brother®

PE-DESIGN 7

Personal Embroidery Design Software System *Ver.*

Instruction Manual

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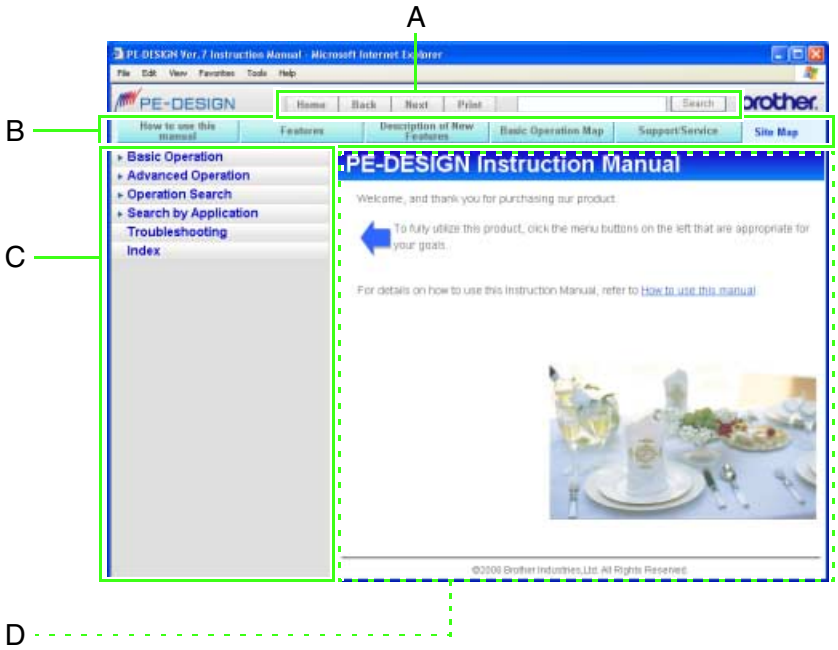
How to Use This Manual

Screen configuration



This manual consists of four elements, A (Operation buttons), B (Support menus), C (Menu area), and D (Main text area). To change the size of the text, click **Text Size** on the **View** menu.

Operation buttons

You can switch the screen, print text, etc. by clicking the appropriate button.

Home — Displays the Instruction Manual top screen.

Back — Returns the display to the screen displayed immediately before.

Next — After you have gone back to a previous page, this displays again the page you came back from.

Print — Prints the text page being displayed. (For details, see page 3.)

Search — You can search the terms and parts of terms (text strings) in the Instruction Manual text. (For details, see page 3.)

How to use Support menus

You can check information about this instruction manual and applications by clicking the appropriate button.

How to use this manual — You can view explanations of the screen display for this manual and the operation methods.

Features — You can view an introduction to the features of the software.

Description of New Features — You can view information on the new functions available in version 7 and the changes to functions from version 6.

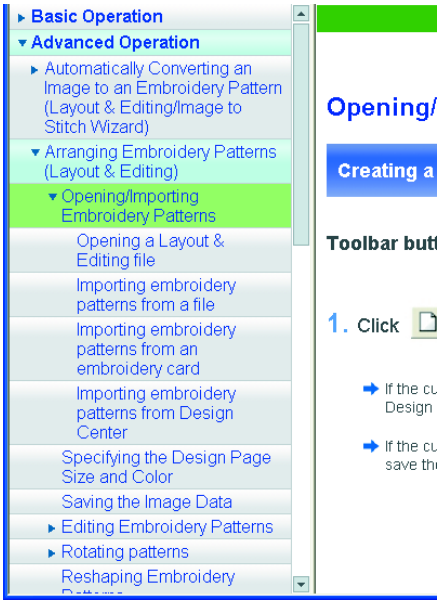
Basic Operation Map — You can view diagrams of the relationships among the software applications and the flow of operations.

Support Service You can check the software support service information and support pages on the Web.

> **Memo:**
> *Accessing support pages requires an environment in which you can connect to the Internet.*
> *You can not access these pages offline.*

SiteMap Displays a site map for this manual.

How to use Menu areas/ Main text areas



Menu area operations

Here, select the item you want to read.

You can open a title in the menu area that has ▶ to its left side by clicking that title. The mark to the left of the title changes to ▼.

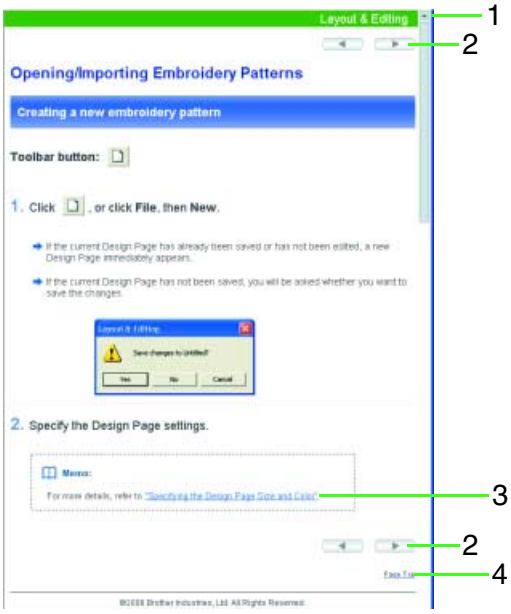
To close an opened title, click it again.

A title with no levels under it has no triangular mark.

If you click such a title, the page for that text area is displayed.

To scroll to titles not currently on the screen, click ⌃ and ⌄.

How to view Text areas



1. Shows applications related to the explanatory text being displayed.

2. Clicking ◀ displays the previous page; clicking ▶ displays the next page.

3. If you click 3, the display jumps to that page.

4. If you click 4, the page is displayed from its start.

To scroll to text not currently on the screen, click ⌃ and ⌄ on the right edge.

Printing

Printing this manual requires a printer.
Some printers can not print illustrations and screen samples completely.

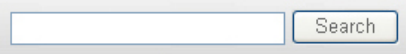
> **Memo:**
>
> *To print as displayed on the screen, set up printing to include background pictures.*
> *Use the procedure below for your operating system to set up printing.*
>
> *For Windows XP*
> *Click **Start-Control Panel-Internet Options**.*
> *Click **Advanced**.*
> *Click **Print background colors and images** to put a check mark in the box, then click **Apply**, then click **OK**.*
>
> *For Windows 2000*
> *Click **Start-Settings-Control Panel-Internet Options**.*
> *Click **Advanced**.*
> *Click **Print background colors and images** to put a check mark in the box. Click **Apply**, then, click **OK**.*

Printing the contents of explanation screens

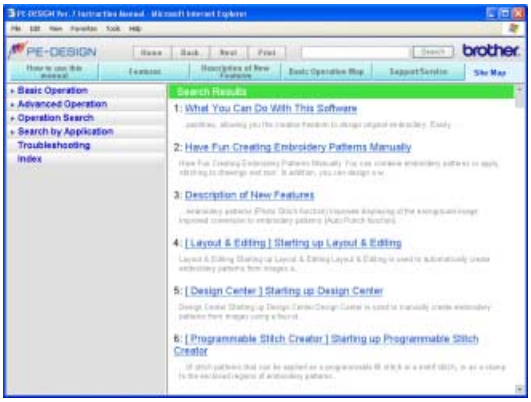
1. Display the page to print.
2. Click Print.
3. Check the printer etc., then click **Print**.

> **Memo:**
>
> *To print part of the page being displayed, select the part you want to print (display it inverted), then click* Print *and in the Print dialog box, select **Selection**.*

How to use the Search function



1. Input the character string you want to search for in the text box.
   You cannot search for multiple lines of text at one time.
2. Click Search.
   The title of the page in which the search string is found and part of the text are displayed in the main text area.



3. Click the title of the page you want to view.
   The corresponding explanation screen is displayed.
   To return to the search results screen, click Back.

Displaying related Web pages

> **Memo:**
>
> *Accessing Web pages requires an environment in which you can connect to the Internet.*
> *You can not access these pages offline.*

1. Displays the Brother global homepage.

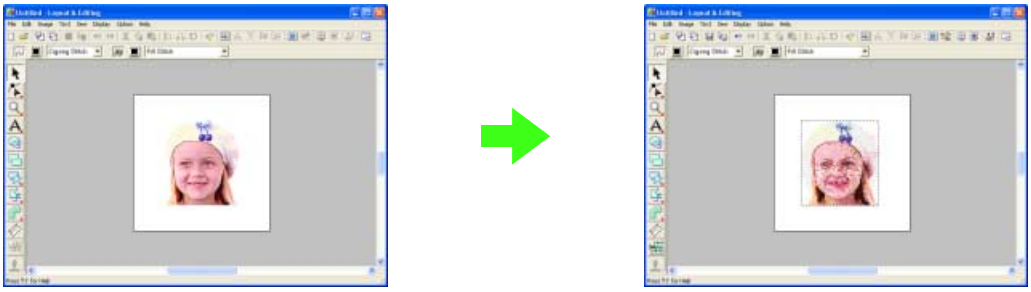
What You Can Do With This Software

This software provides digitizing and editing capabilities, allowing you the creative freedom to design original embroidery. Easily turn illustrations, photos and lettering into custom embroidery designs.

Automatically Create an Embroidery Pattern From an Image

For more details, refer to "Automatically Converting an Image to an Embroidery Design (Auto Punch Function)" on page 18.

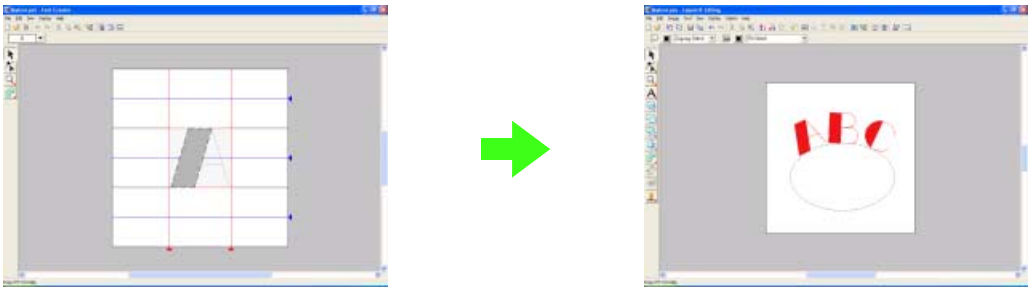
Automatically Create an Embroidery Pattern From a Photo



For more details, refer to "Automatically Converting a Photo to an Embroidery Pattern (Photo Stitch Function)" on page 27 and page 289 (Advanced).

Easily Create Custom Font Patterns

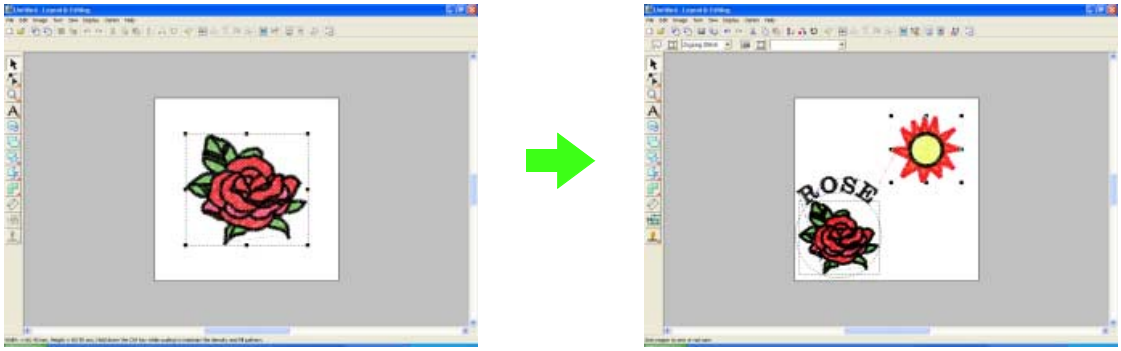
Custom fonts can be created using Font Creator. These fonts can be recalled to be used in Layout & Editing.



For more details, refer to "Manually Creating Custom Font (Font Creator)" on page 296.

Have Fun Creating Embroidery Patterns Manually

You can combine embroidery patterns or apply stitching to drawings and text. In addition, you can design a wider variety of embroidery patterns by using the many sew types available.



For more details, refer to "Arranging Embroidery Patterns (Layout & Editing)" on page 45.

Create Embroidery Patterns Using All Four Applications

Layout & Editing

☞ *Refer to "Automatically Converting an Image to an Embroidery Design (Auto Punch Function)" on page 18.*

☞ *Refer to "Arranging Embroidery Patterns (Layout & Editing)" on page 45.*

☞ *For more details, refer to pages 76 through 192.*

Design Center

☞ *Refer to "Manually Creating Embroidery Patterns From Images (Design Center)" on page 33.*

☞ *For more details, refer to pages 193 through 236.*

Font Creator

☞ *Refer to "Manually Creating Custom Font (Font Creator)" on page 296.*

☞ *For more details, refer to pages 237 through 255.*

Programmable Stitch Creator

☞ *Refer to "Creating Custom Stitch Patterns (Programmable Stitch Creator)" on page 307.*

☞ *For more details, refer to pages 256 through 273.*

New Features of Version 7

■ Stitch generation

- Added Line Sewing Type: Triple Stitch (page 150, page 153, page 218)
- Added Region Sewing Type: Random Walking Stitch (stippling-style stitch) (page 150, page 160, page 224)
- Variations of under sewing
  - Added new under sewing type to the Region Sewing Attributes (page 155, page 156, page 157, page 219, page 220, page 221)
  - Under sewing can be set for zigzag stitching, manual punching, and text (page 153, page 157, page 218)
- Motif stitch can be set to manual punching (page 150)
- Piping Stitch can be set to regions (page 150)
- New zigzag stitch corners have been added to the Line Sewing Attributes
  - (2 styles of Sharp Corners) (page 153, page 218)
- Expanded motif sizing and spacing
  - The motif can be spaced vertically and horizontally (“Spacing” (page 154), “H-Spacing” and “V-Spacing” (page 159, page 223))
  - The motif can be sized up to 100 x 100 mm (3.94 x 3.94 inches) (page 154, page 159, page 223)

■ Editing functions and user interface

- Auto repeat using arrow keys (page 101, page 106, page 202, page 205)
- Can save Personal Sewing Attribute settings (page 165, page 226)

Layout & Editing

- Newly created custom Fonts can be used in Layout & Editing (From Font Creator) (page 305)
- New Small Fonts (Minimum Font size 3.0 mm (0.12 inch)) (page 139)
- Embroidery letters of 2-byte characters for True Type Font can be entered (Japanese, Chinese, Korean, etc.) (page 324)
- Monogramming function includes more decorative frames. All built in fonts, True Type Font, and custom created fonts from Font Creator can now be used with the Monogram function (page 66, page 140)
- Transforming text can be done by dragging. Kerning, Sizing, Rotating, vertical offset can be done by dragging the individual letters (page 133, page 137)
- Can generate a curved outline in the Auto Punch function (page 81)
- Improved editing functions for curved outlines (page 109, page 109, page 110)
- Shape tool has been added to the left tool bar with 24 built in shapes (page 121)
- Six additional stitch formats can be imported and exported: All formats include: .pec, .pes, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, .xxx and .phc (.pec and .phc are import only.) (page 95, page 277)
- Additional fading levels in Image display (page 79)
- Enables the ability to drag & drop clip art, pes files, and stitch format files into Layout & Editing (page 76, page 95, page 96)
- Improved Photo Stitch function:
  - Easier process to create an embroidery pattern from a Photo (page 27, page 82, page 85, page 289)
  - Improved processing speed and color selection (page 27, page 82, page 289)

Design Center

- “Detect Outlines” function to select the outline of an image in “Cut out to Line Image” dialog (page 196, page 197)
- “Figure Handle Stage” has the ability to connect/split a line (page 206)
- Enables the color of a portion of the outline to be changed in the Sew Setting Stage (page 211)
- New button to easily export a design from Sew Setting Stage to Layout & Editing (page 42, page 235)
- Allows up to 20 Undo/Redo operations (page 204)
- Enables to display template image on Figure Handle Stage and enable to display original image on Sew Setting Stage in the Reference Window (page 200, page 208)

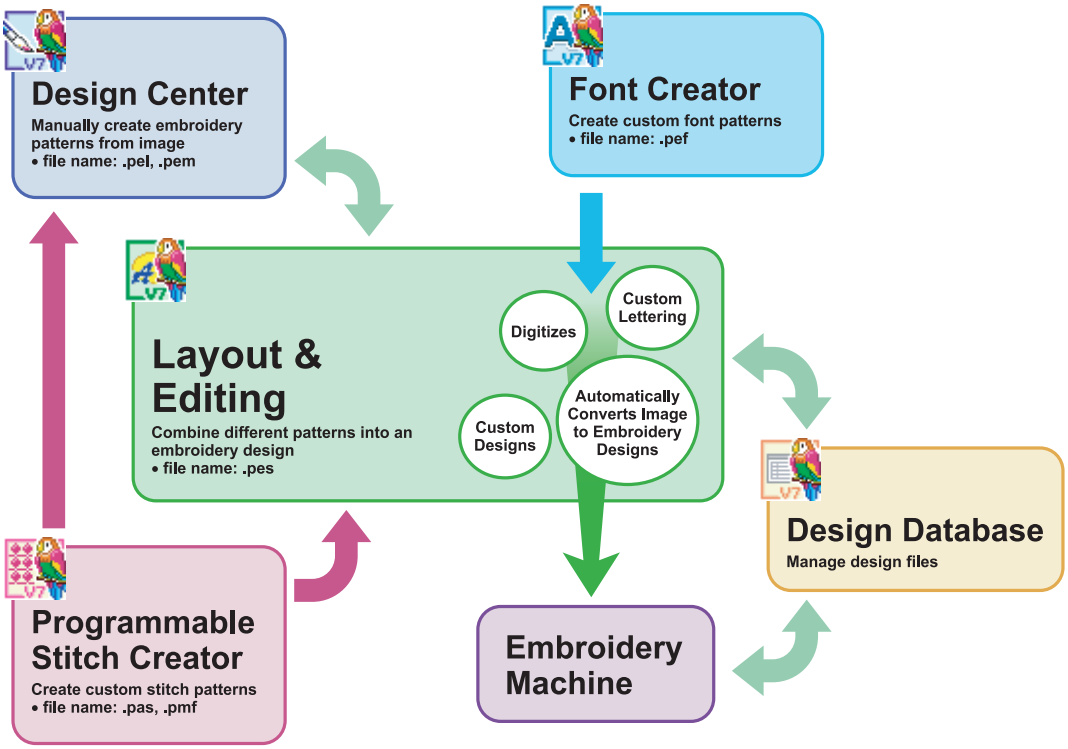
Design Database

- Can drag and drop a design from the Design Database into Layout & Editing (page 277, page 277)
- Can write to an original card from Design Database (page 284)
- Property box when outputting CSV files and printing, enables to output the thread codes (page 63, page 64, page 278, page 287, page 288)

■ General

- New Font Creator program to create custom fonts (page 237, page 296)
- Automatically checks and updates the newest version (page 9)
- Additional sample files for images and embroidery patterns

Basic Operation Map



Contact Technical Support if you have a problem. Please check the company web site (http://www.brother.com/) to find the technical Support in your area. To view the FAQ and information for software updates, visit the Brother Solutions Center at (http://solutions.brother.com/).

Note:

- *On the above website, first select your country and next choose product.*
- *Have the information ready before contacting Technical Support.*
  - *Make sure your computer's operating system is current with all updates.*
  - *Have the make and model of your computer and Windows® Operating System. (Refer to the Quick Reference Guide for system requirements.)*
  - *Information on error messages that appear. This information will help expedite your questions more quickly.*

Online Registration

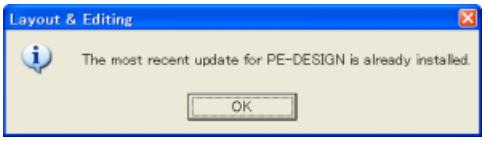
If you wish to be contacted about upgrades and provided with important information such as future product developments and improvements, you can register your product online by following a simple registration procedure.
Click **Online Registration** on the **Help** menu of Layout & Editing to start up the installed Web browser and open the online registration page on our Web site.
The online registration page on the Web site appears when the following address is entered in the **Address** bar of the Web browser.
http://www.brother.com/registration/

Memo:

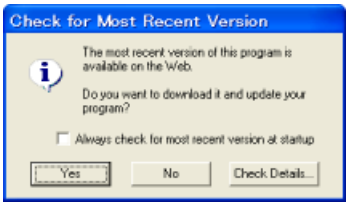
Online registration may not be available in some areas.

Checking for the Latest Version of the Program

Click **Help** in Layout & Editing, then **Check for updates**.
The software is checked to determine whether or not it is the latest version.
If the message shown below appears, the latest version of the software is being used.



If the message shown below appears, the latest version of the software is not being used. Click **Yes**, and then download the latest version of the software from the Web site.



Memo:

*If the **Always check for most recent version at startup** check box is selected, the software is checked at startup to determine whether or not it is the latest version.*

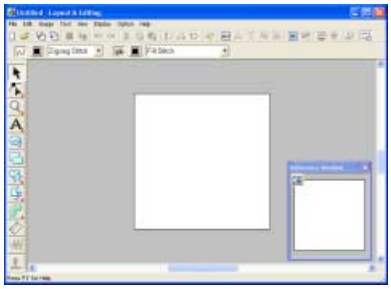
Starting up Layout & Editing

Layout & Editing is used to automatically create embroidery patterns from images and to create embroidery patterns by combining drawn objects and text.

1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing** to open the **Layout & Editing** window.

> **Memo:**
>
> *When Layout & Editing is started up, it automatically checks for the most recent version of the application. (The application can be set not to automatically check for new versions. For details, refer to page 21 of the Quick Reference Guide.) In addition, the newest version can be searched for from the Help menu of Layout & Editing.*

→ The Layout & Editing window appears.



> **Memo:**
>
> - *To fill the entire screen with the Layout & Editing window, click the maximize button on the right end of the title bar.*
> - *At this time, you can change the Design Page properties by using the menu command **Option - Design Page Property**. (For more details, refer to page 99.) The default value for the Design Page size in this example is 100 × 100 mm. The measurements for values displayed in the application can be in either millimeters or inches. For more details, refer to "Changing the measurement units" on page 183.*

Starting up Design Center

Design Center is used to manually create embroidery patterns from images using a four-stage procedure.

1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Center** to open the **Design Center** window.

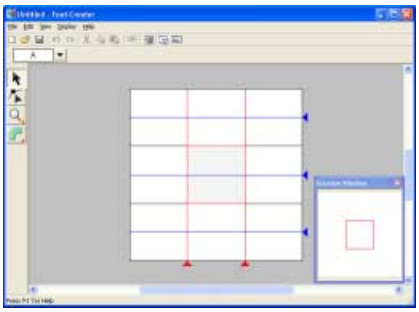
→ The **How do you want to produce embroidery** dialog box and the Design Center window appear.

Starting up Font Creator

Font Creator allows you to create original font characters.

1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Font Creator** to open the **Font Creator** window.

→ The Font Creator window appears.

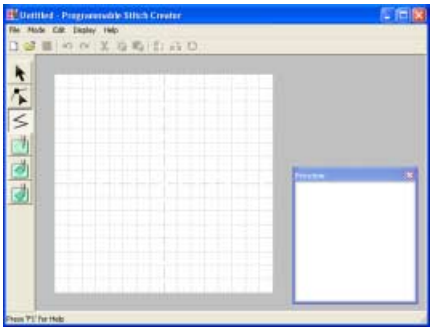


Starting up Programmable Stitch Creator

Programmable Stitch Creator allows you to create, edit and save fill/stamp and motif stitch patterns that can be applied as a programmable fill stitch or a motif stitch, or as a stamp to the enclosed regions of embroidery patterns.

1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Programmable Stitch Creator** to open the **Programmable Stitch Creator** window.

→ The Programmable Stitch Creator window appears.

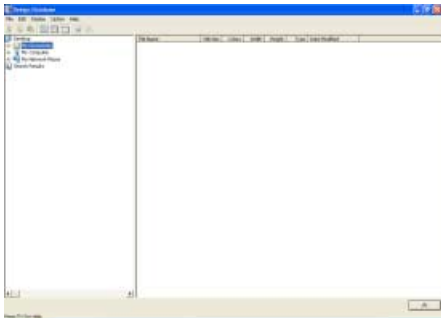


Starting up Design Database

Design Database allows you to organize the embroidery design files on your computer so that you can easily preview them and find the desired design.

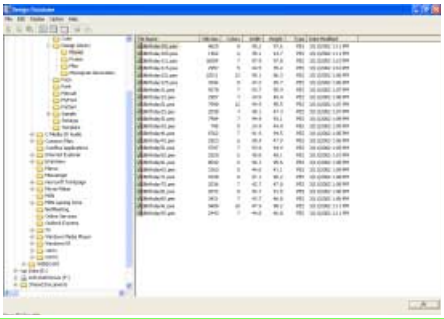
1. Click , then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Database** to open the **Design Database** window.

→ The Design Database window appears.



2. Click a folder in the folder pane.

→ All embroidery files in the folder are displayed in the contents pane.



Memo:

Only .pes, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, .xxx and .phc files are displayed.

Exiting the Application

When you are finished using an application, you can close it.

1. Click **File** in the menu bar, and then click **Exit**.

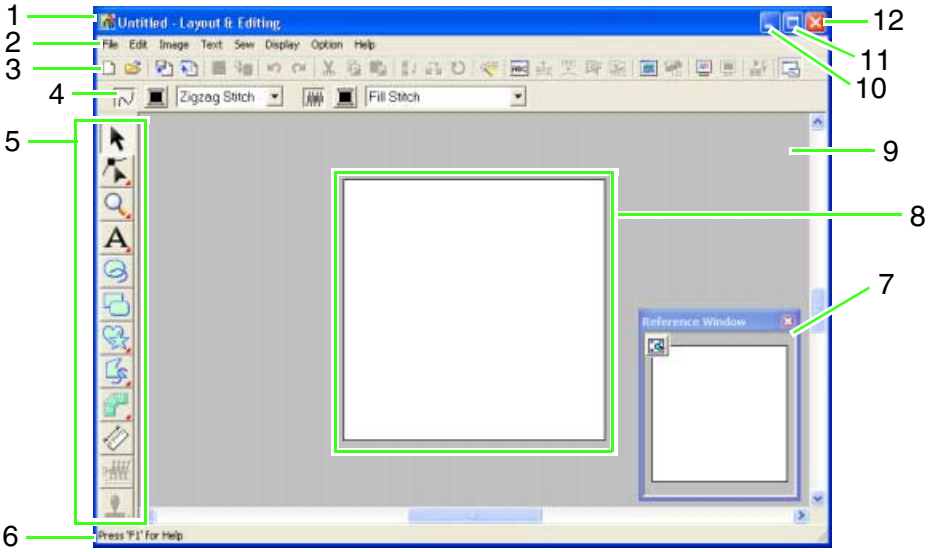
→ The window closes.

Memo:

The window can also be closed by clicking the close button on the right end of the title bar.

Layout & Editing Window

The default value for the design page size in this example is 100 × 100 mm.



1 Title bar

2 Menu bar
Provides access to the functions.

3 Toolbar
Provides shortcuts for the menu commands.

4 Sewing Attributes bar
Sets the sewing attributes (color and sew type) of lines and regions in the pattern.

5 Tool Box
Used to create, select and edit patterns.

6 Status bar
Provides helpful information.

7 Reference Window
Displays all patterns in the work area, giving you an overview while you work on a detailed area. (For more details, refer to “Viewing design in the reference window” on page 175.)

8 Design Page
The actual part of the work area that can be saved and sewn.

9 Work area

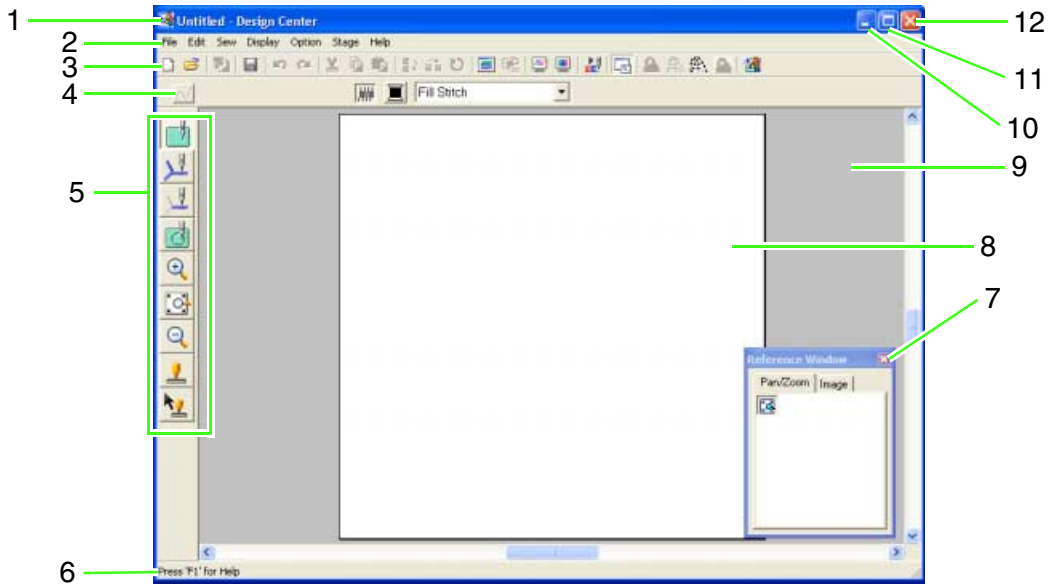
10 Minimize button

11 Maximize button

12 Close button

Design Center Window

The default value for the design page size in this example is 100 × 100 mm.



1 Title bar

2 Menu bar
Provides access to the functions.

3 Toolbar
Provides shortcuts for the menu commands.

4 Sewing Attributes bar
Sets the sewing attributes (color and sew type) of the lines and regions in the pattern (only in the Sew Setting stage)

5 Tool Box
Used to select and edit the image or pattern. Original Image Stage has no Tool Box; the other stages all have a different tools in the Tool Box. (The window for the Sew Setting Stage is shown on this page.).

6 Status bar
Provides helpful information.

7 Reference Window
Displays all outlines and patterns in the work area, giving you an overview while you work on a detailed area. (For more details, refer to “Viewing outlines in the Reference Window” on page 207.)

8 Design Page
The actual part of the work area that can be saved and sewn.

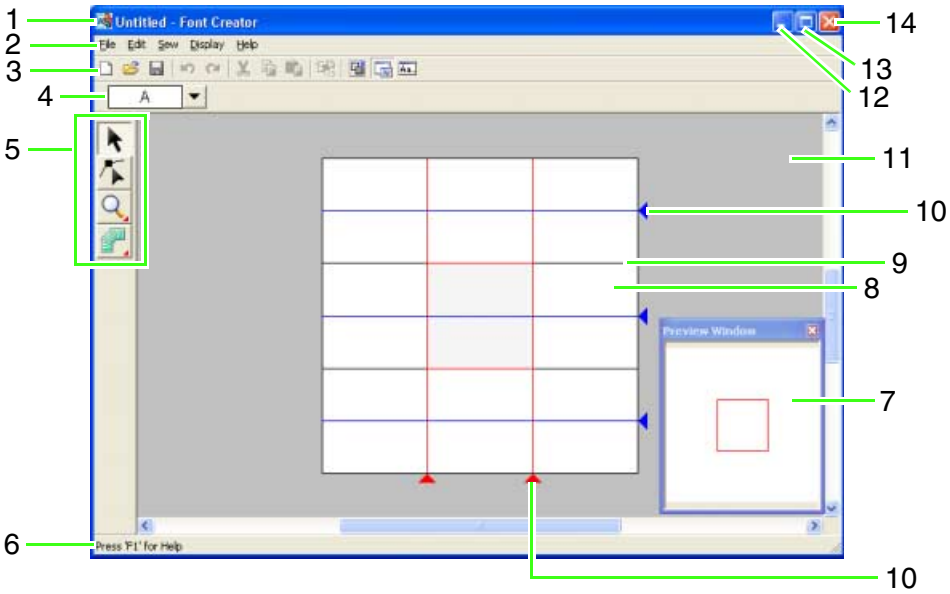
9 Work area

10 Minimize button

11 Maximize button

12 Close button

Font Creator Window



1 Title bar

2 Menu bar
Provides access to the functions.

3 Toolbar
Provides shortcuts for the menu commands.

4 Select Character bar
Allows characters from created fonts to be selected.

5 Tool Box
Used to select and create font pattern.

6 Status bar
Provides helpful information.

7 Preview window
Shows how the stitch pattern will be sewn.

8 Design Page
The actual part of the work area that can be saved.

9 Guidelines (fixed)
The distance between the two guidelines becomes the height of the font created.

10 Guidelines (movable)
These guidelines can be moved according to the shape of the created font. The distance between the two red guidelines becomes the width of the font created. The three blue guidelines are positioning lines for accent positions, the height of small characters, and the bottom edge of small characters.

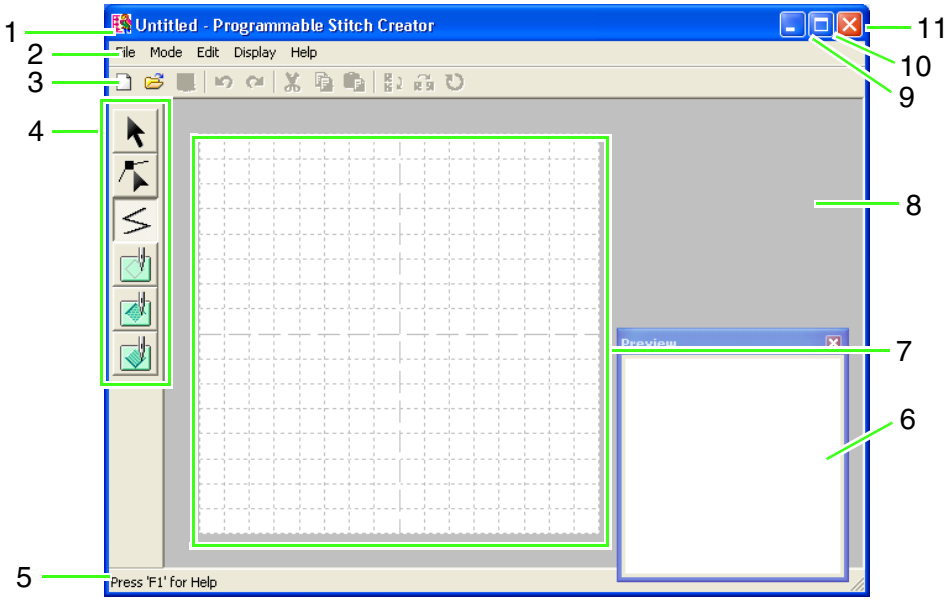
11 Work area

12 Minimize button

13 Maximize button

14 Close button

Programmable Stitch Creator Window



1 **Title bar**

2 **Menu bar**
Provides access to the functions.

3 **Toolbar**
Provides shortcuts for the menu commands.

4 **Tool Box**
Used to select and create fill and motif stitch patterns and stamps.
(The bottom four buttons do not appear in Motif mode.)

5 **Status bar**
Provides helpful information.

6 **Preview window**
Shows how the stitch pattern will be sewn.

7 **Design Page**
The actual part of the work area that can be saved.

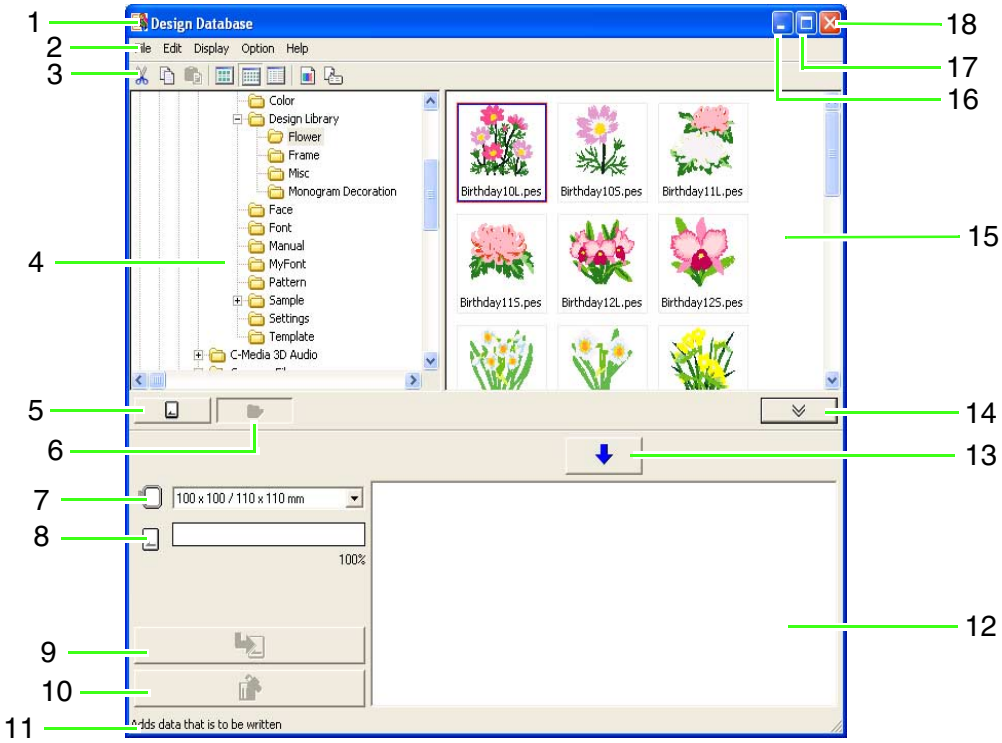
8 **Work area**

9 **Minimize button**

10 **Maximize button**

11 **Close button**

Design Database Window



1 Title bar

2 Menu bar
Gives access to the functions.

3 Toolbar
Provides shortcuts for the menu commands.

4 Folder pane
Provides access to the folders on the computer and the results of any searches that were performed.

5 Card reading button
Reads an original card.

6 Folder content display button
The folder pane and contents pane display are switched to the folder contents.

7 Hoop size selector
This selects the hoop size when writing a design to an original card.

8 Card capacity indicator
Displays the selected design (displayed in the Writing list) for the capacity of the original card.

9 Write button
The selected pattern (displayed in the Writing list) is written to the original card.

10 Remove button
Returns the selected design (displayed in the Writing list) to the unselected state.

11 Status bar
Provides helpful information.

12 Writing list
The list of designs to be written to the original card is displayed.

13 Add button
The design selected in the contents pane is displayed in the Writing list.

14 Card writing box display/non-display button
Press when writing the design to an original card. Click this button to hide or display the Writing list.

15 Contents pane
Displays thumbnails of all embroidery design in the selected folder.

16 Minimize button

17 Maximize button

18 Close button

Automatically Converting an Image to an Embroidery Design (Auto Punch Function)

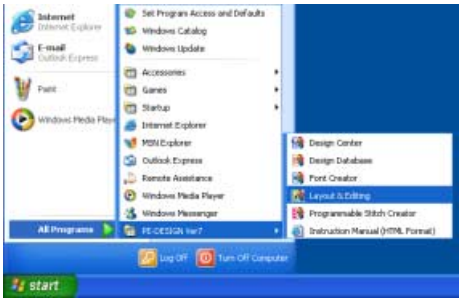
In this section, we are going to use the Auto Punch function to automatically create an embroidery pattern from an image.
This procedure will go through each step of the basic operation.

Step 1	Importing image data into Layout & Editing
Step 2	Automatically converting the image to an embroidery pattern
Step 3	Displaying a preview of the embroidery
Step 4	Saving the embroidery design
Step 5	Transferring the design to an original card

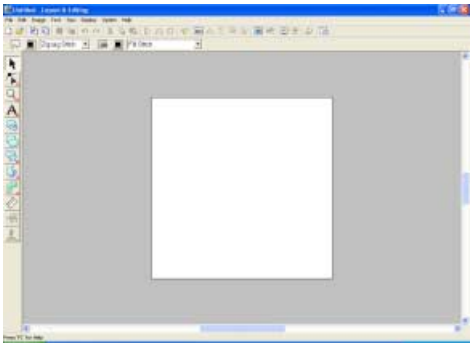
Step 1 Importing image data into Layout & Editing

First, we need to import the image that will be converted into an embroidery pattern.
For this example, we will use the tulip image (tulip.bmp) provided with this application.

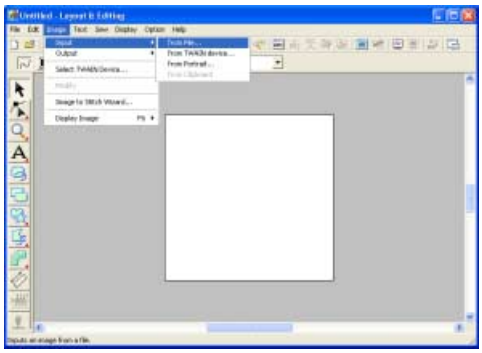
1 Start up Layout & Editing.



Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

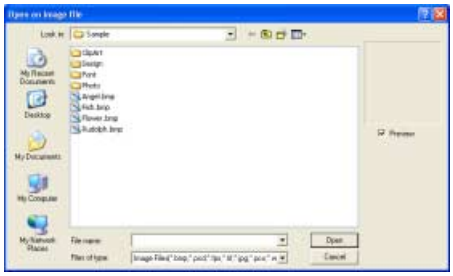


2 Import the image.

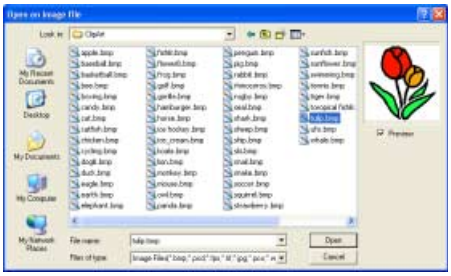


Click **Image**, then **Input**, then **from File**.

> **Memo:**
> *The default value for the design page size in this example is 100 x 100 mm.*

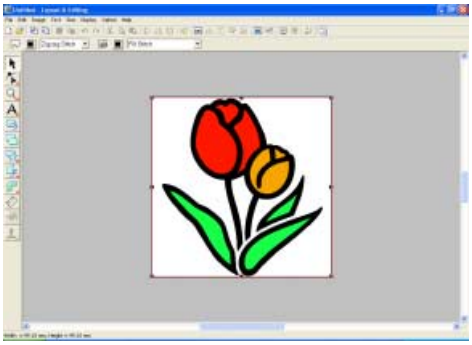


Double-click the **ClipArt** folder to open it.

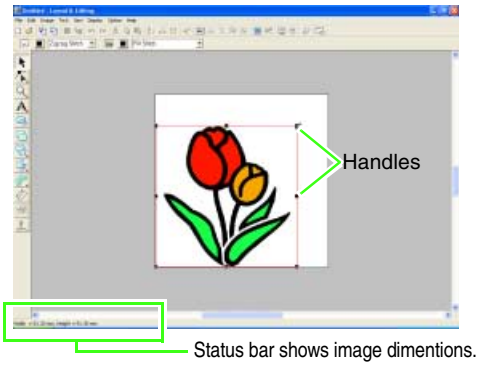


Select the sample file **tulip.bmp**, and then click **Open**, or double-click the file's icon.

→ The image appears in the work area.

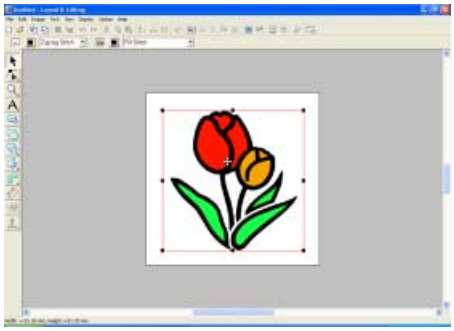


3 **Adjust the image size and position.**



Drag the handle to adjust the selected image to the desired size.

> **Memo:**
>
> *If the handles have disappeared, right-click the image, and then click **Modify Image** in the menu that appeared.*

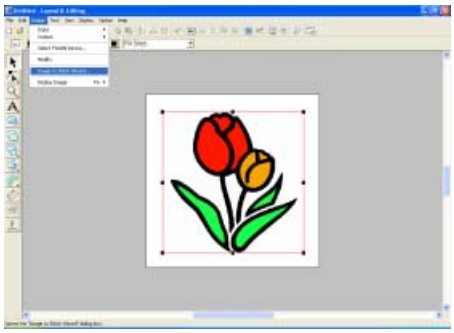


Move the pointer over the selected image, and then drag the image to the desired position.

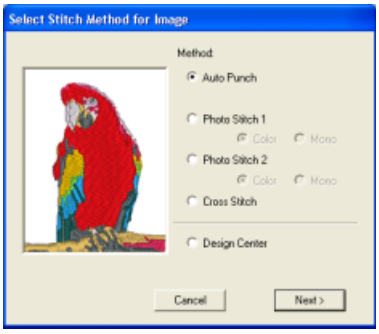
Step 2 Automatically converting the image to an embroidery pattern

Next, the image will automatically be converted to an embroidery pattern.

1 **Select the conversion method.**

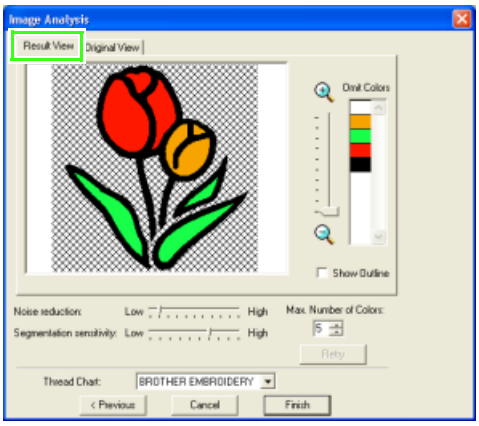


Click **Image**, then **Image to Stitch Wizard**.



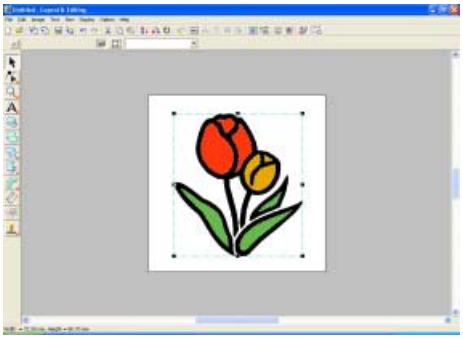
Select **Auto Punch**, and then click **Next**.

2 Convert the image to an embroidery pattern.



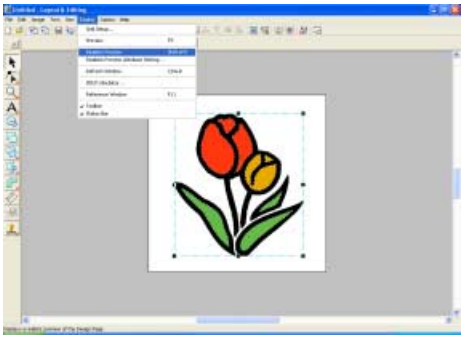
Check the Result View of the conversion, and then click **Finish**.

→ The generated embroidery pattern is displayed.

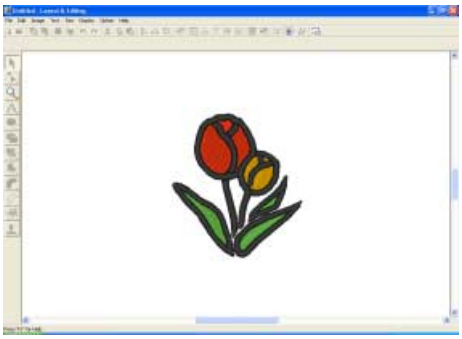


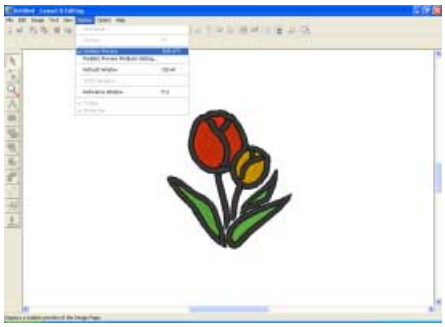
Step 3 Displaying a preview of the embroidery

Preview the finished embroidery.



Click **Display**, then **Realistic Preview**.

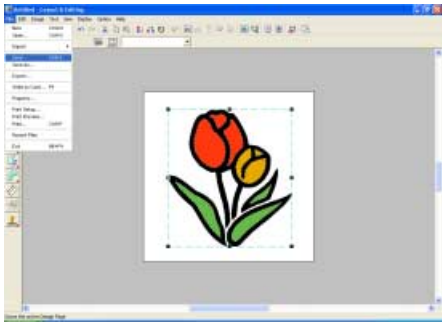




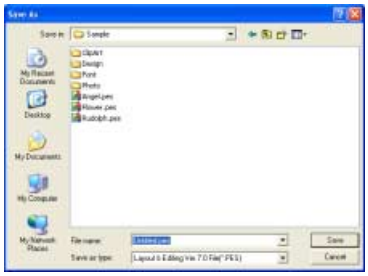
To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 4 Saving the embroidery design

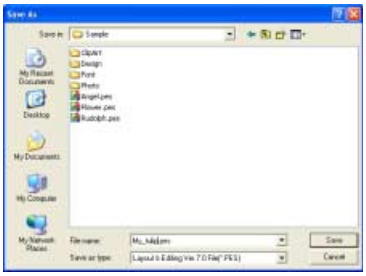
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



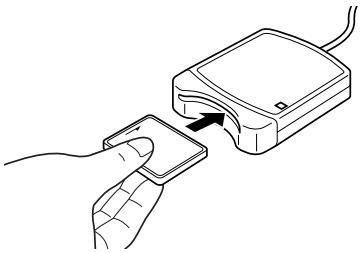
Click **Save**.

Step 5 Transferring the design to an original card

By writing a design to a media that can be used in your sewing machine and transferring it to your sewing machine, you can actually sew the design. For this example, we will transfer the design to an original card.

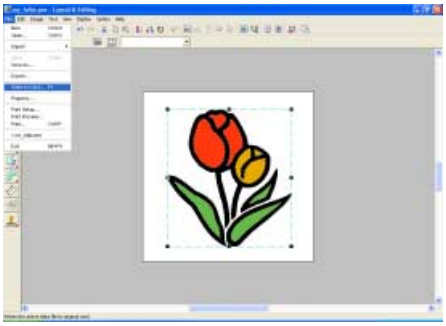
> **Memo:**
> *You can also use Floppy Disks, Compact Flash Card, and USB Media to save designs.*

1 Insert an original card into the USB card writer module.



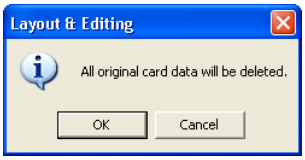
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2 Transfer the embroidery design.



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

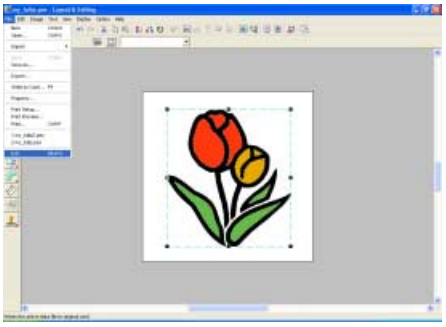
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, or if the original card is not inserted or is defective, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Automatically Converting an Image to an Embroidery Design (Cross Stitch Function)

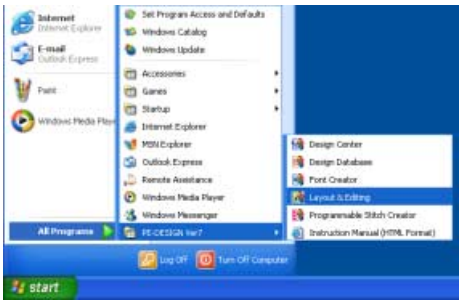
In this section, we are going to use the Cross Stitch function to automatically create a cross-stitch embroidery pattern from an image.
This procedure will go through each step of the basic operation.

Step 1	Importing image data into Layout & Editing
Step 2	Automatically converting the image to an embroidery pattern (Cross Stitch function)
Step 3	Displaying a preview of the embroidery
Step 4	Saving the embroidery design
Step 5	Transferring the design to an original card

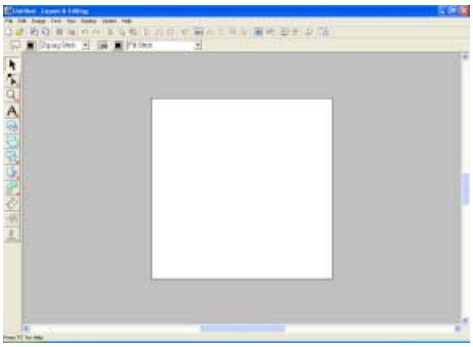
Step 1 Importing image data into Layout & Editing

First, we need to import the image that will be converted into an embroidery pattern.
For this example, we will use the tulip image (tulip.bmp) provided with this application.

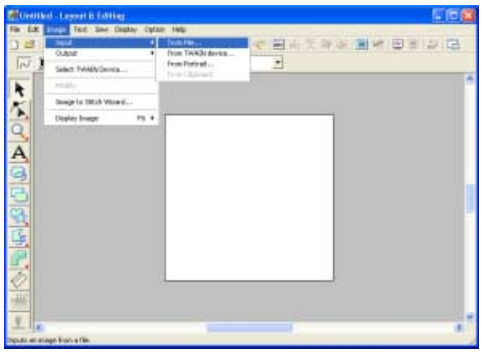
1 Start up Layout & Editing.



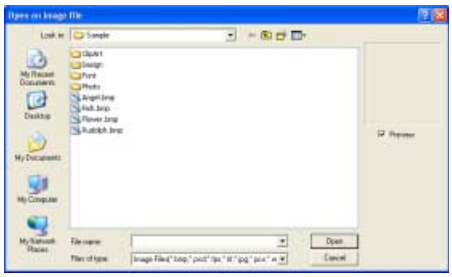
Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.



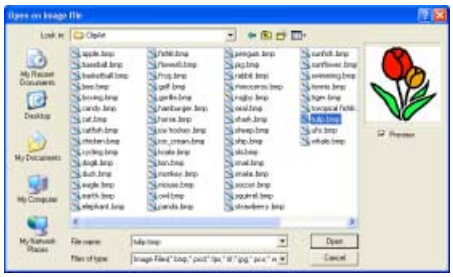
2 Import the image.



Click **Image**, then **Input**, then **from File**.

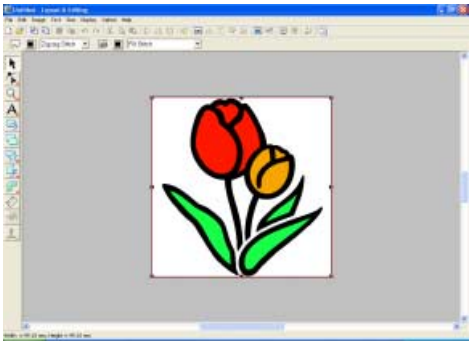


Double-click the **ClipArt** folder to open it.

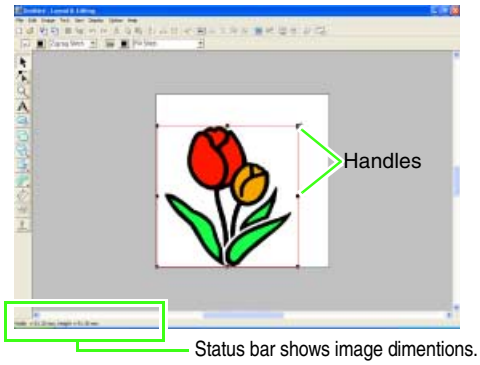


Select the sample file **tulip.bmp**, and then click **Open**, or double-click the file's icon.

→ The image appears in the work area.

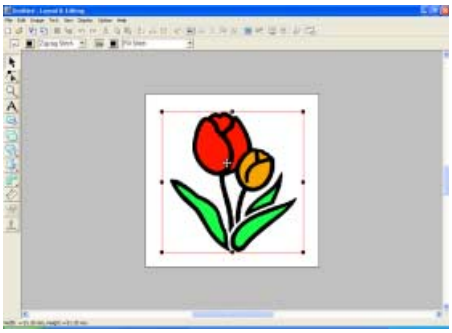


3 Adjust the image size and position.



Drag the handle to adjust the selected image to the desired size.

> **Memo:**
> *If the handles have disappeared, right-click the image, and then click **Modify Image** in the menu that appeared.*

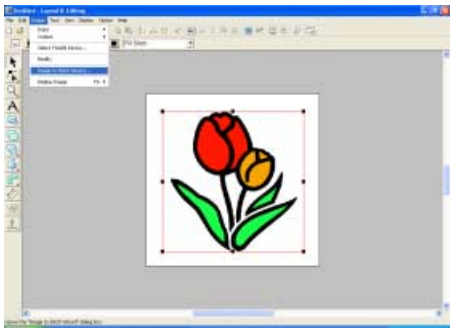


Move the pointer over the selected image, and then drag the image to the desired position.

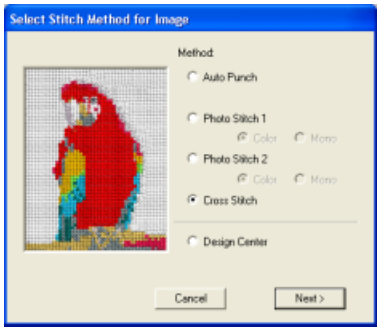
Step 2 Automatically converting the image to an embroidery pattern (Cross Stitch function)

Next, the image will automatically be converted to an embroidery pattern.

1 Select the conversion method.



Click **Image**, then **Image to Stitch Wizard**.

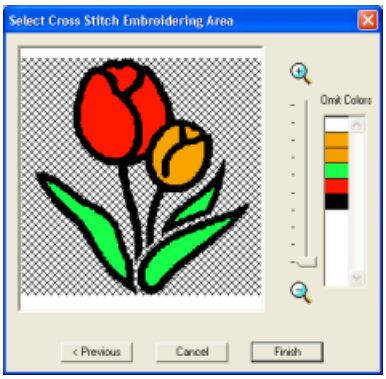


Select **Cross Stitch**, and then click **Next**.

2 Convert the image to an embroidery pattern.

Specify the settings for creating the embroidery pattern, and then click **Next**. For this exercise leave the default setting.

> **Memo:**
> *Various settings are available for converting the image to an embroidery pattern. (For more details, refer to "If Cross Stitch is selected" on page 91.)*

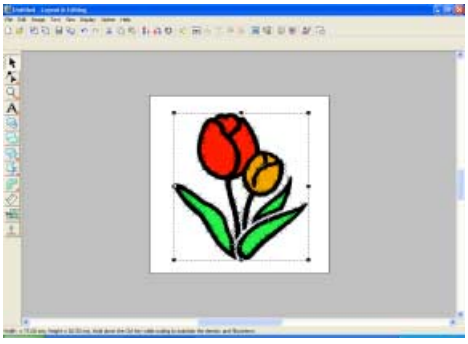


Check the Result View of the conversion, and then click **Finish**.

Memo:

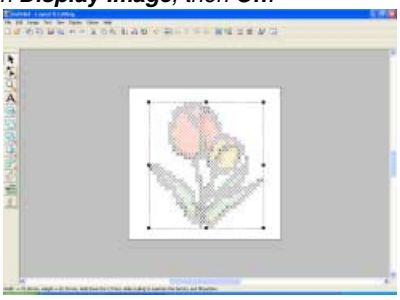
Areas of the image that will not be converted to the embroidery design appear with a crosshatch pattern. The areas that will be converted can be changed. (For more details, refer to "If Cross Stitch is selected" on page 91.)

→ The generated embroidery design is displayed.



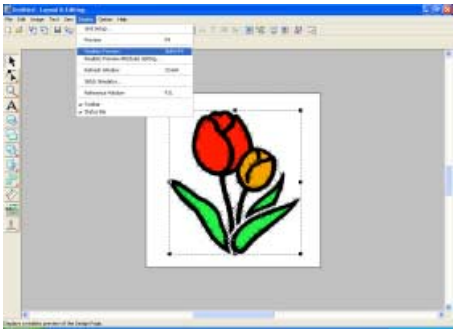
Memo:

*To hide the background image, click **Image**, then **Display Image**, then **Off**.*

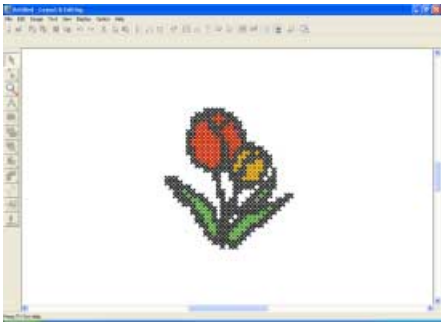


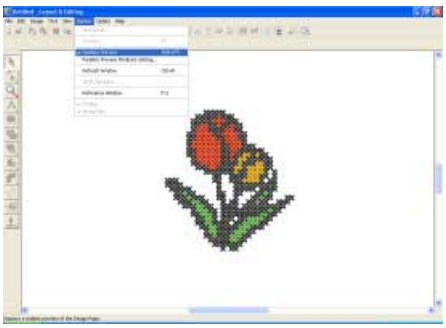
Step 3 Displaying a preview of the embroidery

Preview the finished embroidery.



Click **Display**, then **Realistic Preview**.

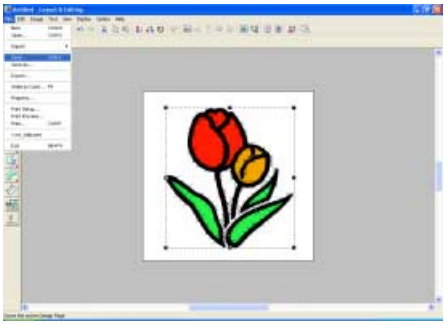




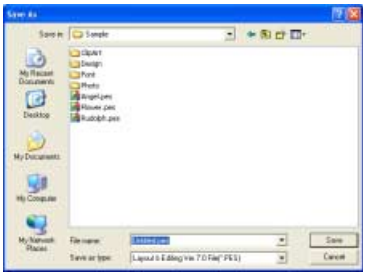
To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 4 Saving the embroidery design

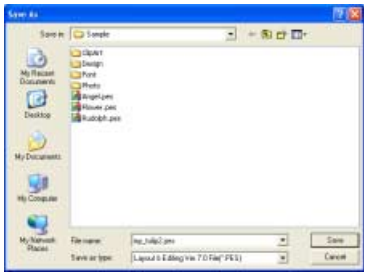
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



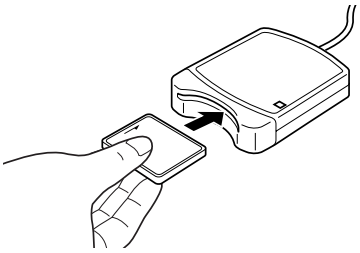
Click **Save**.

Step 5 Transferring the design to an original card

By writing a pattern to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the pattern. For this example, we will transfer the pattern to an original card.

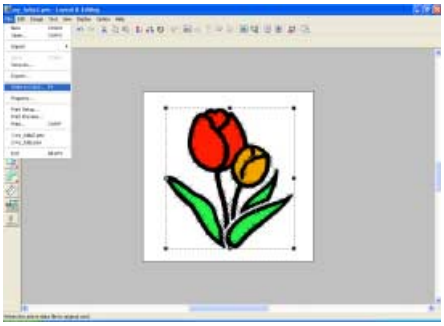
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1. **Insert an original card into the USB card writer module.**



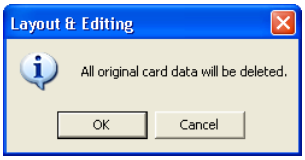
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2 Transfer the embroidery design.



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

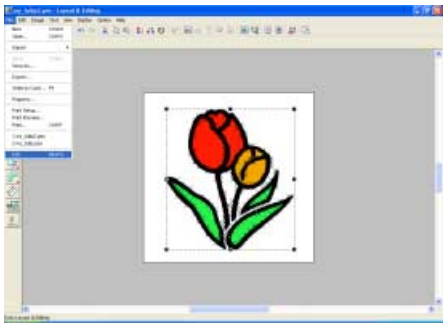
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Automatically Converting a Photo to an Embroidery Pattern (Photo Stitch Function)

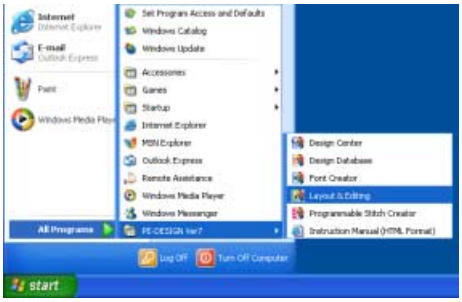
In this section, we are going to use the Photo Stitch function to automatically create an embroidery pattern from a photo.
This procedure will go through each step of the basic operation of Automatically converting a photo to an embroidery pattern using the Stitch Wizard, with the simple method of selecting the optimum pattern from the “candidates”.

Step 1	Importing photo data into Layout & Editing
Step 2	Automatically converting the image to an embroidery pattern
Step 3	Displaying a preview of the embroidery
Step 4	Saving the embroidery design
Step 5	Transferring the design to an original card

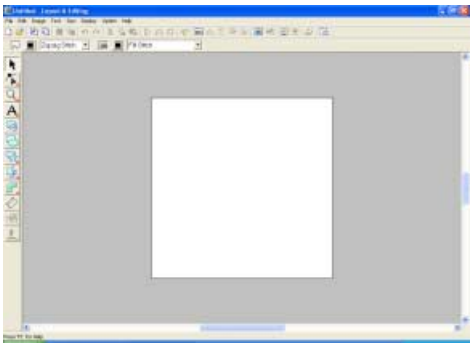
Step 1 Importing photo data into Layout & Editing

First, we need to import the image that will be converted into an embroidery pattern.
For this example, we will use the photo of the girl (girl.bmp) provided with this application.

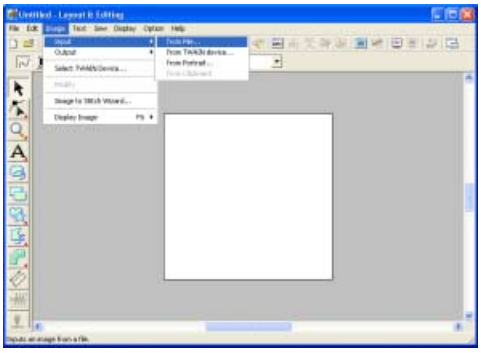
1 Start up Layout & Editing.



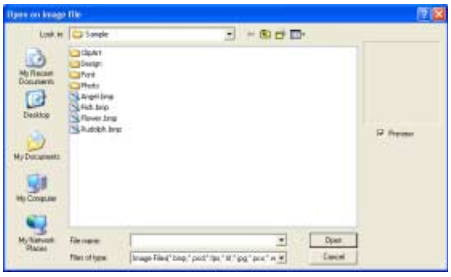
Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.



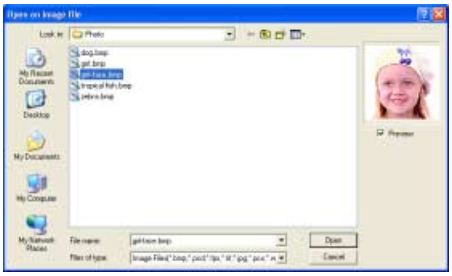
2 Import the image.



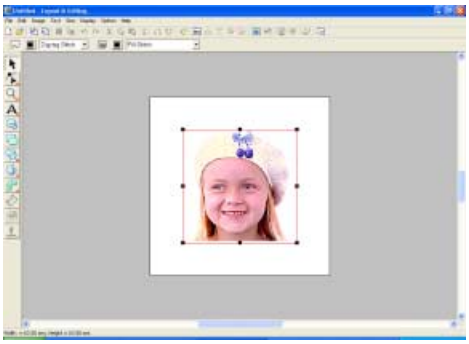
Click **Image**, then **Input**, then **from File**.



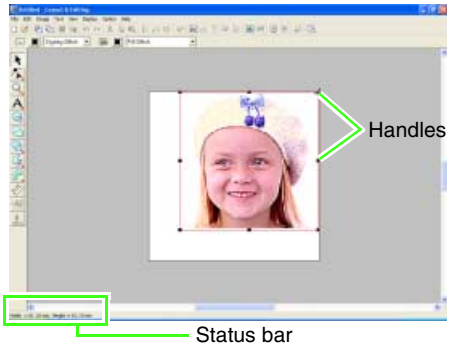
Double-click the **Photo** folder to open it.



Select the sample file **girl-face.bmp**, and then click **Open**, or double-click the file’s icon.



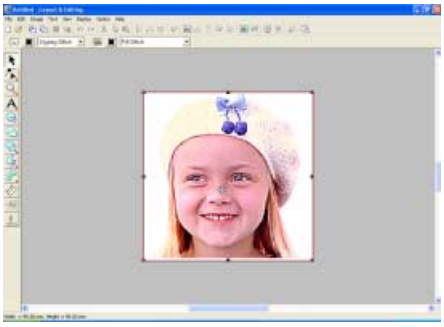
3 **Adjust the image size and position.**



Drag the handle to adjust the selected image to the desired size.

Memo:

*If the handles have disappeared, right-click the image, and then click **Modify Image** in the menu that appeared.*

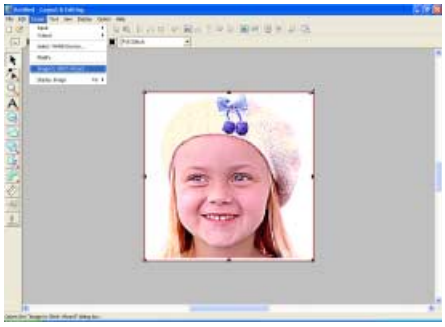


Move the pointer over the selected image, and then drag the image to the desired position.

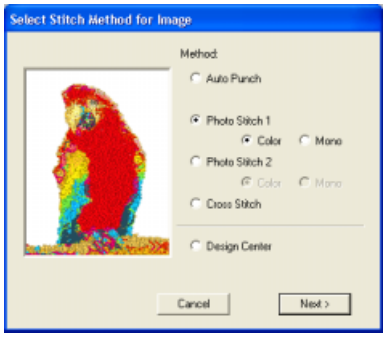
Step 2 Automatically converting the image to an embroidery pattern

Next, the image will automatically be converted to an embroidery pattern.

1 **Select the conversion method.**

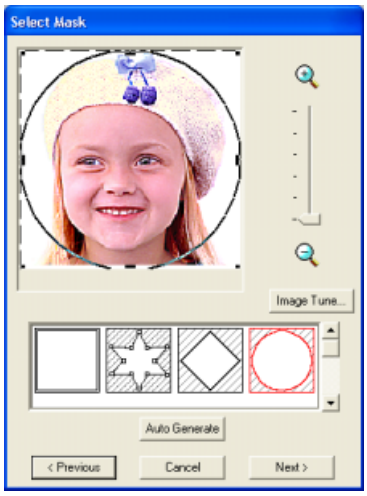


Click **Image**, then **Image to Stitch Wizard**.

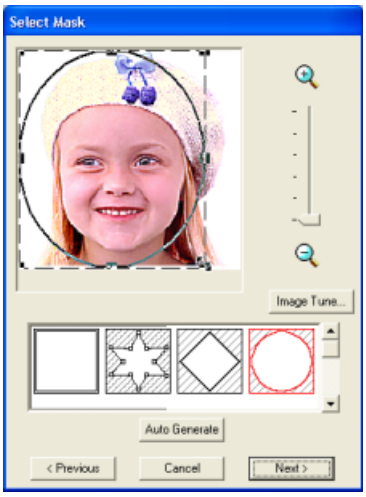


Click **Photo Stitch 1**, then **Color**, and then click **Next**.

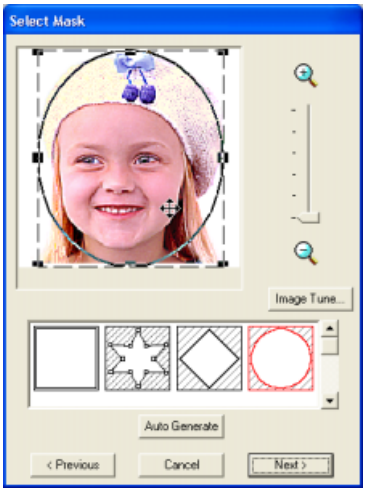
2 **Specify the area (mask shape and position) of the photo to be converted the embroidery pattern.**



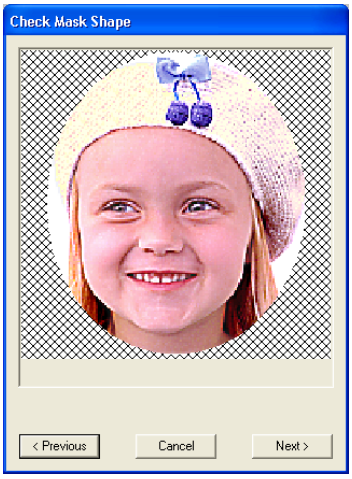
Select the shape of the mask.



Drag the handles to adjust the mask to the desired size.



Move the pointer inside the mask, drag the mask to the desired position, and then click **Next**.



Check the preview of the area to be converted, and then click **Next**.

Memo:

Areas not set to be sewn are shown filled with a crosshatch pattern.

3 Convert the image to an embroidery pattern.

Click **Select from Candidates**....

Memo:

While converting an image into an embroidery pattern, various changes can be specified manually. (For more details, refer to page 84.)

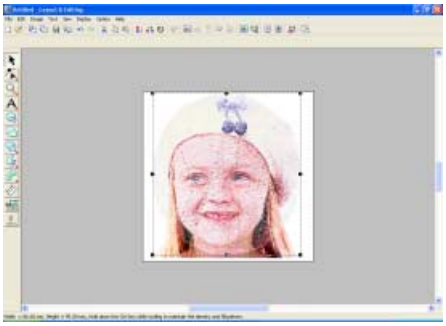
→ There are six patterns with different brightness and contrasts based on the original image. The image showing the current settings is selected in the **Select from Candidates** dialog box.

Select one of the candidates and click **OK**.

→ This preview changes to the selected image.

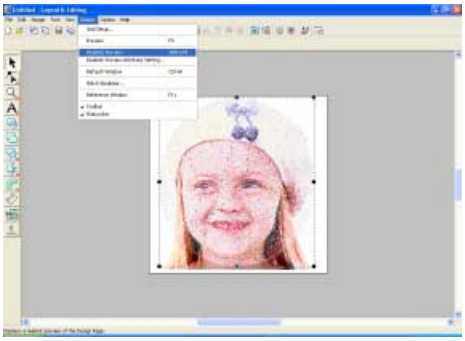
Check the preview, then click **Finish**.

→ The generated embroidery pattern is displayed.

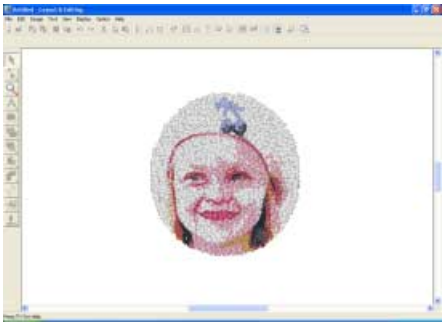


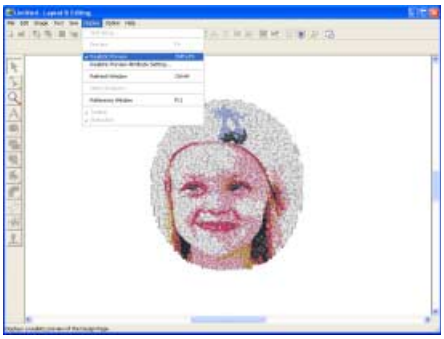
Step 3 Displaying a preview of the embroidery

Preview the finished embroidery.



Click **Display**, then **Realistic Preview**.

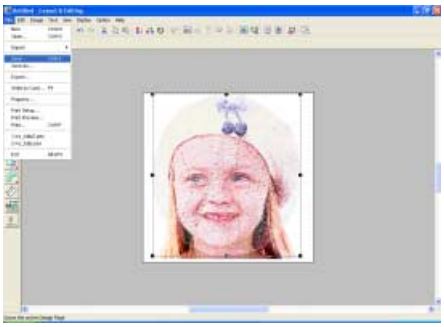




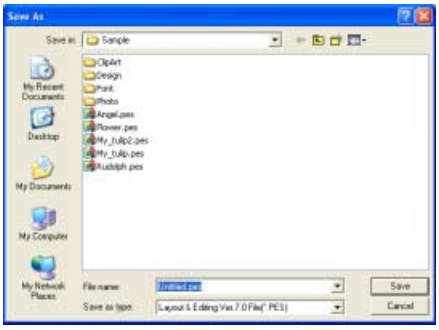
To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 4 Saving the embroidery design

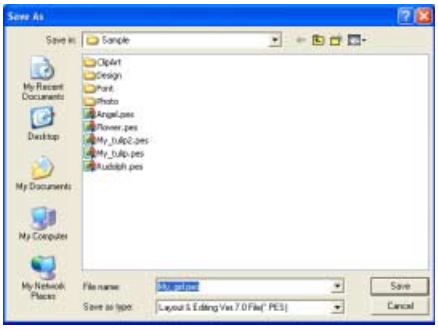
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



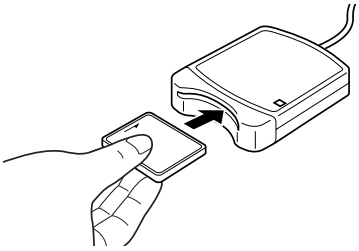
Click **Save**.

Step 5 Transferring the design to an original card

By writing a pattern to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the pattern. For this example, we will transfer the pattern to an original card.

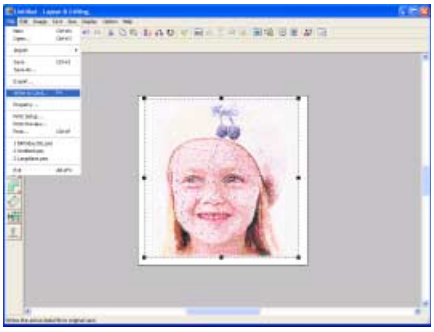
> **Memo:**
> *You can also use Floppy Disks, Compact Flash Card, and USB Media to save designs.*

1. **Insert an original card into the USB card writer module.**



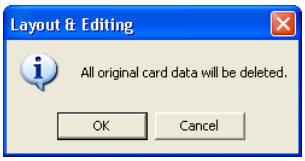
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2. **Transfer the embroidery pattern.**



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

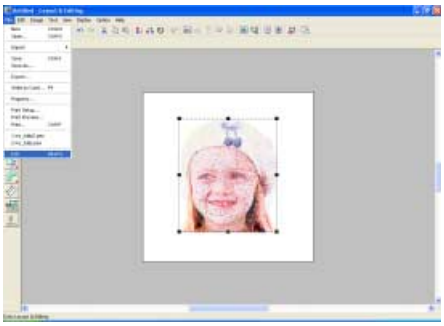
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Manually Creating Embroidery Patterns From Images (Design Center)

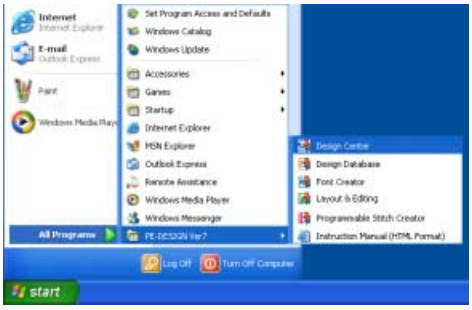
In this section, we are going to manually create an embroidery pattern from an image.
This procedure will go through each step of the basic operation.

Step 1	Opening an image file (Original Image Stage)
Step 2	Extracting the outlines by selecting colors
Step 3	Editing the outlines (Line Image Stage)
Step 4	Specifying sewing attributes (Sew Setting Stage)
Step 5	Displaying a preview of the embroidery
Step 6	Saving the embroidery pattern
Step 7	Transferring the design to an original card

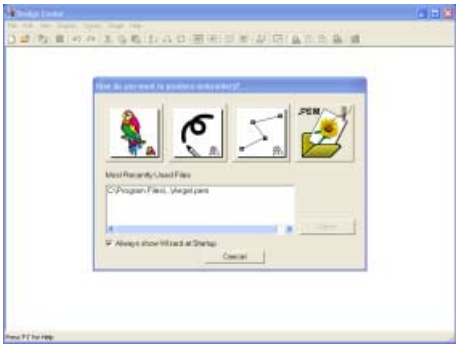
Step 1 Opening an image file (Original Image Stage)

First, we need to import the image to be used to create the embroidery pattern.
For this example, we will use the flower image (Flower.bmp) provided with this application.

1 Start up Design Center.

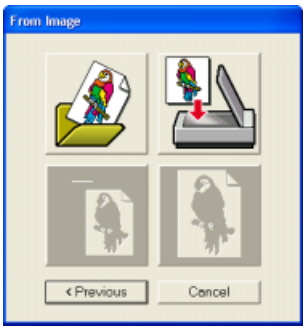


Click , then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Center**.

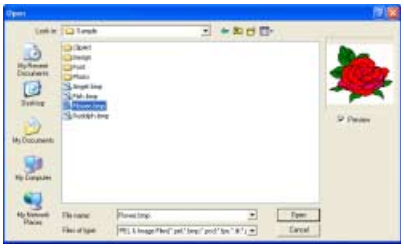


Click .

2 Open the image.



Click .

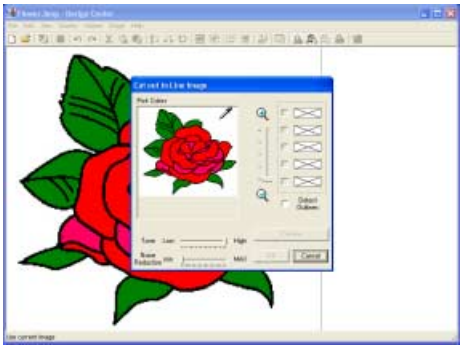


Select the sample file **Flower.bmp**, and then click **Open**, or double-click the file's icon.

→ The image appears in the Design Page and in the **Cut out to Line Image** dialog box.

Step 2 Extracting the outlines by selecting colors

After opening the image, we will continue to the Line Image Stage, where we will select the colors of the areas to be used to create the outlines for the embroidery.

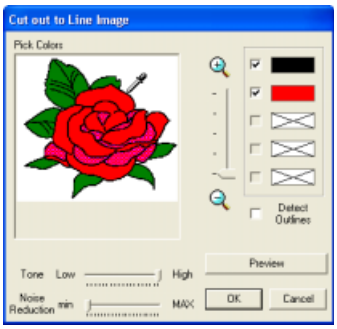


Move the pointer over the image.

→ The shape of the pointer changes to .

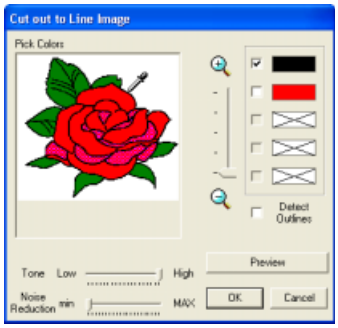
Memo:

*To display the image enlarged (or reduced), move the **ZOOM** slider up (or down). When the image is enlarged, you can scroll through it to display different parts.*



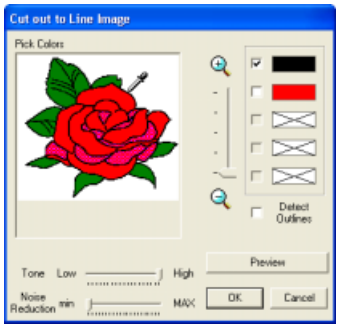
Click any part of the outline.

→ The selected color appears in a box on the right side, and ✔ appears in the check box to show that the color is selected.

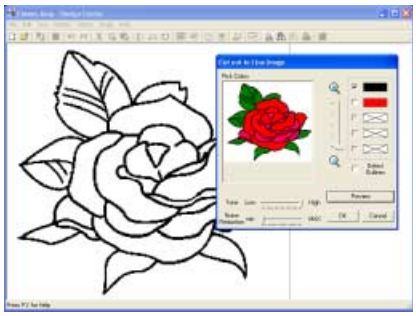


Memo:

If a color other than that for the outline was selected, clear the check box beside the color to deselect it.



Click **Preview** to preview the line image.

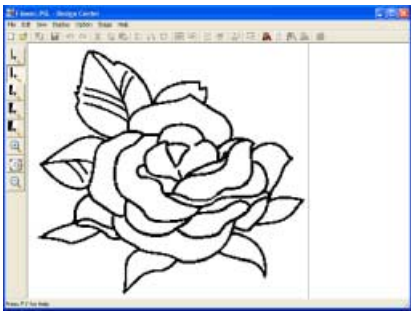


When the line image appears as desired, click **OK**.

Memo:

If the preview is covered by the dialog box and cannot be viewed, move the pointer over the title bar of the dialog box, and then drag the dialog box to a more convenient place.

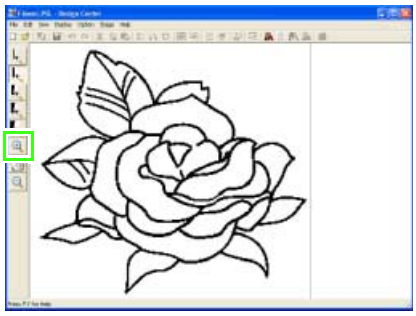
→ The line image is displayed in the Design Page.



Step 3 Editing the outlines (Line Image Stage)

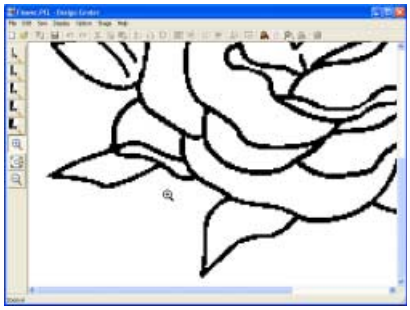
At this time, you might need to correct a few lines in the line image. You should make sure that regions are completely enclosed by either a single closed line or intersecting lines. Here, we will try to simply draw more leaf veins and to erase a number of leaves.
After editing the line image, we will continue to the Figure Handle Stage, where the line image is converted to a figure handle image.

1 This draws more leaf veins.



Click .

→ When the pointer is moved over the work area, the shape of the pointer changes to .



Click the leaf for which you want to draw more veins.

Memo:

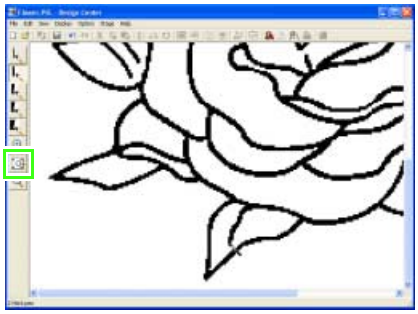
- *To further enlarge the line image, continue clicking the line image.*
- *To zoom in on a specific area, move the pointer near the desired area, and then drag the pointer diagonally over the desired area. A dotted box appears as you drag the pointer, and the selected area is enlarged when the mouse button is released.*
- *To zoom out from the line image, click* *, and then click the line image.*

Click .

→ When the pointer is moved over the work area, the shape of the pointer changes to .

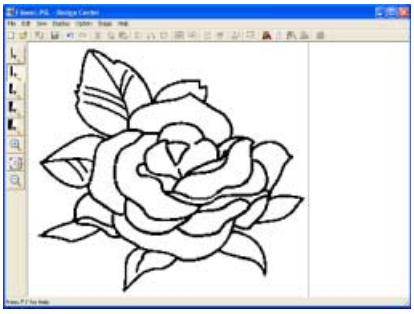
Hold down the left mouse button and drag the pointer to draw the leaf vein.

2 To erase the leaf.



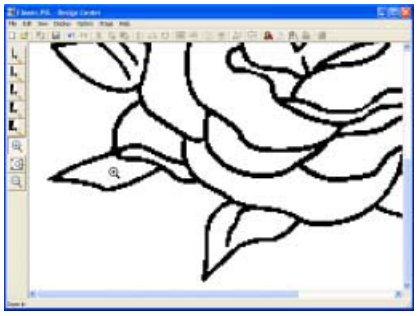
Click to view the entire line image.

→ The Design Page fills the Design Center window.



Click

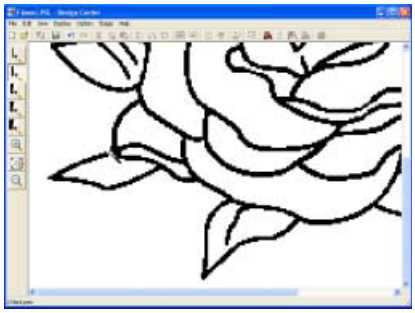
→ When the pointer is moved over the work area, the shape of the pointer changes to .



Click the leaf that you want to erase.

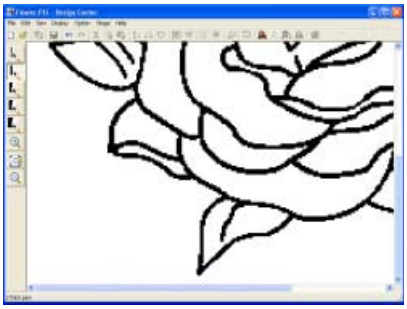
Click .

→ When the pointer is moved over the work area, the shape of the pointer changes to .



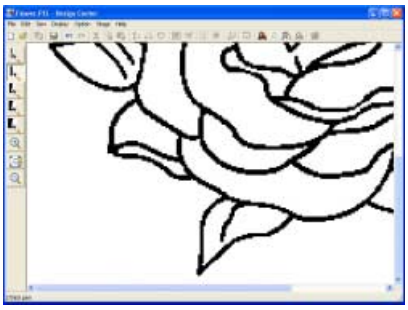
Move the pointer over the leaves that you want to erase, and then hold down the right mouse button.

→ The shape of the pointer changes to .



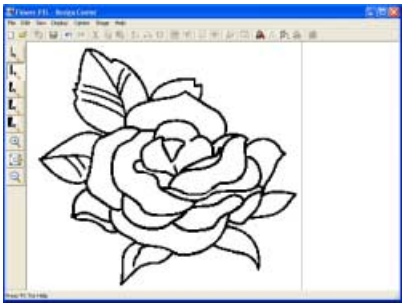
While holding down the right mouse, carefully drag the pointer to erase the line.

> **Memo:**
>
> *If you deleted part of the outline by mistake, you can cancel the immediate preceding operation by clicking **Edit – Undo**, or click on the **Undo** button . You have up to 5 undos in Design Center.*

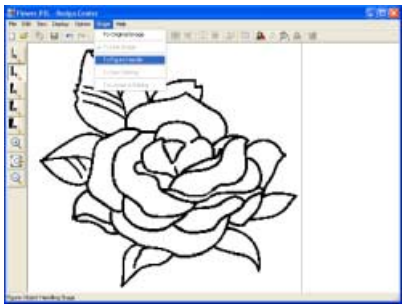


After editing the line image, click to view the entire line image.

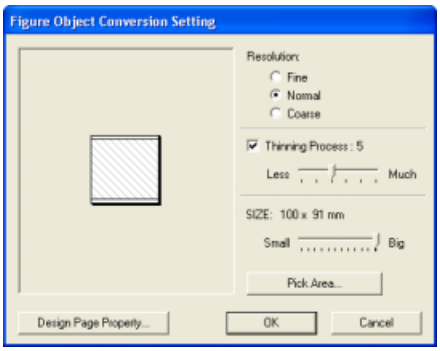
→ The Design Page fills the Design Center window.



3 **Convert the figure handle image to a pattern.**



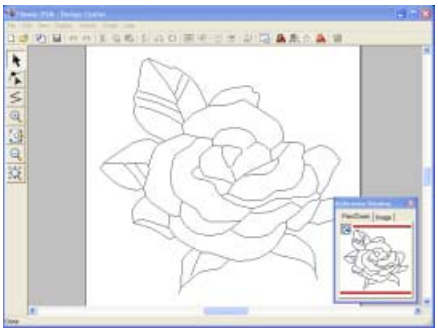
Click **Stage**, then **To Figure Handle**, or click .



For this exercise, leave the default setting. Click **OK**.

> **Memo:**
>
> *Various settings are available for converting the line image to a figure handle image. (For more details, refer to "Changing settings for converting to outlines" on page 199.)*

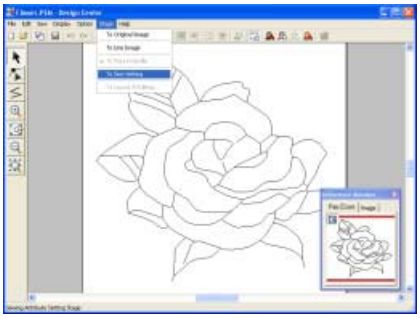
→ The line image is converted to a figure handle image.



Step 4 Specifying sewing attributes (Sew Setting Stage)

We are now going to apply sewing attributes to the different parts of the embroidery pattern.

1 Convert the figure handle image to a pattern.

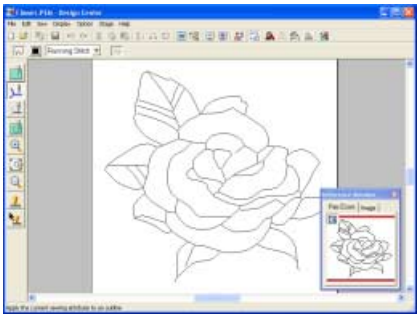


Click **Stage**, then **To Sew Setting** or click .

2 Specify the sewing attributes for the outline.

Click .

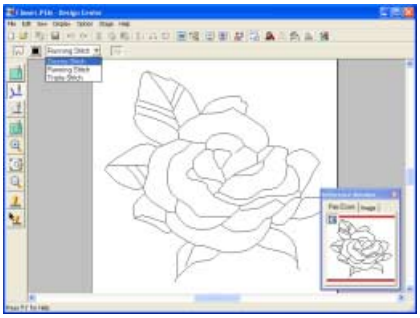
→ The shape of the pointer changes to , and the Sewing Attributes bar appears.



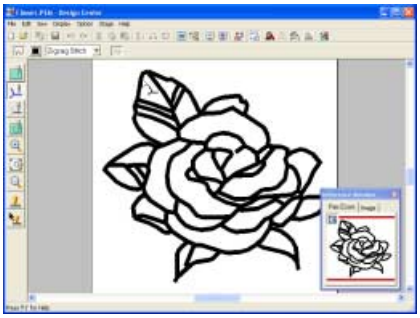
To change the outline color, click , select **BLACK**, and then click **Close**. (For this example, use the default color, **BLACK**.)

> **Memo:**
> *To move the dialog box to a more convenient place on the screen, move the pointer over the title bar, and then drag the dialog box.*

→ is displayed in the selected color.

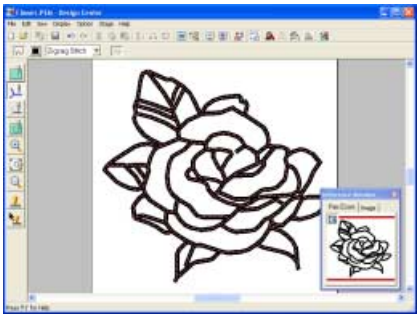


To change the sew type to the zigzag stitch, click , then **Zigzag Stitch**.



Click the outline of the pattern to apply the attributes (color, sew type and width) to it.

→ The image now appears with “marching lines” along the outline.



Memo:

*If the width of the outline is too thick, click **Sew**, then **Sewing Attribute**, and then specify a different zigzag stitch width.*

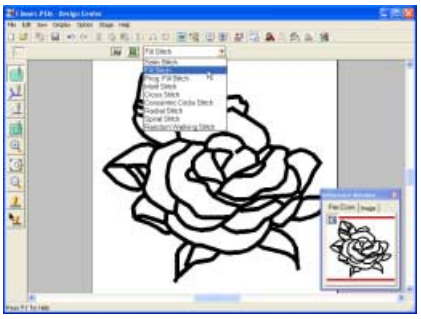
3 Specify the sewing attributes for the regions.

Click .

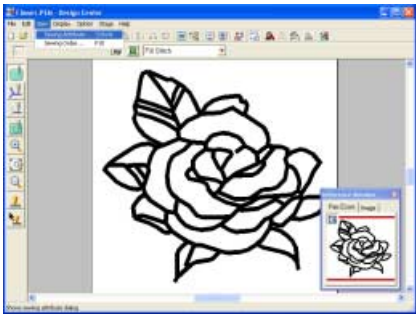
→ The shape of the pointer changes to , and the Sewing Attributes bar appears as shown below.

To specify the color of the regions in the leaves, click to select **LEAF GREEN** and then click **Close**.

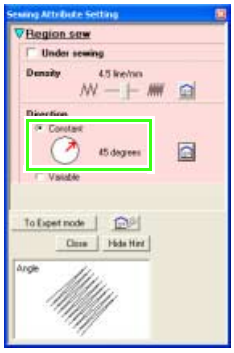
→ is displayed in the selected color.



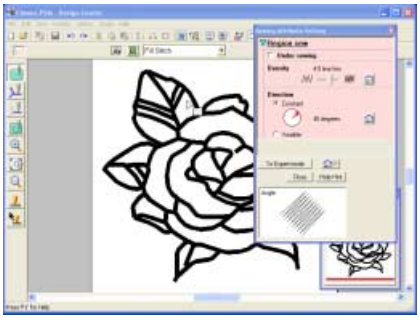
Specify the sew type of the regions in the leaves. For this example, use the default sew type, **Fill Stitch**.



To change the attributes for the fill stitch, click **Sew**, then **Sewing Attribute**.

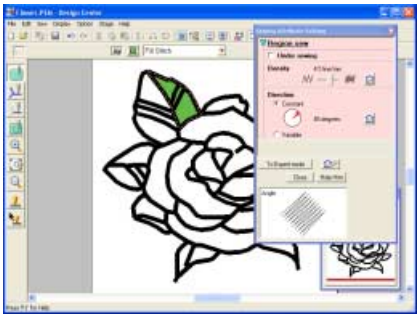


To change the direction of the fill stitching, click **Constant**, move the pointer over the red arrow inside of the circle, and then drag the red arrow to the desired angle.



Click the regions of the leaves to which you want to apply the attributes.

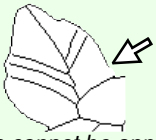
→ “Marching lines” appear around the selected region.



In the same way, specify the color and sew type for all regions of the leaves.

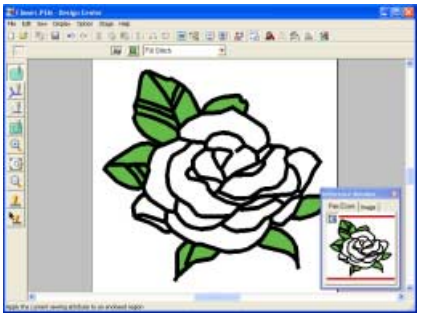
Note:

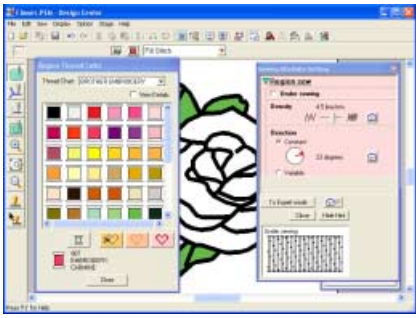
Sewing attributes cannot be applied to regions that are not fully enclosed, as shown in the illustration of the leaf below.



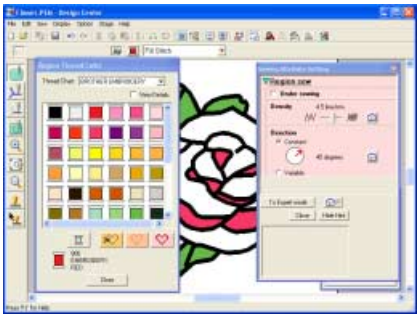
If the attributes cannot be applied to a region, go back to Figure Handle stage and make sure that region is closed. Edit any broken lines with the Point Edit tool. (For more details, refer to “Reshaping outlines” on page 205.)

→ After applying the sewing attributes to the leaves, the image appears as shown below.

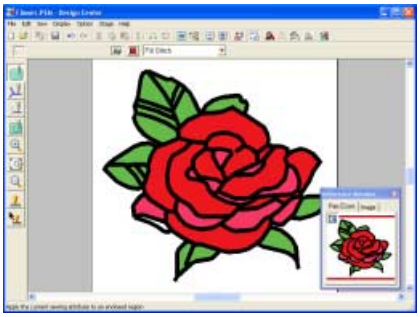




As with the leaves, specify the sewing attributes for part of the flower. Select the color **CARMINE**, set the stitching direction, and then click each region where you want to apply the attributes.



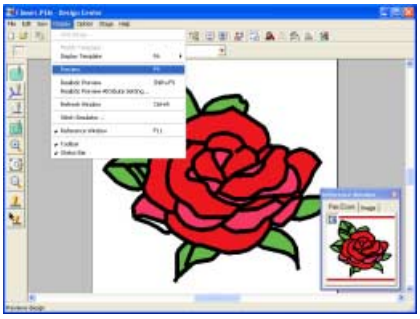
Specify the sewing attributes for the remainder of the flower. Select the color **RED**, set the stitching direction, and then click each region where you want to apply the attributes.



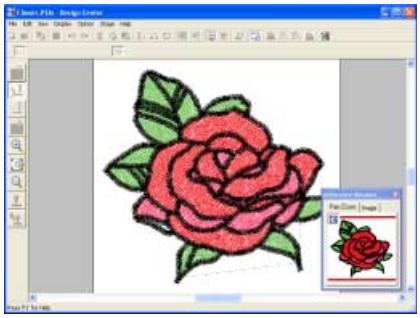
Step 5 Displaying a preview of the embroidery

Preview the stitching and finished embroidery.

1 Check the preview of the stitching.

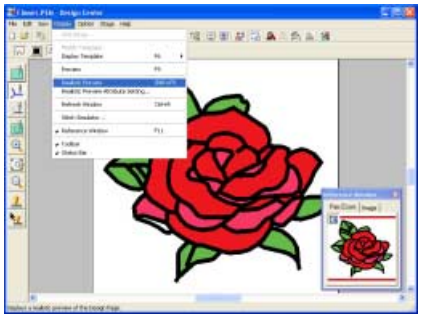


Click **Display**, then **Preview**.

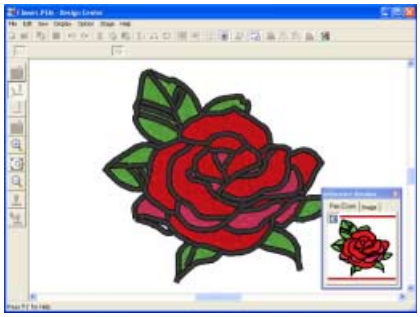


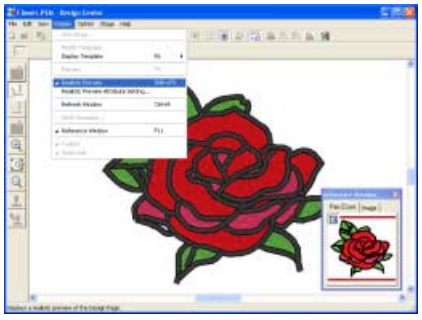
To return to the normal view after checking the preview, click **Display**, then **Preview**, or press the Esc key.

2 Check the preview of the finished embroidery.



Click **Display**, then **Realistic Preview**.

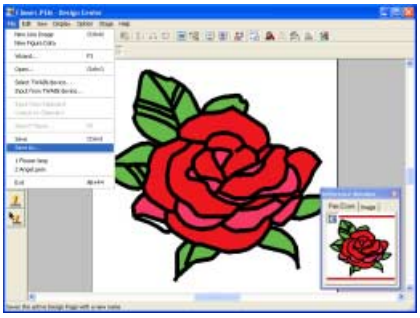




To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 6 Saving the embroidery pattern

The embroidery pattern that was created can be saved.



Click **File**, then **Save As**.

Type in the file name.

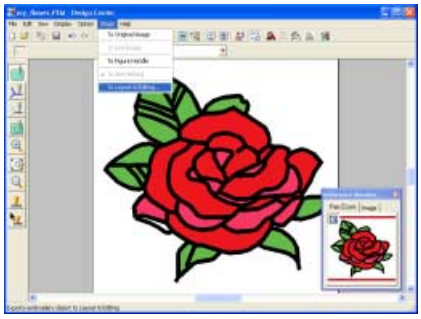
If necessary, change the drive and folder. Click **Save**.

Step 7 Transferring the design to an original card

By writing a pattern to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the pattern. For this example, we will transfer the pattern to an original card.

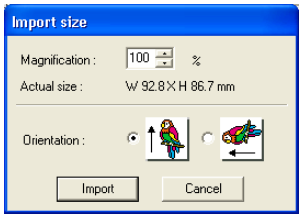
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1. **Import the embroidery pattern into Layout & Editing.**



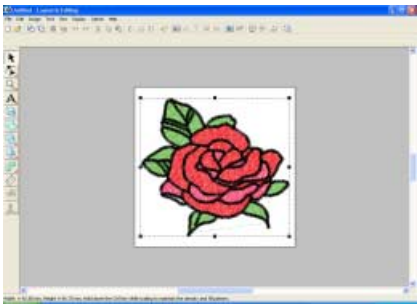
Click **Stage**, then **To Layout & Editing**, or click .

→ Layout & Editing is started up.

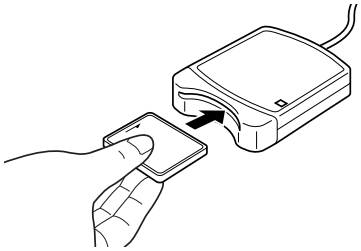


Click **Import**.

→ The embroidery pattern created in Design Center is imported into Layout & Editing.

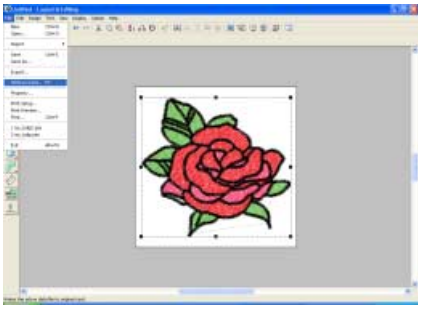


2 **Insert an original card into the USB card writer module.**



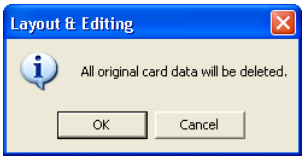
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

3 **Transfer the embroidery pattern.**



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

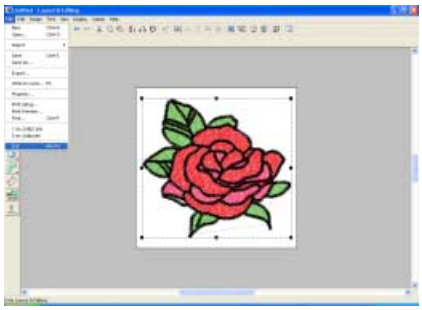
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

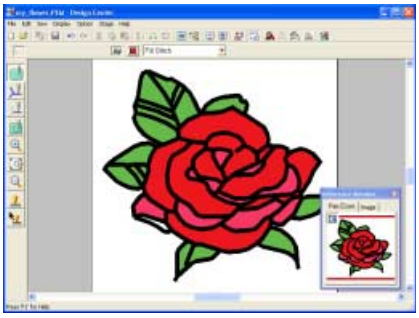
4 **Quit Layout & Editing.**



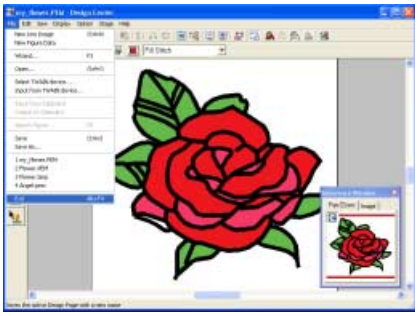
Click **File**, then **Exit**.

> **Memo:**
> *In Layout & Editing, the pattern is saved as a .pes file.*
> *To save the pattern, click **File** in Layout & Editing, then **Save as**.*

5 **Quit Design Center.**



Display the Design Center window.



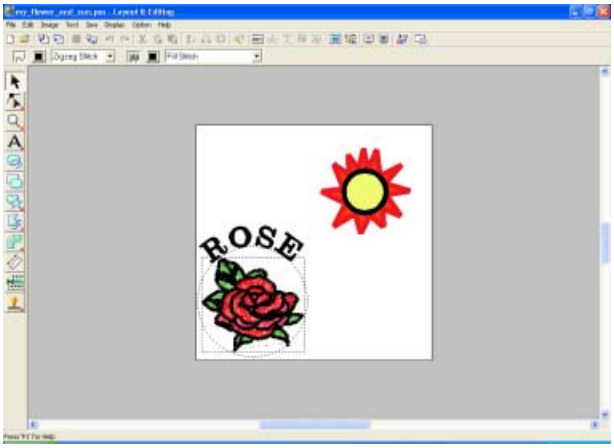
Click **File**, then **Exit**.

Arranging Embroidery Patterns (Layout & Editing)

In this section, we will import the embroidery pattern created in Design Center and combine it with other embroidery patterns in Layout & Editing.
This procedure will go through each step of the basic operation.

Step 1	Importing an embroidery pattern from Design Center
Step 2	Adding text
Step 3	Drawing shapes
Step 4	Displaying a preview of the embroidery
Step 5	Saving the embroidery design
Step 6	Transferring the design to an original card

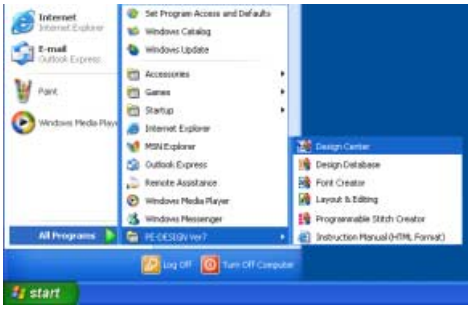
At the end of this session, the embroidery design will appear as shown below.



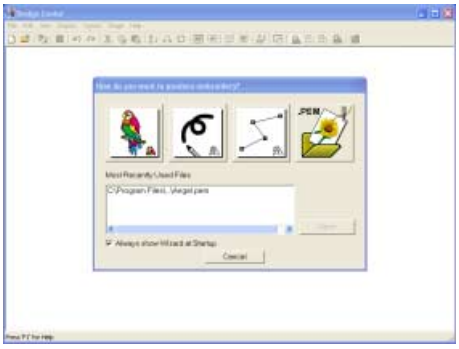
Step 1 Importing an embroidery pattern from Design Center

For this example, we will import the embroidery pattern (Flower.pem) created in Design Center in the section “Manually Creating Embroidery Patterns From Images (Design Center)”.

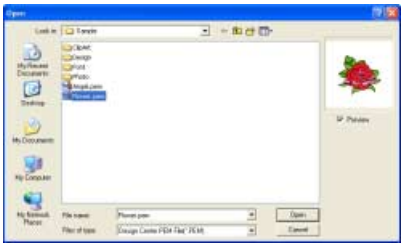
1 Open the embroidery pattern in Design Center.



Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Center**.

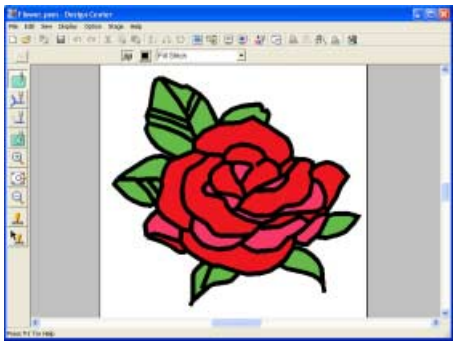


Click .

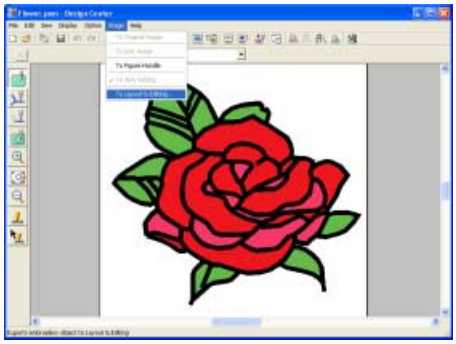


Select the **Flower.pem**, and then click **Open**, or double-click the file’s icon.

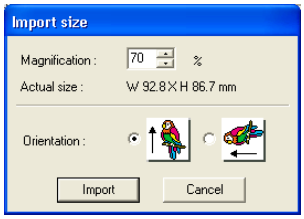
→ The embroidery pattern is displayed in the Design Page of Design Center.



2 Import the embroidery pattern into Layout & Editing.

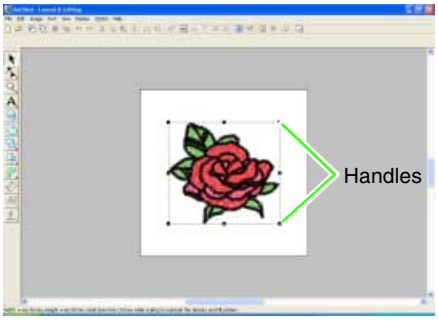


Click **Stage**, then **To Layout & Editing**, or click .



In the **Magnification** box, type or select **70%**, and then click **Import**.

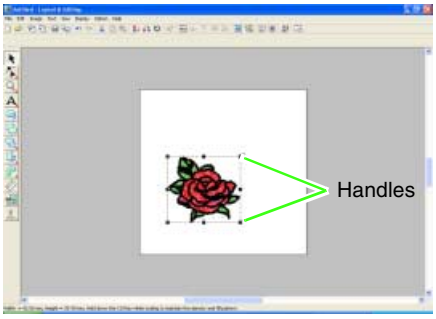
→ The embroidery pattern is imported into the Design Page of Layout & Editing.



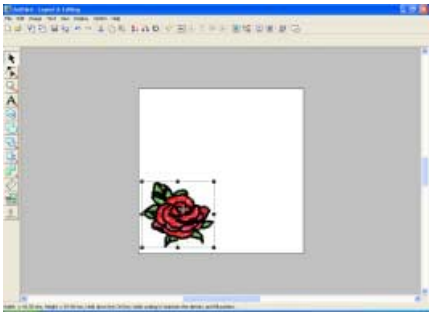
Memo:

- *The handles that appear around the embroidery pattern show that the pattern is selected.*
- *The status bar shows the dimensions (width and height) of the selected pattern.*

3 Adjust the embroidery pattern size and position.



Drag the handle to adjust the selected pattern to the desired size.

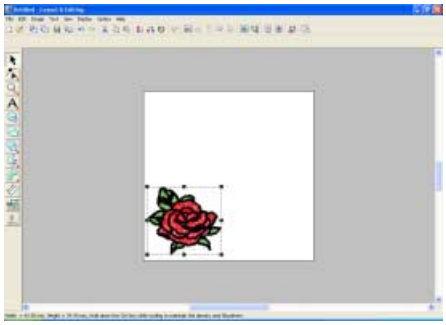


Move the pointer over the selected embroidery pattern, and then drag the pattern to the desired position.

Step 2 Adding text

First, we will draw a circle to be used as a guide for the text. Then, we will arrange text on the circle.

1 Select the shape to be drawn.

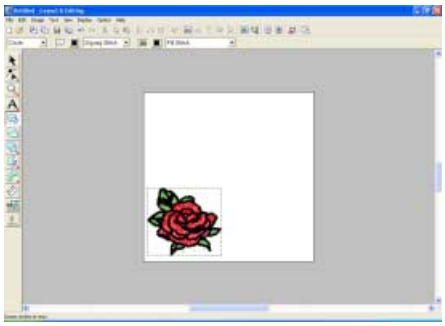


Click .

→ The shape of the pointer changes to , and the Sewing Attributes bar appears as shown below.

Memo:

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears.



For this example, use the default shape, **Circle**.

2 Since the circle will be used as a guide for the text, specify that it will not be sewn.

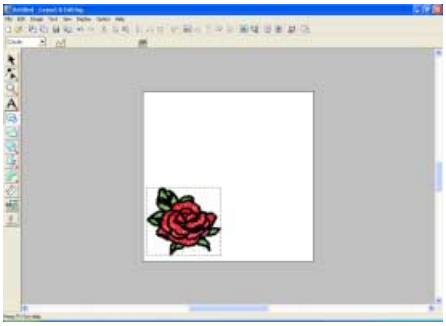
To cancel line sewing (outline), click .

→ The **Line color** button and the **Line sew type** selector disappear.

To cancel region sewing (inside area), click .

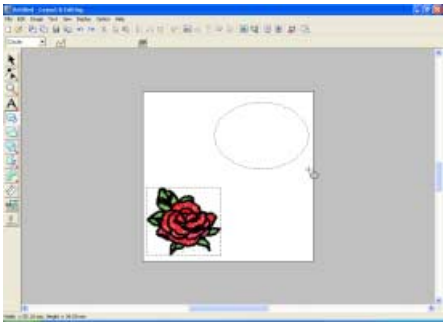
→ The **Region color** button and **Region sew type** selector disappear.

3 Draw the circle.

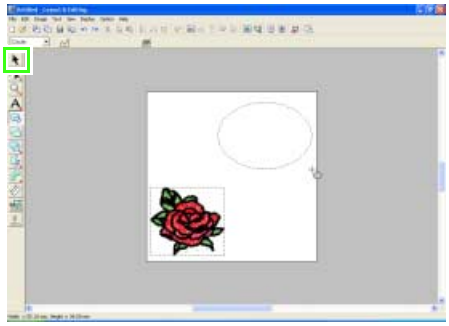


Drag the pointer in the Design Page.

→ The circle (outline and inside area) appears when the mouse button is released.

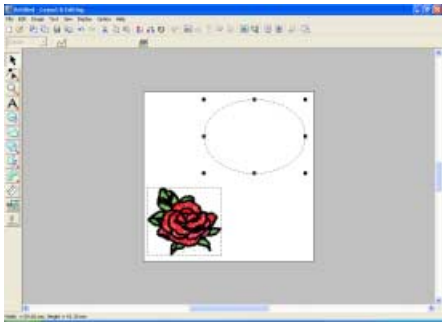


4 Adjust the circle size and position.

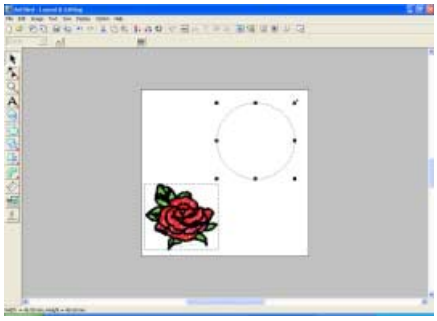


Click .

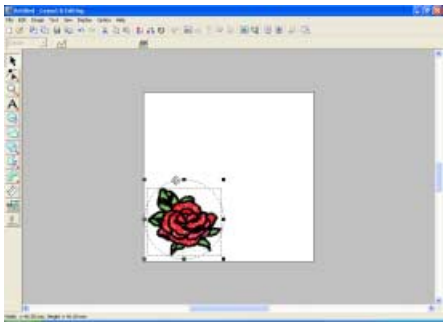
→ The shape of the pointer changes to .



Click the circle to select it.

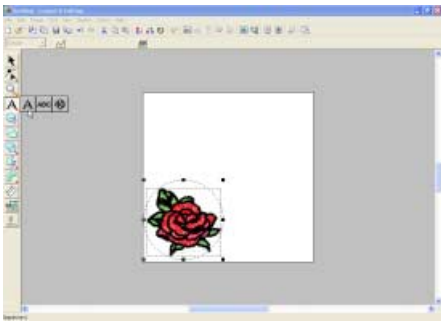


Drag a handle to adjust the circle to the desired size.



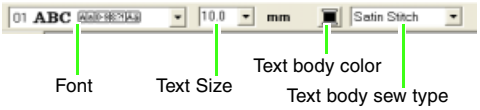
Move the pointer over the circle, and then drag the circle so that the flower pattern is centered in the circle.

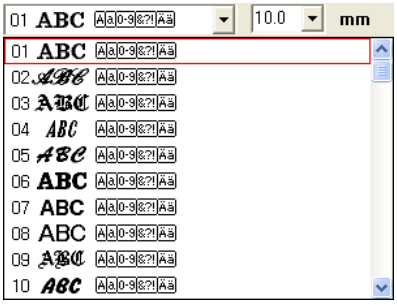
5 Add the text.



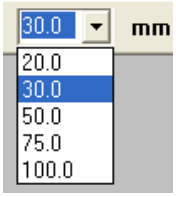
Click A, then A.

→ The shape of the pointer changes to I, and the Sewing Attributes bar appears as shown below.





Select the font. For this example, use the default font, **01**.

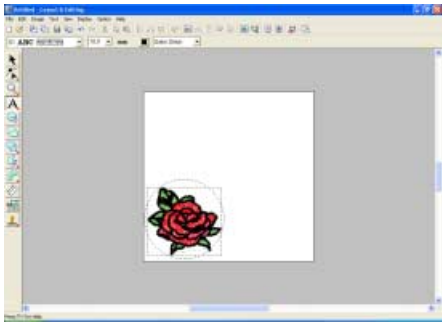


Specify the size. For this example, use the default size of **10.0 mm**.

> **Memo:**
> *The value indicates the height of the characters.*

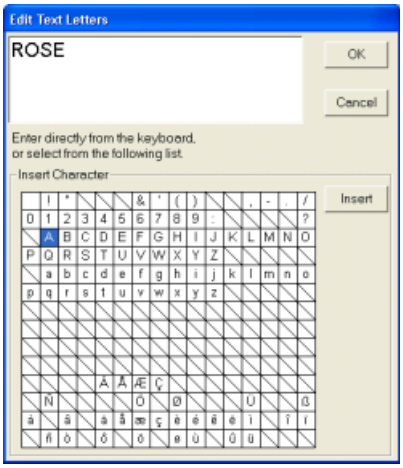
Select the color. For this example, use the default color, **BLACK**.

Select the sew type. For this example, use the default sew type, **Satin stitch**.



To enter the text, click anywhere in the Design Page.

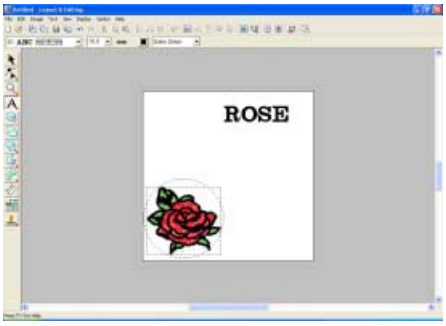
→ The **Edit Text Letters** dialog box appears.



Type in “ROSE”, and then click **OK**.

> **Memo:**
> *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*

→ The text is displayed in the Design Page.



Memo:

- *If you want to edit the entered text, click on the Tool Box, click the text to select it, and then select the menu command* ***Text – Edit Letters****. Edit the text in the* ***Edit Text Letters*** *dialog box that appeared.*
- *If you want to delete the text, select it, and then press the* Delete *key.*
- *If you want to change the text color, font or other attributes after entering the text, click on the Tool Box, click the text to select it, and then change the settings on the Sewing Attributes bar.*

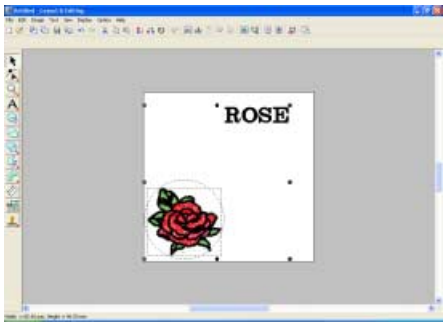
6 Arrange the text.

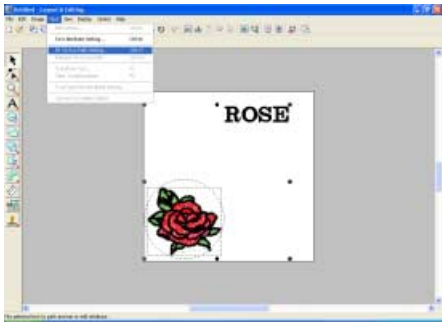
Click .

→ The shape of the pointer changes to .

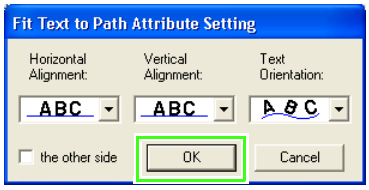
Click the text ROSE , hold down the Ctrl key, and then click the circle.

→ Both the circle and the text are selected.



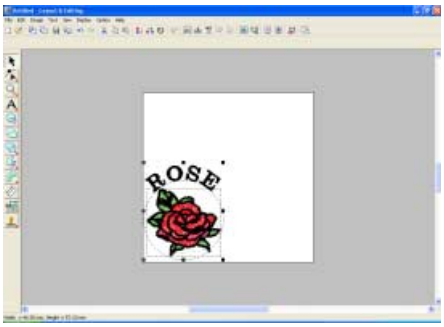


Click **Text**, then **Fit Text to Path Setting** menu.



For this example, use the default settings, and then click **OK**.

→ The text is now arranged on the circle.



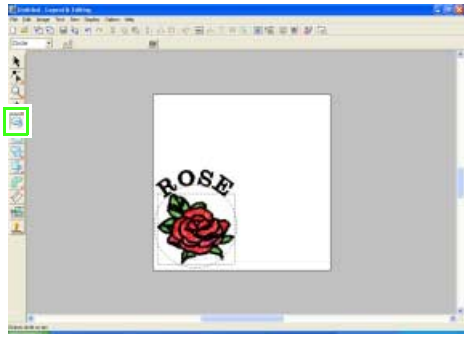
Memo:

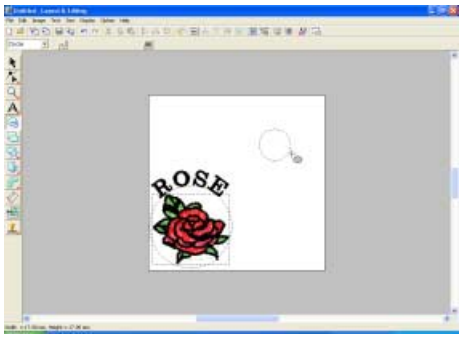
Once the text is arranged on the circle, you can move both patterns as a group, without affecting their relative position, or you can move the text alone to change its position on the circle. (For more details, refer to "Editing grouped patterns individually" on page 105.)

Step 3 Drawing shapes

The next object to add will be a sun. We will first draw a circle to get the basic shape, and then change the color, sew type and width of the outline and the color and sew type for the inside area.

1 Draw the circle for the center of the sun.

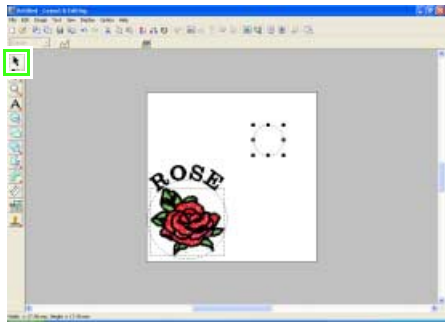




Click , and while holding down the **Shift** key, drag the pointer in the Design Page.

Note:

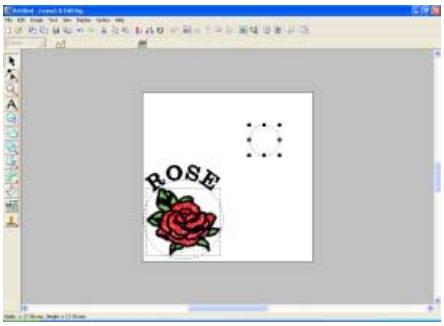
By holding down the Shift key, a perfect circle is created.



Click , and then click the circle to select it.

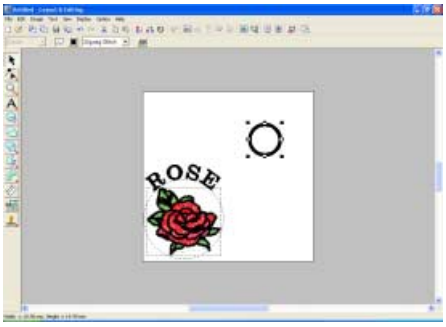
Memo:

If you need to modify the size of the circle, select it, and then drag a handle at one of the corners.

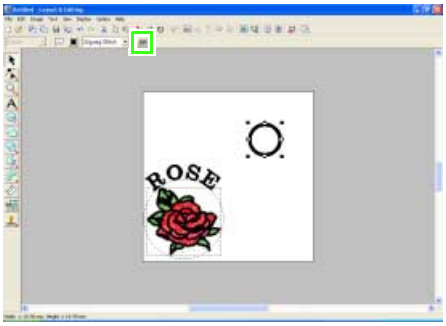


To change the color and sew type for the outline, click .

→ The Sewing Attributes bar appears as shown below.

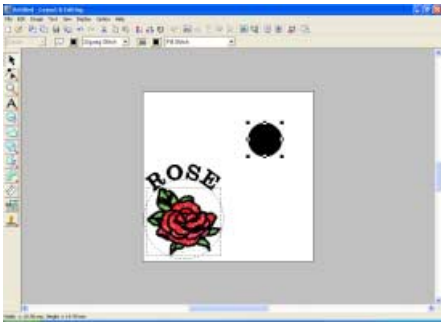


For this example, use the default settings, **BLACK** and **Zigzag Stitch**.



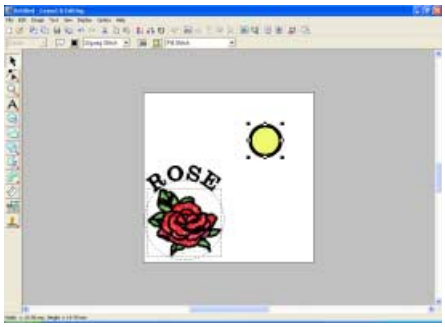
To change the color for the region, click .

→ The Sewing Attributes bar appears as shown below.

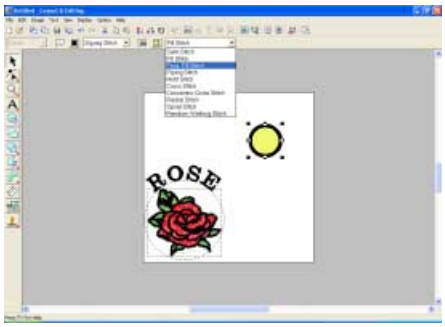


For this example, select the color **LEMON YELLOW**.

→ The embroidery pattern appears as shown below.

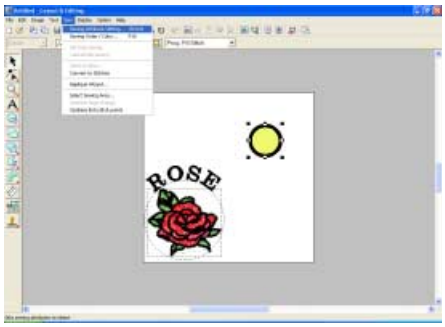


2 Select a programmable fill stitch for the sew type of the region.

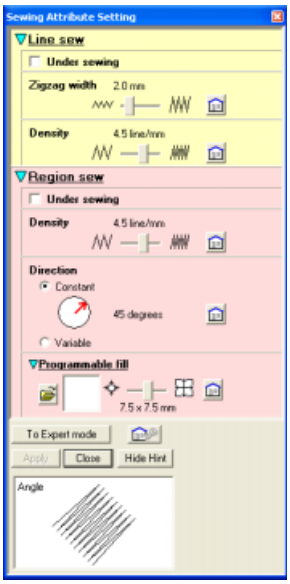


Click

, then **Prog. Fill Stitch**.

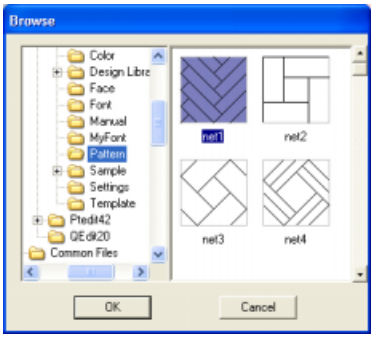


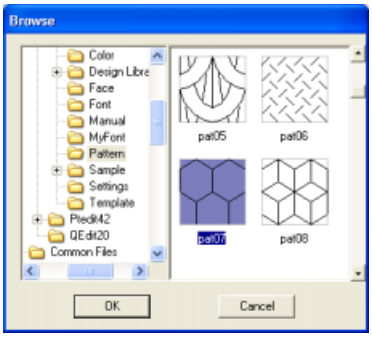
Click **Sew**, then **Sewing Attribute Setting** menu.



Click under **Programmable fill.**

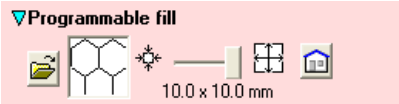
→ The **Browse** dialog box appears, allowing you to preview and browse through the existing programmable fill stitch patterns.





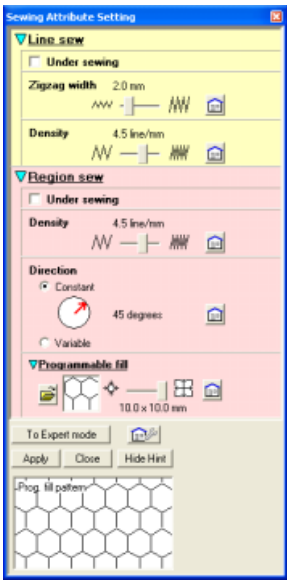
Select **pat07**, and then click **OK**.

→ The dialog box closes and a preview of the selected stitch appears at the bottom of the **Sewing Attribute Setting** dialog box.



To change the size, move the slider to the right until it is set to **10.0** × **10.0 mm** (**0.39** × **0.39 inch**).

→ The **Sewing Attribute Setting** dialog box appears as shown below.

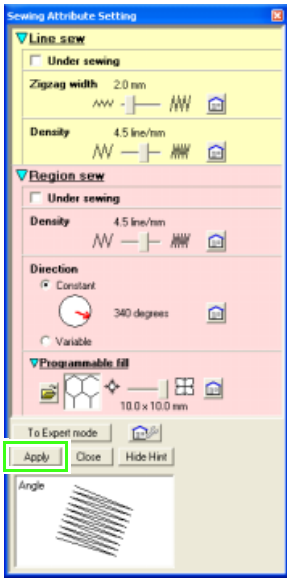


Memo:

- *The preview of the stitch pattern at the bottom of the dialog box changes each time a setting is changed. This allows you to see how each setting affects the pattern.*
- *The width and height of the pattern can be changed separately. (For more details, refer to "Programmable fill stitch" on page 157.)*

To change the direction of the fill stitching, click **Constant**, move the pointer over the red arrow inside of the circle, and then drag the red arrow until **340 degrees** is selected.

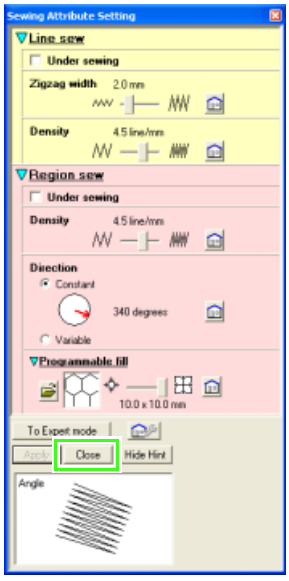
→ The **Sewing Attribute Setting** dialog box appears as shown below.



Click **Apply**.

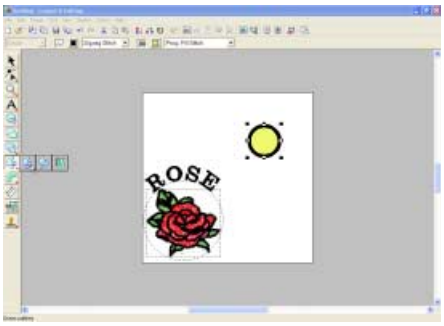
→ The stitch and its settings are applied to the inside area of the selected circle.

Note:
The selected sewing attributes will be applied to the regions of every pattern that will be drawn, until the attributes are changed.



Click **Close**.

3 Use the Outline tool to draw the rays of the sun.



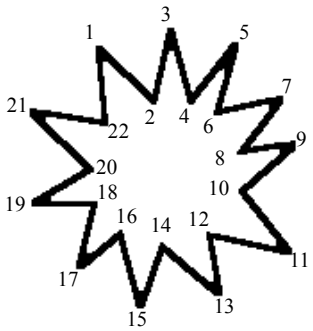
Click , then .

→ The shape of the pointer changes to , and the Sewing Attributes bar appears as shown below.

Note:
*Make sure that **Close path** is selected in the **Path shape** selector. If **Close path** is selected, the first point and the last point are automatically joined to form a region. If **Open path** is selected, the pattern will not have a region, therefore sewing attributes can only be applied to the line. To draw a simple line, select **Open path**.*

Select the color and sew type for the outline. For this example, select the color **RED**, and use the default sew type, **Zigzag Stitch**.

Select the color of the region. For this example, select the color **VERMILION**, and sew type of **Fill Stitch**.

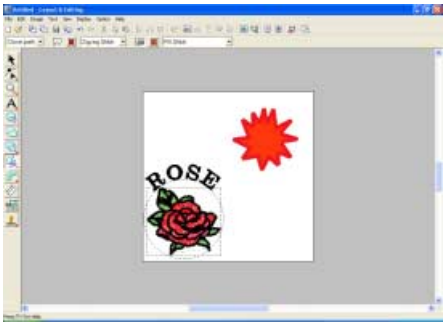


To draw the rays of the sun around the circle using the circle as a guide, click in the Design Page to select the start point (1), continue clicking in the Design Page to select every other corner (2 through 21), and then double-click at 22.

Memo:

To remove the last point that was entered, click the right mouse button before double-clicking.

→ The embroidery pattern appears as shown below.



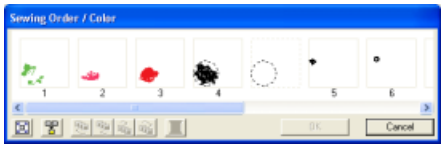
Memo:

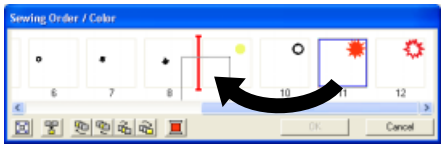
- *If you want to delete the pattern, click on the Tool Box, click the pattern to select it, and then press the* Delete *key or select the menu command* ***Edit - Delete****.*
- *If you want to change the pattern shape, color, or sew type after drawing it, click on the Tool Box, click the pattern to select it, and then change the settings on the Sewing Attributes bar or in the* ***Sewing Attribute Setting*** *dialog box.*

4 Change the sewing order so that the circle for the sun is sewn on top of the sun's rays.

Click **Sew**, then **Sewing Order/Color** or click .

→ The **Sewing Order/Color** dialog box appears.



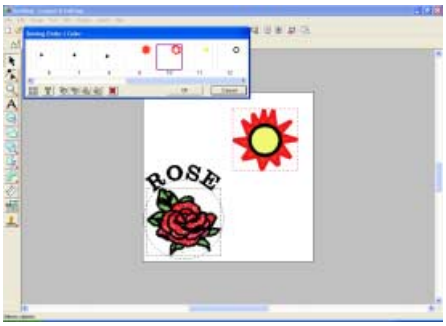


Click the frame containing the region for the sun's rays to select it, and then drag the frame to the left of the circle for the sun. (This part of the sun will be sewn first.)

Memo:

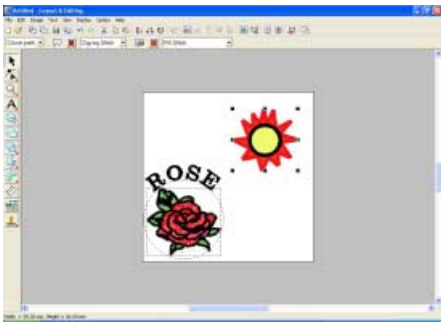
When a frame in the ***Sewing Order/Color*** *dialog box is selected, the buttons at the bottom of the dialog become available. The sewing order of the selected pattern can also be changed by using these buttons. (For more details, refer to "Editing the sewing order" on page 171.)*

Click the frame containing the outline for the sun's rays to select it, and then drag the selected frame between the region for the sun's rays and the circle for the sun.



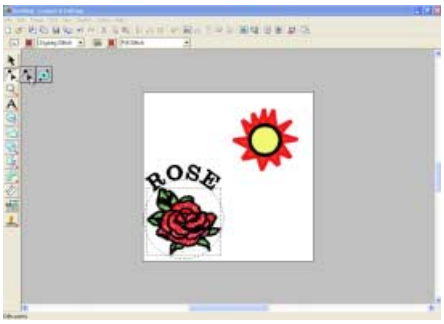
Click **OK**.

→ The sun's rays will be sewn before the sun (circle).



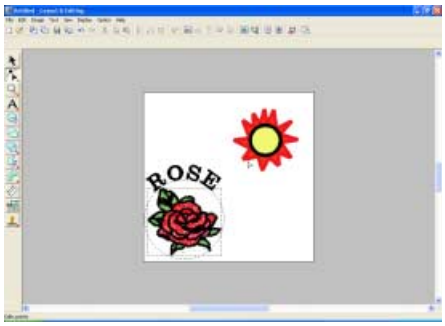
If necessary, move the circle so that it looks centered relative to the sun's rays.

5 Adjust the shape of the sun's rays.



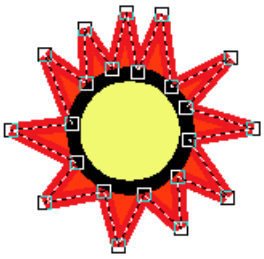
Click , then .

→ The shape of the pointer changes to .



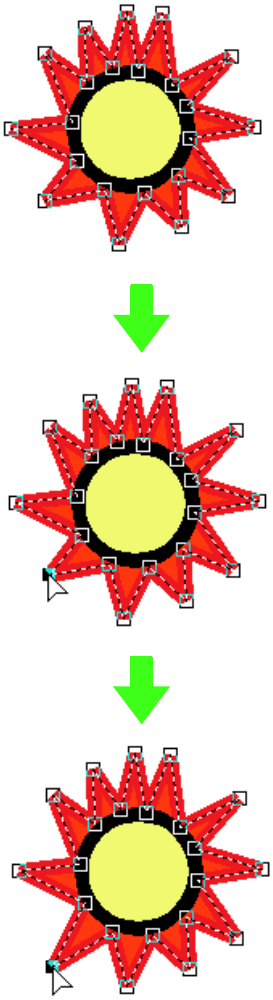
Click the sun's rays to select it.

→ The points in the pattern appear as small empty squares.



Click the point that you want to move.

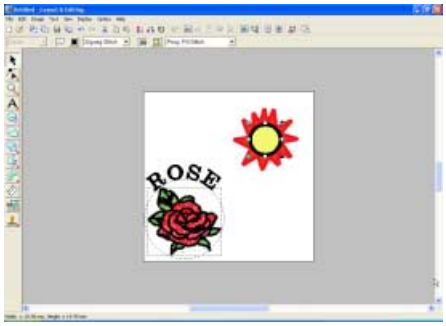
→ The selected point appears as a small black square.



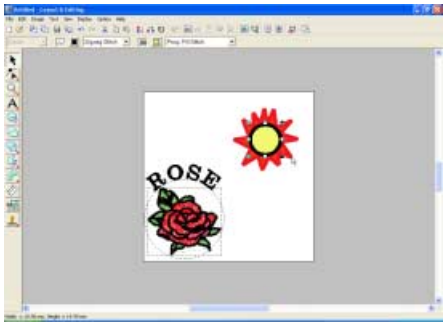
Drag the point to the new position.

> **Memo:**
> *Points can be added or deleted. (For more details, refer to "Inserting points" on page 107 and "Deleting points" on page 108.)*

6 **Specify hole sewing for the sun's rays so that the area for the sun (circle) will not be sewn twice.**

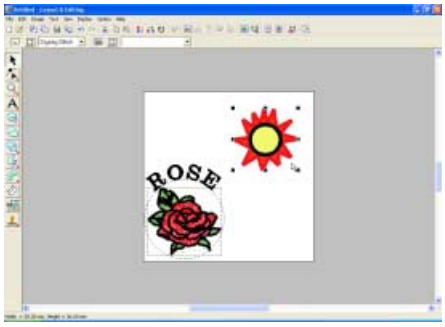


Click on the Tool Box, and then click the sun's circle to select it.

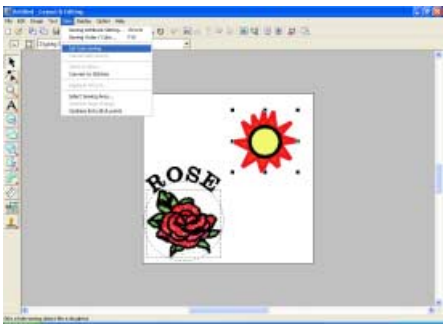


Hold down the Ctrl key and click the sun's rays.

→ The circle and the broken line are now selected together.



> **Memo:**
> *If it is difficult to select the two patterns, drag the pointer to draw a selection frame around the patterns.*



Click **Sew**, then **Set Hole Sewing** menu.

→ The following message appears.

Note:
Hole sewing cannot be applied if one of the patterns is not completely enclosed within the other pattern.

Click **OK**.

Note:
Patterns with hole sewing set cannot be moved separately. To adjust their relative positions, click ↖ *on the Tool Box, select one of the patterns, and then cancel hole sewing by selecting the menu command* ***Sew – Cancel Hole Sewing****.*

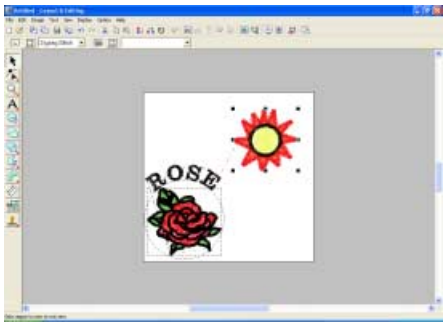
Memo:
For details on specifying the setting so that the same region is not sewn twice, refer to "Preventing overlapping stitching (hole sewing)" on page 166.)

Step 4 Displaying a preview of the embroidery

Preview the stitching and finished embroidery.

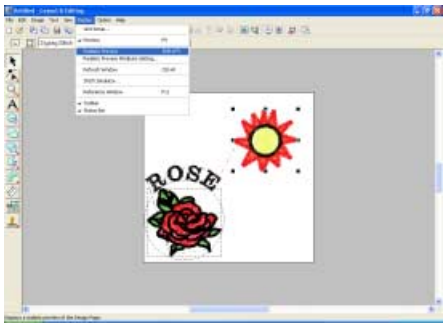
1 Check the preview of the stitching.

Click **Display**, then **Preview**.

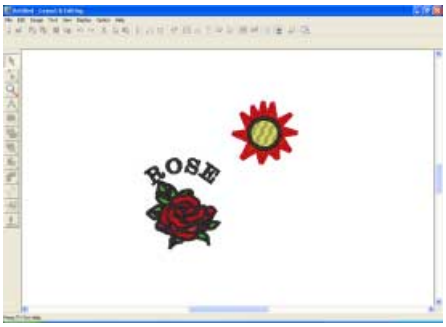


To return to the normal view after checking the preview, click **Display**, then **Preview** menu, or press the Esc key.

2 Check the preview of the finished embroidery.



Click **Display**, then **Realistic Preview**.



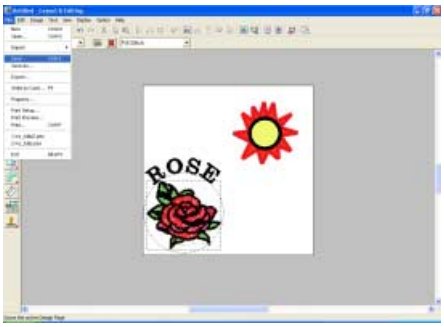
Memo:

To preview the finished embroidery for a specific pattern in the design, click ↖ *and select the pattern, and then click* ***Display****, then* ***Realistic Preview****.*

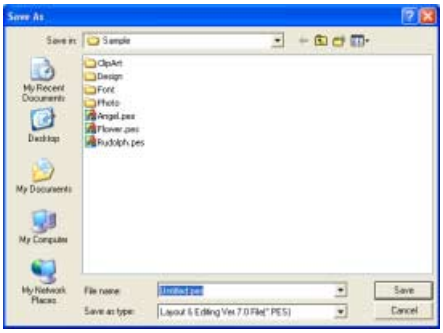
To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 5 Saving the embroidery design

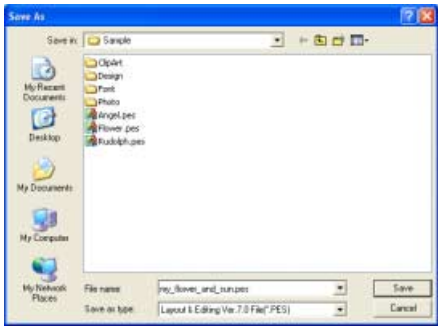
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



Click **Save**.

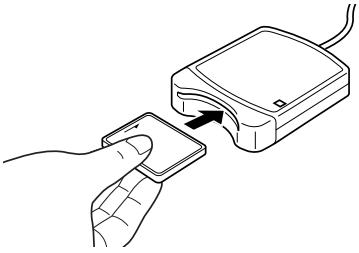
Step 6 Transferring the design to an original card

By writing a design to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the design. For this example, we will transfer the design to an original card.

Memo:

For other media you may use include floppy disks, compact flash memory, USB media and etc.

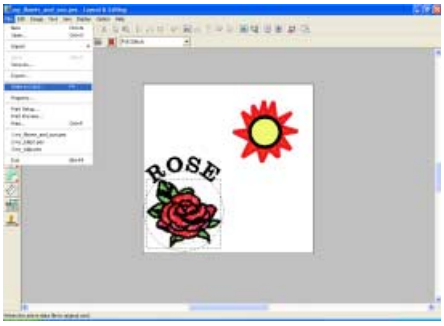
1. **Insert an original card into the USB card writer module.**



Note:

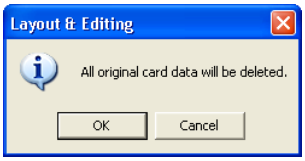
The original card is inserted correctly when you hear it snap into place.

2 Transfer the embroidery design.



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

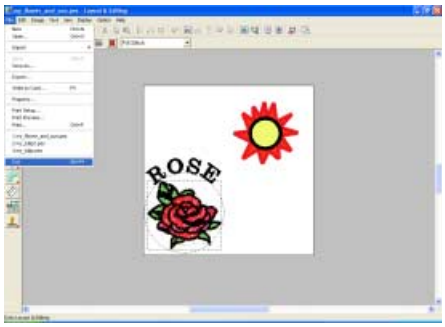
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Managing Embroidery designs (Design Database)

Design Database is used to organize embroidery design files so that you can easily view the file information for the embroidery designs.
Here, we will practice the basic operations up to checking the embroidery design file and opening Layout & Editing. Also, as handy functions, we introduce a method for printing a list of embroidery design files (Case 1) and a method for searching embroidery design files (Case 2).

Step 1	Checking embroidery design files
Step 2	Opening an embroidery design file in Layout & Editing

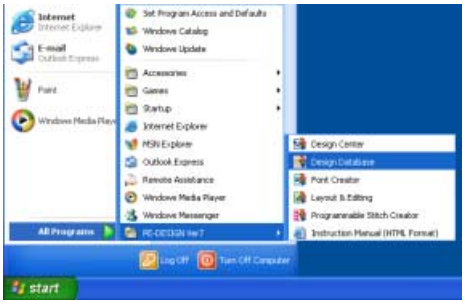
Case 1	Printing a catalog of embroidery designs

Case 2	Searching for an embroidery design

Step 1 Checking embroidery design files

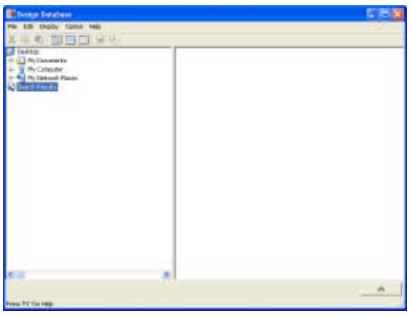
The embroidery design file is checked in the content pane. You can switch to large or small thumbnails or to detail display.

1 Start up Design Database.

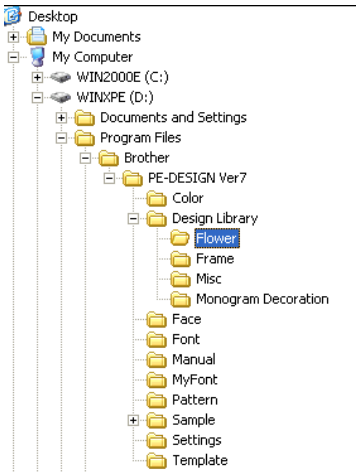


Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Database**.

→ The Design Database window appears.

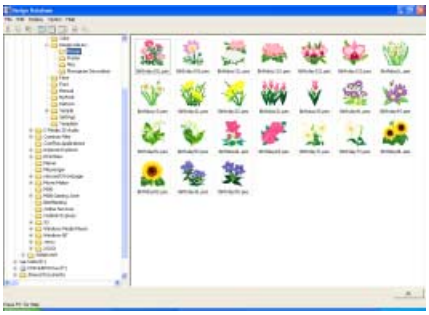


2 Select the folder.



Click [+] in front of the name of the drive where the application is installed, then **Program Files**, then **Brother**, then **PE-DESIGN Ver7**, and then click the folder containing the embroidery design files that you want to check.

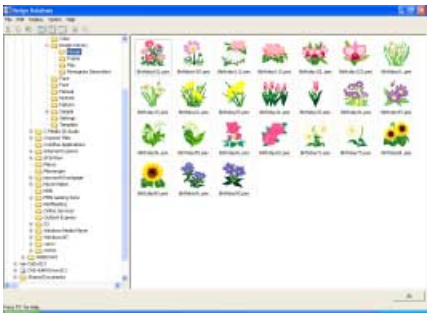
→ All embroidery design files in the folder are displayed in the contents pane.



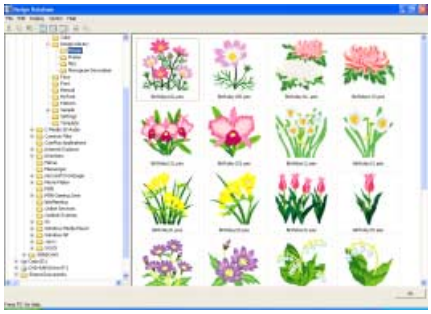
Memo:

The displayed files have the following extensions.
.pes, .phc, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, .xxx

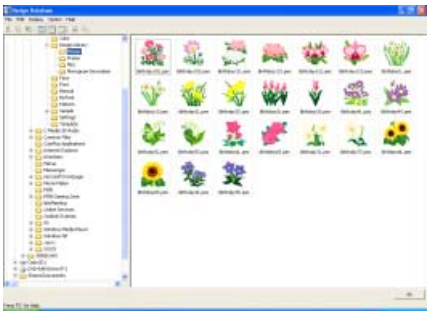
3 Switch the display in the content pane and check the file.



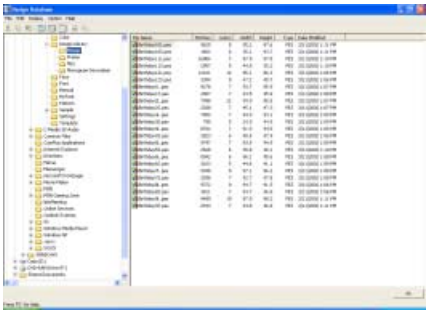
Either click **Display**, then **Large Thumbnails** or **Small Thumbnails**, **Details** or click the tool bar or , .



Large Thumbnails

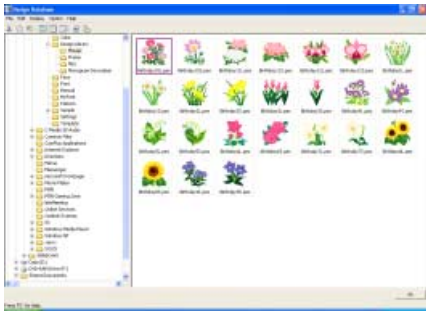


Small Thumbnails

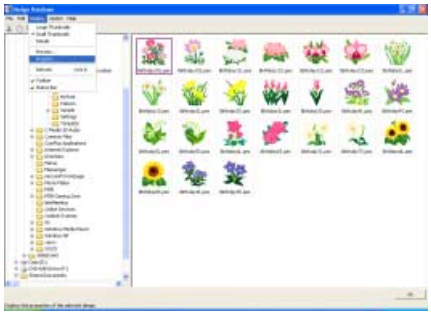


Details

4 If necessary, check the sewing information.



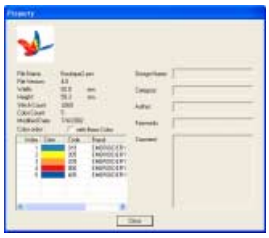
Select an embroidery design file.



Click **Display**, then **Property** or click .

Non-PES files and PES files from version 3.0 or earlier

PES files
(version 4.0 or later)

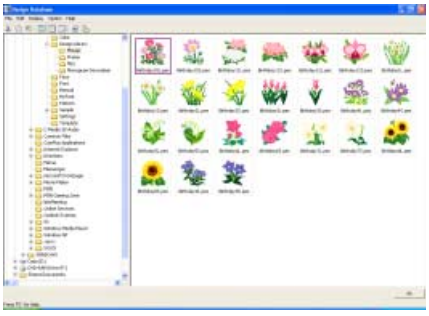


When you are finished viewing the information, click **Close**.

> **Memo:**
> *The thread colors are displayed as basic colors. Thread colors in .pes files are displayed according to the thread colors set when the file was read by Layout & Editing. To switch to display with basic colors, select the **with Basic Color** check box.*

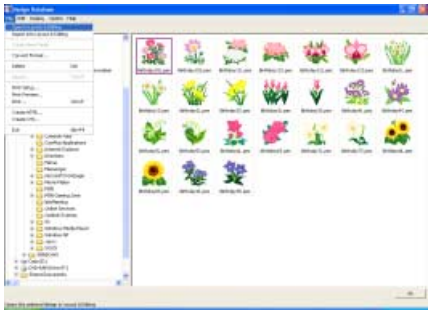
Step 2 Opening an embroidery design file in Layout & Editing

You can easily open any selected .pes file in Layout & Editing.



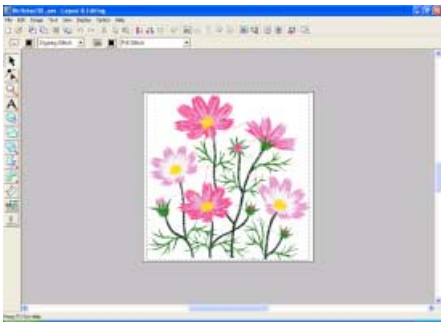
Select the embroidery design file that you want to open.

> **Note:**
> *Be sure to select a folder that contains .pes files.*



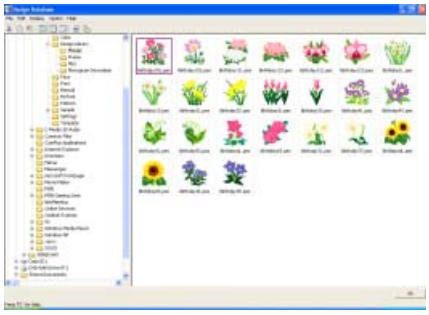
Click **File**, then **Open in Layout & Editing**.

→ The selected embroidery design appears in a new Design Page of the Layout & Editing window.

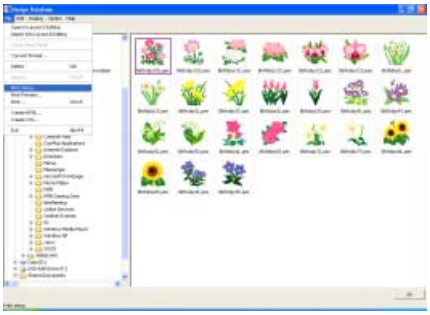


Case 1 Printing a catalog of embroidery designs

Information, such as the file size, stitch count and thread colors, in addition to an image of the embroidery can be printed for all patterns in a folder.

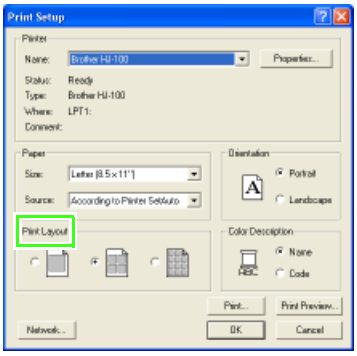


Select the folder containing the embroidery designs that you want to catalog.

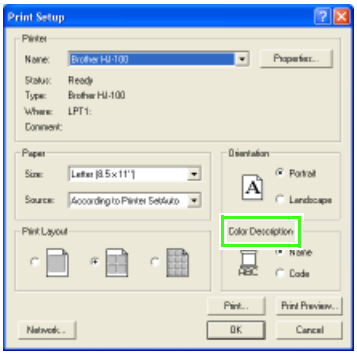


Select the file(s) to be printed, and then click **File**, then **Print Setup**.

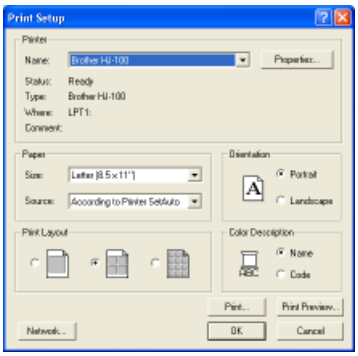
→ A **Print Setup** dialog box similar to the one shown below appears.



Select whether each design is printed on a separate page, 4 designs are printed on a page or 12 designs are printed on a page.



Under **Color Description** select whether the thread colors appear as the name of the color or the brand and thread number.

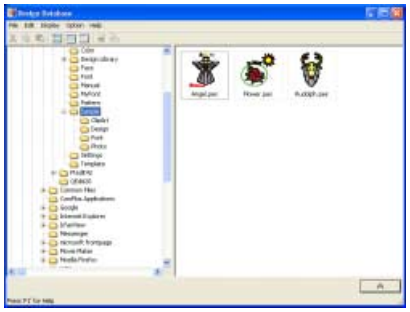


Click **Print**.

→ Images of the selected designs are printed.

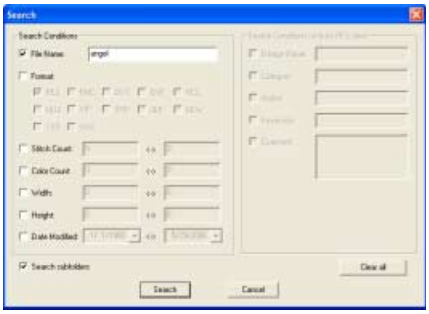
Case 2 Searching for an embroidery design

Search conditions can be specified to quickly search for embroidery design files (.pes, .phc, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd or .xxx) in a folder.
In this example, we will specify a file name and file format to search for a specific pes file (angel.pes).

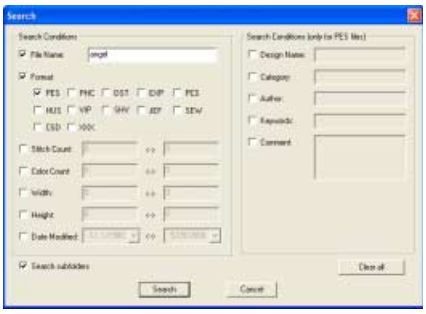


Select the folder that you want to search.

Click **File**, then **Search**.



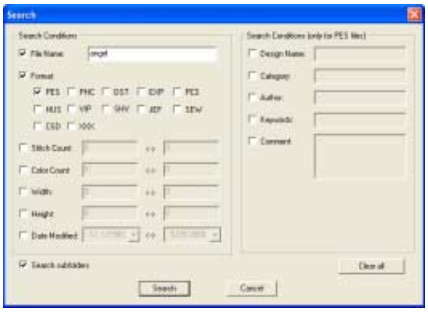
Select the **File Name** check box, and then type in “angel”.



Select the **Format** check box, and then select the **PES** check box.

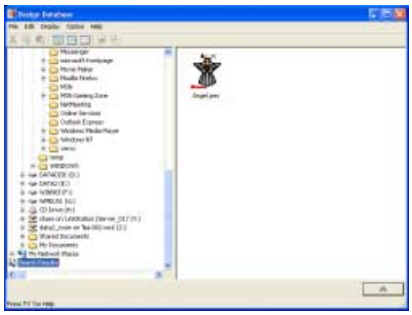
Memo:

- *To also search through the subfolders (folders within the selected folder), select the **Search Subfolders** check box.*
- *To clear the search conditions, click **Clear all**.*
- *For details on the search conditions, refer to “Searching for an Embroidery Design” on page 280.*



Click **Search**.

→ A list of files matching the specified search conditions appears.



Entering Monograms (Layout & Editing)

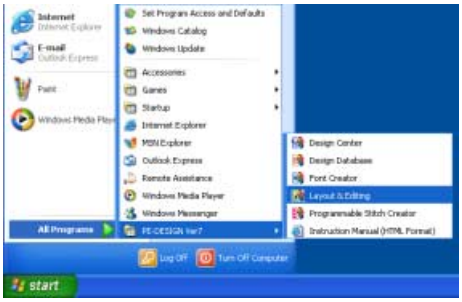
Using the monogram function, ornamented characters arranged in a decorative pattern can be created. This procedure will go through each step of the basic operation.

Step 1	Creating monograms
Step 2	Changing the font and character size
Step 3	Changing the thread color and sew type
Step 4	Adjusting the size and position of the decorative pattern
Step 5	Saving the embroidery design
Step 6	Transferring the design to an original card

Step 1 Creating monograms

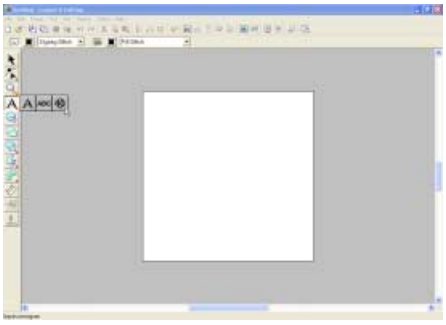
As an example, we will create a monogram with a decorative pattern added to the letters “ABC”.

1 Start up Layout & Editing.



Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

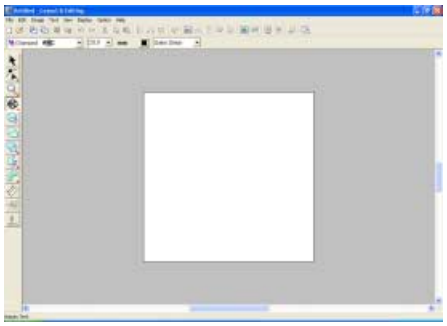
2 Select the monogram tool.



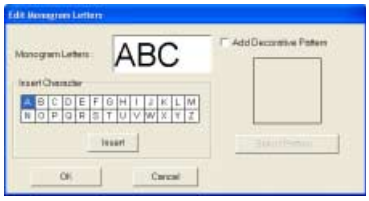
Click A, then ABC.

Diamond and script fonts are exclusively used for monograms. But you can use other built-in fonts and True Type Fonts.
The illustration above allows you to change the font, size and sew type.

3 Enter the letters.



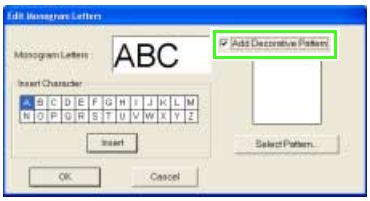
Click in the Design Page where you want the monogram to appear.



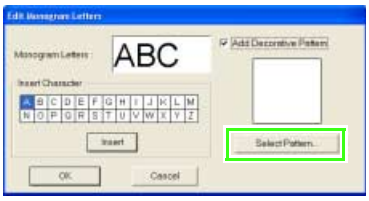
Type “ABC” using the computer key board.

Note:

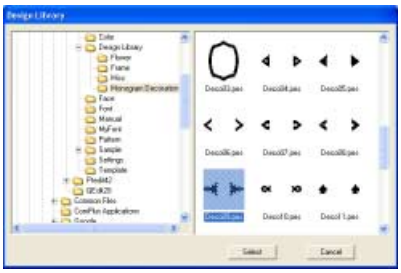
- *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it.*
- *You cannot insert line feeds. If you press the Enter key, the dialog closes and the monogram pattern is displayed in the Design Page.*



To add a decorative pattern around or at the sides of the monogram, select the **Add Decorative Pattern** check box.

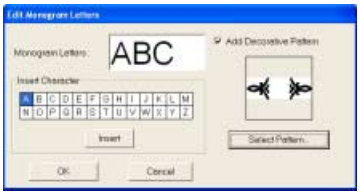


Click **Select Pattern**.



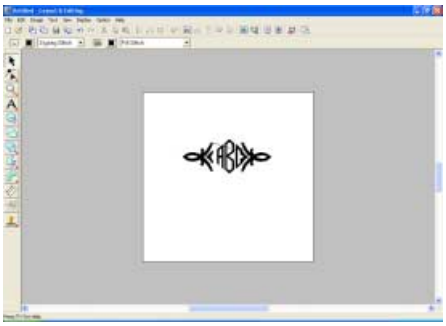
Click a decorative pattern to select it, and then click **Select**.

→ The selected pattern appears in the preview box of the **Edit Monogram Letters** dialog box.



Click **OK**.

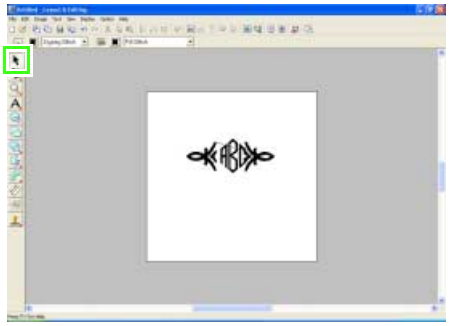
→ The monogram is displayed in the Design Page with the selected decorative pattern.



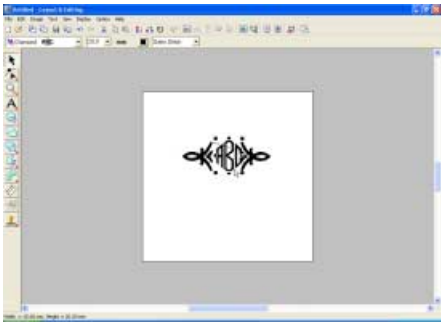
Step 2 Changing the font and character size

Next, we will change the font and character size of the monogram.

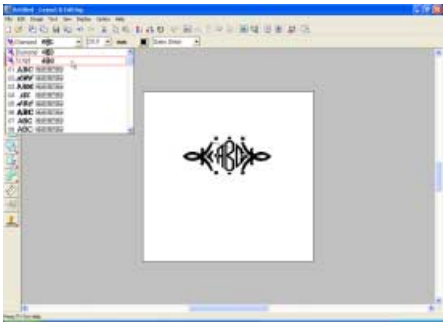
1 Select the monogram to be edited.

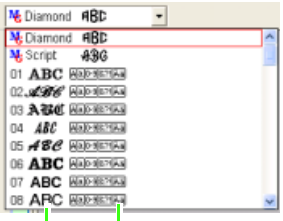


Click . Then click the monogram.



2 **Change the font by clicking on the pulldown arrow and selecting a font.**





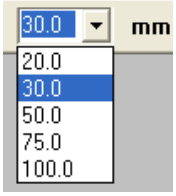
Monogram font name

Monogram font sample

Memo:

Diamond and Script are fonts exclusively for monograms. You can also use the built-in fonts or True Type fonts. (For more details, refer to "Entering Monograms" on page 140.)

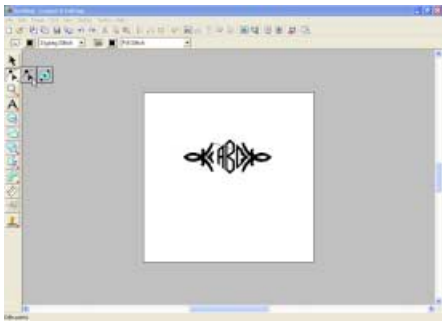
3 **Change the character size.**



Step 3 Changing the thread color and sew type

The thread color and sew type for the monogram can be changed.

1 **Select the character to be edited.**



Click , then .

Then Click the monogram.

To select a single character, click the point for the character that you want to select.

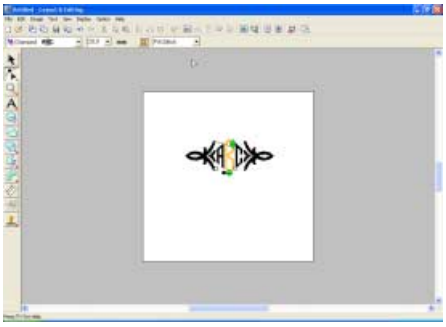
2 Change the sewing attributes.

Click , and select color.

→ The thread color for the selected character is changed.

Click the pulldown arrow on the right side, and then select a sew type.

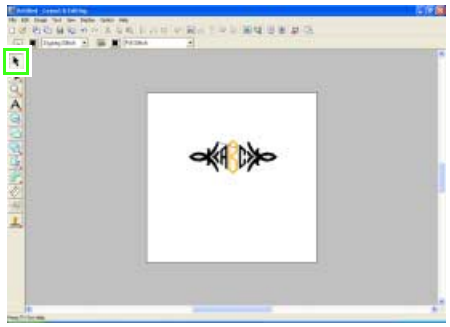
→ The thread sew type for the selected character is changed.



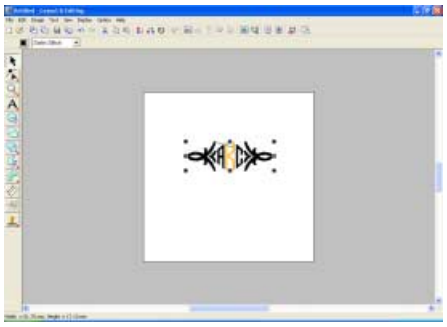
Step 4 Adjusting the size and position of the decorative pattern

The size and position of the decorative pattern can be adjusted.

1 Select the decorative pattern to be edited.

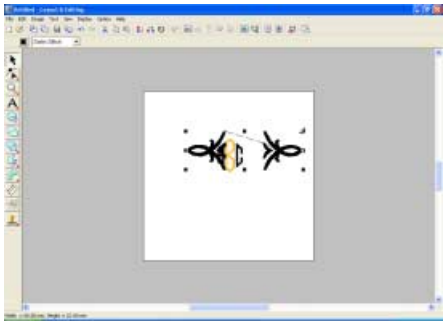


Click . Then Click the decorative pattern.



2 Adjust the size.

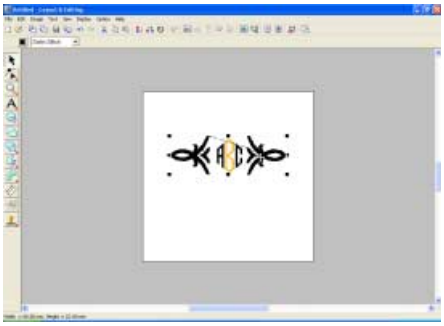
Move the pointer over one of the handles of the selected pattern.



Drag the handle to adjust the pattern to the desired size.

3 Adjust the position.

Move the pointer over the selected pattern. And drag the pattern to the desired position.

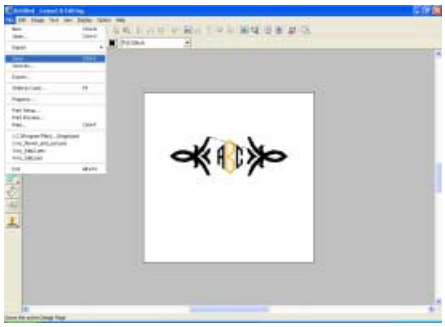


Memo:

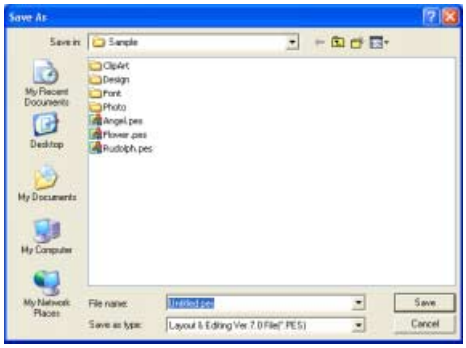
The shape of the pointer changes to ✥ *when the pattern can be moved.*

Step 5 Saving the embroidery design

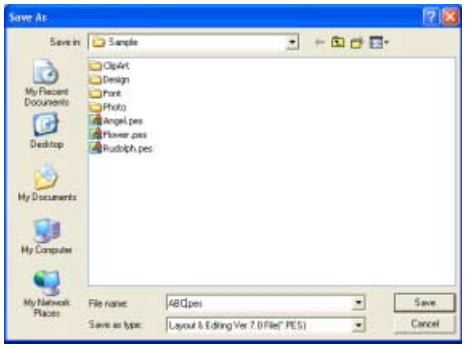
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



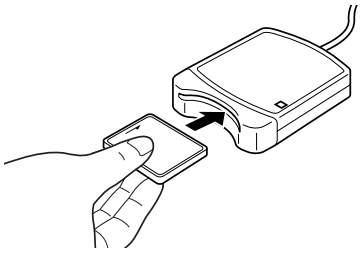
Click **Save**.

Step 6 Transferring the design to an original card

By writing a design to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the design. For this example, we will transfer the design to an original card.

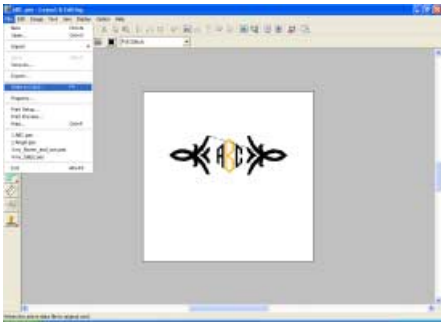
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1 Insert an original card into the USB card writer module.



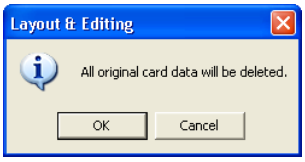
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2 Transfer the embroidery design.



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

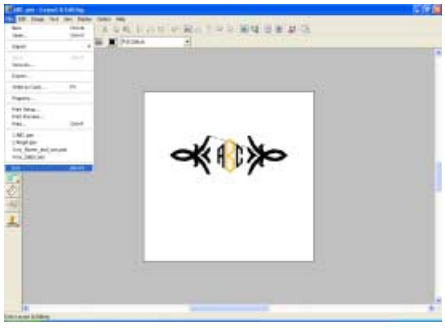
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Creating Appliqués

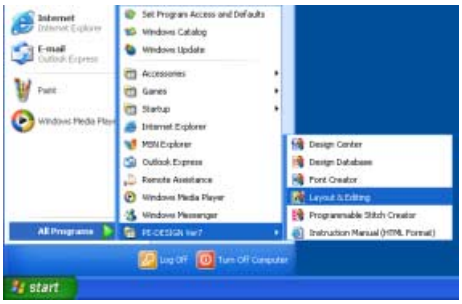
The Applique Wizard provides instructions for easily creating appliqués.
This procedure will go through each step of the basic operation.

Step 1	Creating an appliqué pattern
Step 2	Saving the design
Step 3	Transferring the design to an original card

Step 1 Creating an appliqué pattern

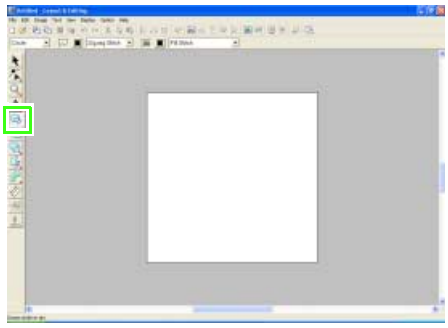
An appliqué can be created from any sharp.
In the following steps, we will draw a circle and create an appliqué.

1 Start up Layout & Editing.



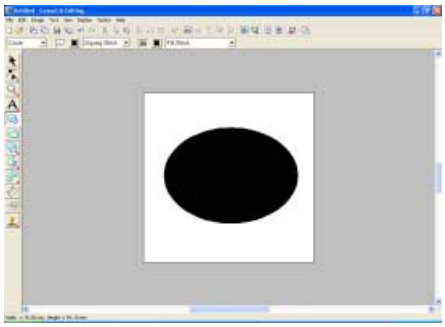
Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

2 Draw a circle.

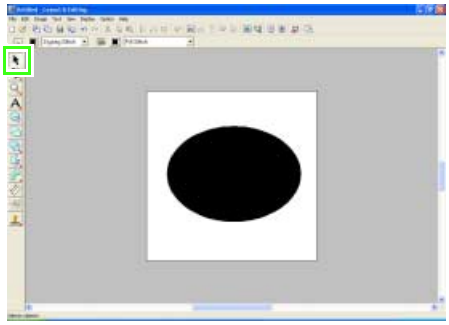


To draw a circle click on .

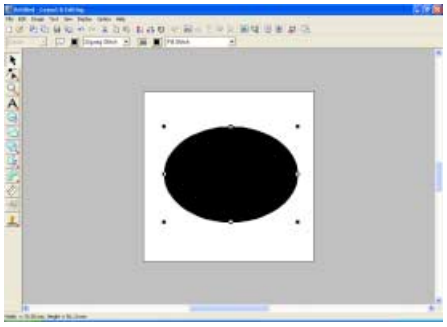
Then drag the pointer in the Design Page to the desired size.

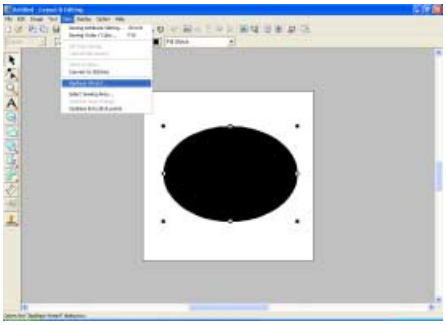


3 Create the appliqué.

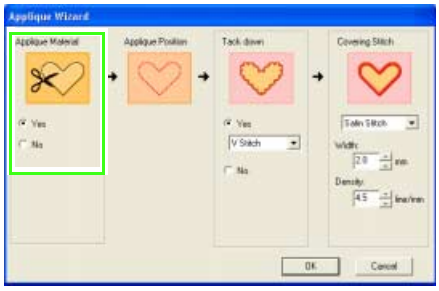


Click . Then select the circle pattern that will be the appliqué.

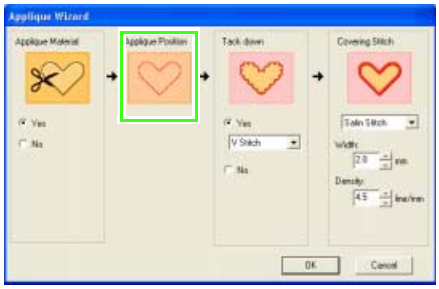




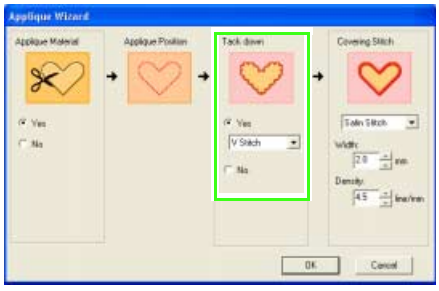
Click **Sew**, then **Applique Wizard** menu.

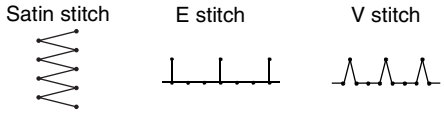


Under **Applique Material**, select whether (**Yes**) or not (**No**) the outline of the appliqué is to be sewn onto the appliqué fabric as a guide for cutting it out.

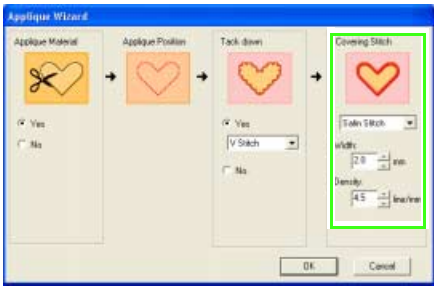


The **Applique Position**, (guideline for attaching the appliqué piece) is set to be sewn automatically.

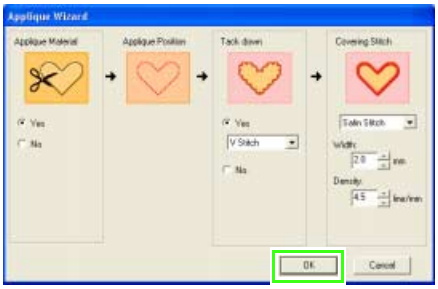




Under **Tack down**, select whether (**Yes**) or not (**No**) the appliqué is to be basted onto the base fabric. If **Yes** is selected, select the basting stitch from the selector. You can also select which stitch (satin stitch, E stitch or V stitch) to use for the basting.

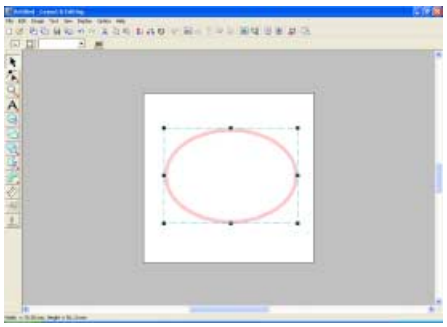


Under **Covering Stitch**, select the sew type and other attributes for finishing the appliqué.



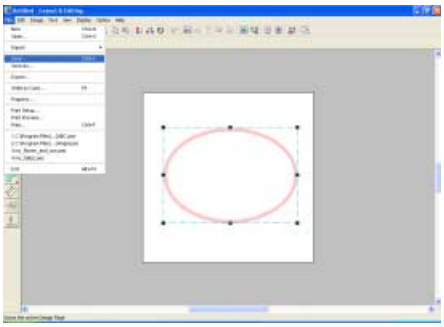
Click **OK** to finish the Applique Wizard and display the design in the Design Page.

→ The generated appliqué pattern is displayed on the Design Page of Layout & Editing.

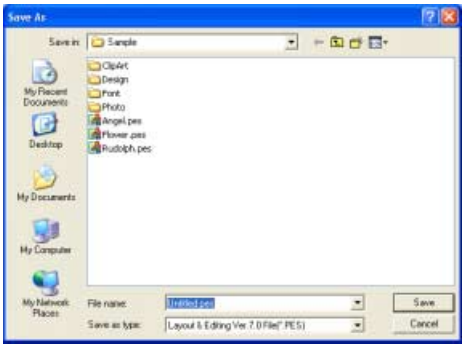


Step 2 Saving the design

After the appliqué pattern is finished, you may want to save it.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.

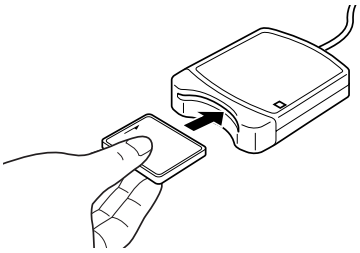
Click **Save**.

Step 3 Transferring the design to an original card

By writing a design to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the design. For this example, we will transfer the design to an original card.

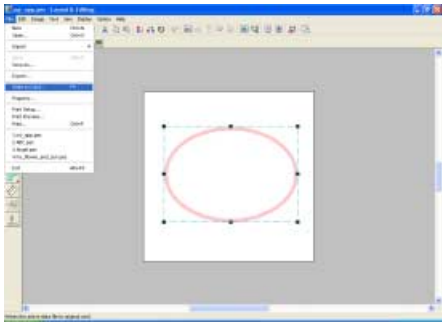
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1. **Insert an original card into the USB card writer module.**



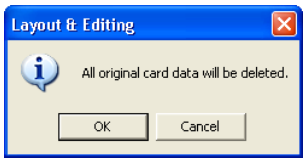
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2. **Transfer the embroidery design.**



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

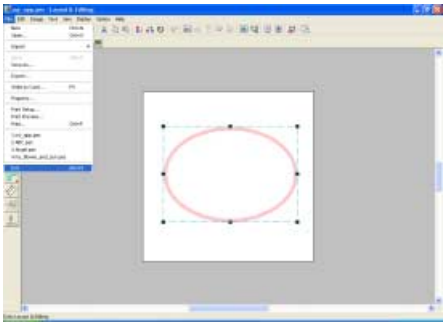
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Importing Image Data

Importing image/photo data

Different types of clip art or photos can be imported into Layout & Editing to create embroidery patterns. There are many different types of files that can be imported:

Windows bitmap (.bmp)

Exif (.tif, .jpg)

ZSoftPCX (.pcx)

Windows Meta File (.wmf)

Portable Network Graphics (.png)

Encapsulated PostScript (.eps)

Kodak PhotoCD (.pcd)

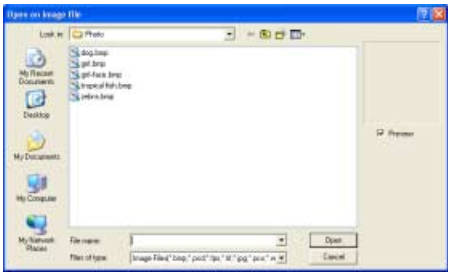
FlashPix (.fpx)

JPEG2000 (.j2k)

To get the best results, use clip art or photos that are clear and have a distinguishable outline or color borderline for importing.

1. Click **Image**, then **Input**, then **from File**.

→ An **Open an image file** dialog box similar to the one shown below appears.



2. Select the drive, the folder and the desired file.

> **Memo:**
>
> *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Open** to open the file.

→ The image appears in the work area.

> **Memo:**
>
> - *Double-clicking the file name also opens the file and closes the dialog box.*
> - *To quit the operation, click **Cancel**.*
> - *If the image was saved at a specific resolution, it is displayed at that resolution.*
> - *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
> - *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
> - *The displayed image can also be imported into Layout & Editing by dragging the image file into the Layout & Editing window.*

> **Note:**
>
> - *With .pcd and .fpx files containing many pages, only the first page can be opened. Tiff files with LZW compression cannot be opened.*
> - *You can change the size and position of an imported image, and then save that information with the .pes file. The next time that you import the same image into the saved .pes file, a message appears, asking whether to input the image at its previously saved position and size or at its original position (the center of the Design Page).*
> - *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Importing image data from a scanner or digital camera

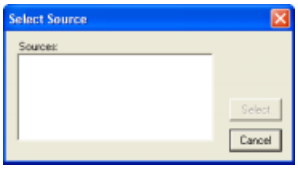
Images can be imported into the current Design Page from a scanner or other TWAIN device and used as a template for creating an embroidery pattern.

> **Memo:**
>
> *TWAIN is an application interface (API) standardization for software that controls scanners and other devices.*

1. Check that the scanner or other TWAIN device is correctly connected to your computer.

2. Click **Image**, then **Select TWAIN device**.

   → A **Select Source** dialog box similar to the one shown below appears.



3. From the **Sources** list, click the desired device to select it.

> **Note:**
> *If no TWAIN device is installed, there will be no names displayed in the **Sources** list. First, install the driver software for the TWAIN device that you want to use.*

4. Click **Select** to choose the selected device and to close the dialog box.

> **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

5. Click **Image**, then **Input**, then **from TWAIN device**.

   → The driver interface for the device selected in the **Select Source** dialog box appears.

6. Specify the necessary settings for importing an image, and then import the image.

> **Note:**
> *For information on using the driver interface, refer to the help manual for that interface, or contact the manufacturer of the interface.*

   → When the image transfer between the scanner (or other device) and the driver is completed, the imported image will be pasted into the Design Page at its original size.

> **Memo:**
> - *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
> - *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
> - *To hide the original image, click **Off**.*

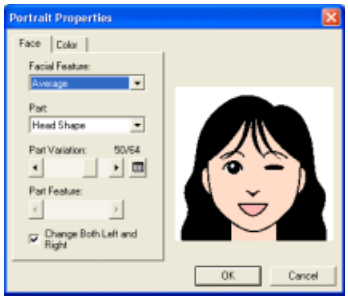
> **Note:**
> *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Creating a portrait image

Combine images of facial features provided with the application to create an original portrait image.

1. Click **Image**, then **Input**, then **from Portrait**.

   → The **Portrait Properties** dialog box appears.



2. From the **Facial Feature** selector, select the overall contour (appearance) of the portrait (for example, narrow, wide, or child-like)

> **Memo:**
> *The preview area shows the setting changes that you make.*

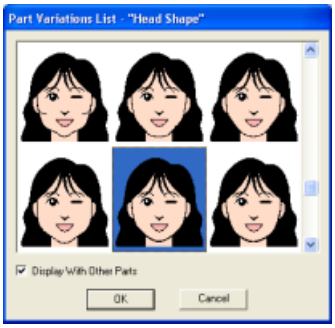
3. From the **Part** selector, select the part of the portrait to be changed.

> **Memo:**
> *The part of the portrait to be changed can also be selected by clicking it in the preview area.*

4. Move the **Part Variation** slider to select the desired part variation.

Memo:

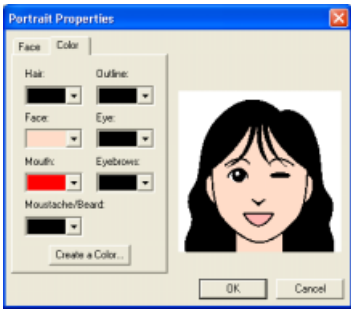
- *To change both sides of a part together, such as the eyes or ears, select the **Change Both Left and Right** check box.*
- *The selected part variation is shown in the sample image.*
- *To display all variations of the selected part, click* .



- *To display the images of all parts combined, select the **Display With Other Parts** check box in the **Part Variations List** dialog box that appeared.*
- *Select a part from the list, and then click **OK**.*

5. To select a part feature (for example, standard size, slightly larger, slightly smaller, wider or taller), move the **Part Feature** slider, if it is available.

6. To change the color of the parts, click the **Color** tab, click the selector for the color that you want to change, and then select the desired color from the color list that appeared.



7. Click **OK**.

→ The portrait image is displayed in the Design Page.

Memo:

- *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*
- *To display, hide, or display a faded copy of the image that remains in the work area, click **Image**, then **Display Image**, and then click the desired display setting.*
  - *To hide the original image, click **Off**.*

Note:

Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.

Importing image data from the Clipboard

Image data can be imported into the Design Page from the Clipboard. This allows you to import an image without saving it first.

1. Click **Image**, then **Input**, then **from Clipboard**.

Note:

This can only be done when there is image data on the Clipboard.

→ The image is displayed in the Design Page.

Memo:

- *The image is displayed with a resolution of 100 dpi for both the height and width.*
- *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*

Changing the Image Settings

Changing the display of the background image

The image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Image**, then **Display Image**, and then select the desired setting.

   To display the original image, click **On (100%)**.

   To display a faded copy of the image, click the desired density (**75%**, **50%** or **25%**).

   To hide the original image, click **Off**.

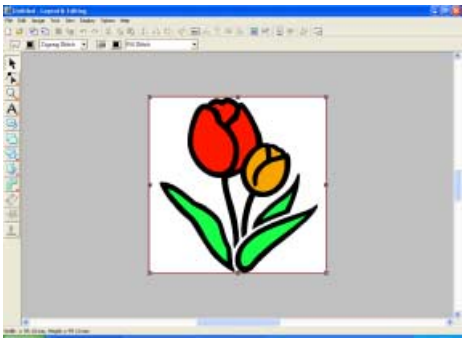
> **Memo:**
> - *This function is not available if no image has been imported into the Design Page.*
> - *Press the shortcut key (F6) to switch between displaying the image (**On (100%)**) to displaying it faded at each density (**75%**, **50%** and **25%**) to hiding the image (**Off**).*

Changing the size and position of the image

The size and position of the image can be adjusted.

1. Click **Image**, then **Modify**.

   → A red line and handles appear around the image.



> **Memo:**
> - *The status bar shows the dimensions (width and height) of the image.*

Moving an image:

1. Move the pointer over the image.

   → The shape of the pointer changes to ✥.

2. Drag the image to the desired location.

Scaling an image:

1. Move the pointer over one of the handles.

   → The shape of the pointer changes to ↔, ↕, ⤡ or ⤢, depending on the handle that the pointer is over.

> **Memo:**
> - *↔ is for scaling the width.*
> - *↕ is for scaling the height.*
> - *⤡ and ⤢ are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
> - *If the Shift key is held down while a handle is dragged, the image is enlarged or reduced from the center of the image.*

2. Drag the handle to adjust the image to the desired size.

Deleting an image:

1. Press the Delete key, or click **Edit**, then **Delete**.

   → The image will be deleted from the Design Page.

Automatically Converting an Image to an Embroidery Pattern (Image to Stitch Wizard)

The Image to Stitch Wizard gives step-by-step instructions for converting an image into an embroidery pattern.

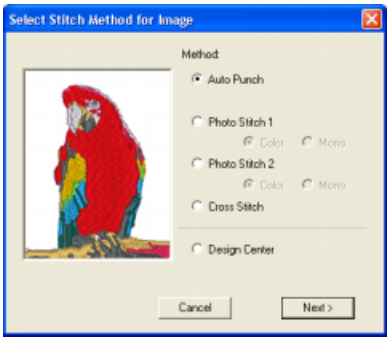
Toolbar button:

1. If no image is displayed in the Design Page, use one of the commands on the **Input** sub-menu of the **Image** menu to display the image that you want to convert to an embroidery pattern.

2. Click **Image**, then **Modify**, and then re-size and re-position the image for creating the embroidery pattern.

3. Click , or click **Image**, then **Image to Stitch Wizard**.

   → The following dialog box appears.



> **Note:**
> *The dialog box will not appear if no image is displayed in the Design Page. Instead, a dialog box appears, allowing you to open an image file.*

4. Select the type of embroidery that you want to create, and then click **Next**.

   Auto Punch:
   Select this option to automatically extract the image for creating the embroidery pattern.
   (Proceed to "**If Auto Punch is selected**")

   Photo Stitch 1:
   Select this option to automatically create a realistic photo embroidery pattern. This option can be used to create embroidery patterns in color (**Color**) or black and white (**Mono**).
   (Proceed to "**If Photo Stitch 1 (Color) is selected**" or "**If Photo Stitch 1 (Mono) is selected**")

   Photo Stitch 2:
   Select this option to automatically create realistic photo embroidery in 4 colors (**Color**) or 1 color (**Mono**).
   (Proceed to "**If Photo Stitch 2 (Color) is selected**" or "**If Photo Stitch 2 (Mono) is selected**")

   Cross Stitch:
   Select this option to create a cross stitch pattern.
   (Proceed to "**If Cross Stitch is selected**")

   Design Center:
   Select this option to start up Design Center with the Design Page image.
   (Proceed to "**If Design Center is selected**")

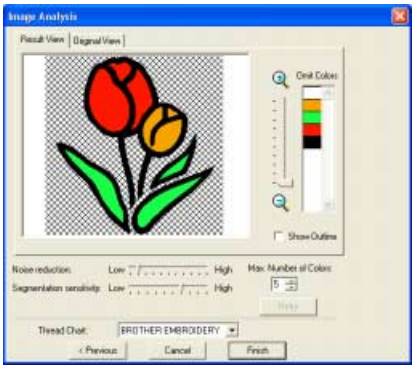
> **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

> **Note:**
> *Although a custom Design Page size can be specified, since processing will take too long when trying to create an extremely large pattern with the Photo Stitch function, the message "Too large image to convert" will appear. If this message appears, use the **Modify** command to reduce the size to 500 mm (16.69 inches) or less.*

Automatically converting an image to an embroidery pattern (Auto Punch)

If Auto Punch is selected

→ After the image has been analyzed by the software, an **Image Analysis** dialog box similar to the one shown below appears.



1. Select the desired settings.

To display the resulting analyzed image, click the **Result View** tab. The embroidery pattern will be created with this image.

To adjust the zoom ratio that the image is displayed in, move the slider between and .

To display the outline extracted from the analyzed image, select the **Show Outline** check box.

Use the following sliders to specify the settings for analyzing the image.
Noise reduction: Sets the level of noise (distortions) that is removed from the image.
Segmentation sensitivity: Sets the sensitivity for the image analysis.
Max. Number of Colors: Sets the number of colors used.

From the **Thread Chart** selector, select the desired thread color chart. The most appropriate thread colors from the selected thread chart are selected. A user thread chart can also be selected.

To display the original image, click the **Original View** tab.

Memo:

- *After changing the settings, click **Retry** to display the image with the new settings applied. If **Retry** is not clicked, the new settings are not applied.*
- *To quit the operation and close the dialog box, click **Cancel**.*
- *To return to the previous dialog box, click **Previous**.*

2. On the **Result View** tab, click the areas of the image to select whether or not they are to be sewn.

Memo:

Areas not set to be sewn are shown filled with a crosshatch pattern.

3. If necessary, in the **Omit Colors** list, click the colors to select whether or not they will be sewn.

Memo:

Colors that are crossed out are set to not be sewn.

4. After selecting the desired settings, click **Finish**.

→ An embroidery pattern is created from the analyzed data, the appropriate thread colors and sew type settings are applied, and then the pattern is displayed in the Design Page.

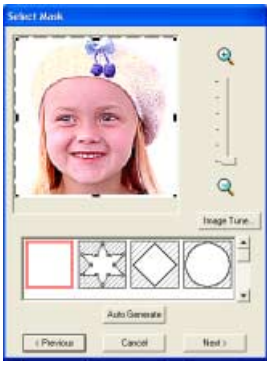
Memo:

The sew type settings of the created embroidery pattern can later be changed in the same way as the settings for other patterns.

Automatically converting a photo to an embroidery pattern (Photo Stitch 1/Photo Stitch 2)

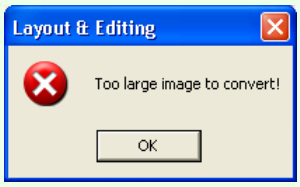
If Photo Stitch 1 (Color) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.



Note:

If the width or height of the image exceeds 500 mm, the following message appears. When this happens, adjust the original image size.



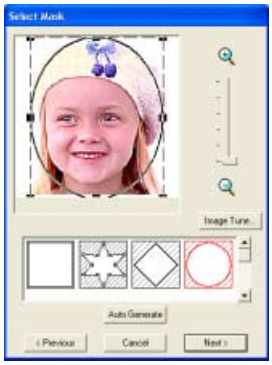
Memo:

- *To quit the operation and close the dialog box, click **Cancel**.*
- *To return to the previous dialog box, click **Previous**.*

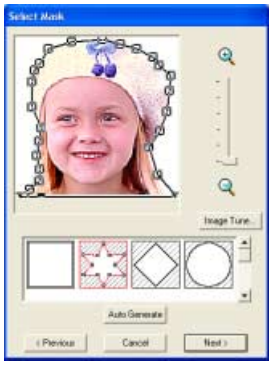
1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).
2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image.

Memo:

- *To display the **Image Tune** dialog box, where you can adjust the image, click **Image Tune**.*
- *To display the image enlarged (or reduced), move the **ZOOM** slider up (or down).*
- *When the dialog box appears, the square mask is selected.*
- *To create any shape of mask, select* *, and then move, enter or delete points to adjust the mask shape. To add points, click the outline of the mask. To delete points, select the point, and then press the* Delete *key.*
- *If **Auto Generate** was clicked,* *is selected, and the points in the outline of the mask can be moved, added or deleted.*
- *With a single-colored background, click **Auto Generate** to automatically detect the outline of the image. The outline can be adjusted by moving or deleting points.*



Pattern edited with the round mask



Pattern edited with the adjustable mask

Note:

With a small original image, it may not be possible to reduce the size of the mask.

Memo:

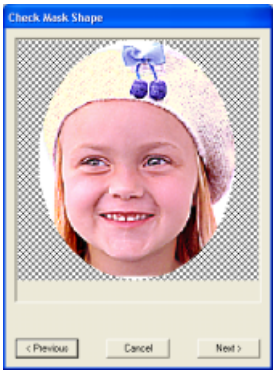
Image Tune

- *Clicking the **Image Tune** button in the **Select Mask** dialog box displays an **Image Tune** dialog box similar to the one shown below.*

- *The image window displays the image resulting from the current settings.*
- *Move the **Original – Sharp** slider to adjust the sharpness of the image's outlines. A setting more towards **Sharp** makes a more noticeable boundary between bright and dark areas.*
- *Move the **Dark – Bright** slider to adjust the brightness of the image.*
- *Move the **Contrast Low – High** slider to adjust the contrast of the image.*
- *Click **OK** to display the adjusted image in the **Select Mask** dialog box and to close this dialog box.*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

3. In the **Select Mask** dialog box, click **Next**.

→ The image is analyzed, and the **Check Mask Shape** dialog box appears.



Memo:

Areas not set to be sewn are shown filled with a crosshatch pattern.

4. Click **Next**.

→ The **Photo Stitch 1 Parameters** dialog box appears.

5. Specify the settings for creating the embroidery pattern.

Memo:

- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

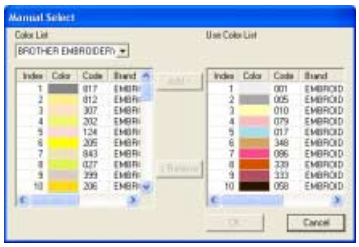
Sewing Option

Detail	Specifies how detailed the created embroidery pattern will be. Selecting a setting closer to **Fine** creates more details in the pattern and increases the number of stitches. (The stitches will overlap)
Run Pitch	Sets the sewing pitch. The pattern is created with this setting value as the minimum length. When the value is lowered, the sewing pitch will be shortened, resulting in finer stitching. Range: 2.0 to 10.0 mm (0.08 to 0.39 inch) Default: 3.0 mm (0.12 inch)
Sew Page Color	If this check box is selected, the data for the parts of the pattern that are the same color as the Design Page will be created. Clear the check box to keep the fabric the same color as the Design Page. Default: Selected
Conversion Priority	Select what parameter is given priority when converting to embroidery pattern. **Stitch Quality**: Creates a pattern while giving priority to the stitching quality. However, many jump stitches will result. **Jump Stitch Reduction**: Creates a pattern while giving priority to reducing the number of jump stitches in order to reduce complications during embroidering. However, the stitching quality will be slightly reduced.
Image Type	If **Photo** is selected, the thread colors will be mixed together, which will result in a more natural look. If **Cartoon** is selected, the thread colors will not be mixed together, which will result in a more simply colored look. Select **Photo** for image data from a photograph, etc. Select **Cartoon** for image data from an illustration, etc.

Color Option

Auto Select	Select this check box to automatically select the thread colors. As a default, this check box is selected. If this check box is cleared, select the thread colors manually.
Manual Select	Appears when the **Auto Select** check box is cleared. Click this button to open the **Manual Select** dialog box, which lets you manually set the thread colors to be used when creating the pattern (see below).
Thread Chart	Selects the thread chart for selecting the thread color with the Auto Select function. The most appropriate thread colors from the selected thread chart are selected. A user thread chart can also be selected.
Max. Number of Colors	Sets the number of colors selected by the Auto Select function. Range: 1 to 50 Default: 10
Brightness / Contrast	The top slider is used to adjust the brightness. Move the slider to the right to increase the brightness or to the left to decrease the brightness. The bottom slider is used to adjust the contrast. Move the slider to the right to increase the contrast or to the left to decrease the contrast. Click on Update Preview to see changes made.
Select from Candidates	Click this button to open the **Select from Candidates** dialog box. Variations of the image with different degrees of brightness and contrast are displayed. Click one of the variations, and then click **OK** to apply the settings and display a preview of the image.
Update Preview	Click this button to update the previewed image after settings have been changed.

Memo:



- *To move the color selected in the **Color List** to the **Use Color List**, click **Add**. If no color is selected, or if the **Use Color List** already contains 50 colors, this button cannot be clicked.*
- *To delete the color selected in the **Use Color List**, click **Remove**. If no color is selected in the **Use Color List**, this button cannot be clicked.*
- *The thread colors in the **Color List** and **Use Color List** are listed, in order, starting from the brightest. This order is the sewing order and cannot be changed.*
- *The maximum number of colors that can be added to the **Use Color List** is 50.*
- *Thread colors displayed in the **Use Color List** are not displayed in the **Color List**.*
- *To select several colors, hold the Shift key (to select adjacent colors) or the Ctrl key (to select colors that are not adjacent), and then select the desired colors.*
- *To apply the changes to the list and close the dialog box, click **OK**. The selected colors are applied to the preview shown in the **Photo Stitch 1 Parameters** dialog box. This button cannot be clicked if the **Use Color List** is empty.*
- *To close the dialog box without applying the changes, click **Cancel**.*

6. In the **Photo Stitch 1 Parameters** dialog box, click **Update Preview**.

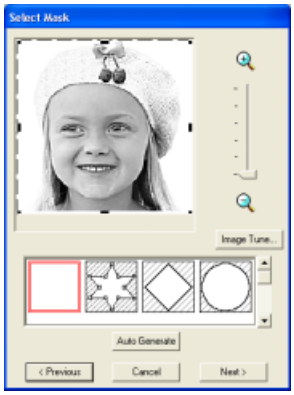
→ The previewed image is updated.

7. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

If Photo Stitch 1 (Mono) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.



Note:

If the width or height of the image exceeds 500 mm, the following message appears. When this happens, adjust the original image size.

1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

Memo:

*With a single-colored background, click **Auto Generate** to automatically detect the outline of the image.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

For details on the settings, refer to page 82.

Memo:

*To display the **Image Tune** dialog box, where you can adjust the image, click **Image Tune**. (For more details, refer to "Image Tune" on page 83.)*

3. In the **Select Mask** dialog box, click **Next**.

→ A **Gray Balance** dialog box similar to the one shown below appears.

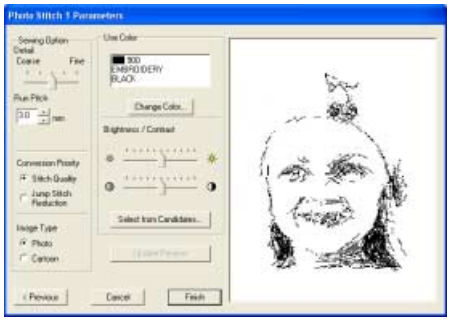
4. Move the slider to specify which parts of the image to create the embroidery pattern for.

Memo:

- *Areas not set to be sewn are shown filled with a crosshatch pattern.*
- *An embroidery pattern will be created from any areas remaining in black.*
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

5. In the **Gray Balance** dialog box, click **Next**.

→ The **Photo Stitch 1 Parameters** dialog box appears.



6. Specify the settings for creating the embroidery pattern.

Memo:

- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Sewing Option

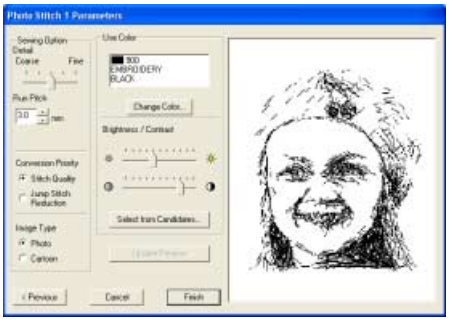
Detail	Specifies how detailed the created embroidery pattern will be. Selecting a setting closer to **Fine** creates more details in the pattern and increases the number of stitches. (The stitches will overlap)
Run Pitch	Sets the sewing pitch. The pattern is created with this setting value as the minimum length. When the value is lowered, the sewing pitch will be shortened, resulting in finer stitching. Range: 2.0 to 10.0 mm (0.08 to 0.39 inch) Default: 3.0 mm (0.12 inch)
Conversion Priority	Select what parameter is given priority when converting to embroidery pattern. **Stitch Quality**: Creates a pattern while giving priority to the stitching quality. However, many jump stitches will result. **Jump Stitch Reduction**: Creates a pattern while giving priority to reducing the number of jump stitches in order to reduce complications during embroidering. However, the stitching quality will be slightly reduced.
Image Type	If **Photo** is selected, the thread colors will be mixed together, which will result in a more natural look. If **Cartoon** is selected, the thread colors will not be mixed together, which will result in a more simply colored look. Select **Photo** for image data from a photograph, etc. Select **Cartoon** for image data from an illustration, etc.

Color Option

Change Color	Click on the **Change Color** button to open the **Thread Color** dialog box if you wish to change the color of the photo stitching. You can also change the brand of thread you wish to sew with. Select the color and click ok to make the color change.
Brightness / Contrast	The top slider is used to adjust the brightness. Move the slider to the right to increase the brightness or to the left to decrease the brightness. The bottom slider is used to adjust the contrast. Move the slider to the right to increase the contrast or to the left to decrease the contrast. Click on **Update Preview** to see changes made.
Select from Candidates	Click this button to open the **Select from Candidates** dialog box. Variations of the image with different degrees of brightness and contrast are displayed. Click one of the variations, and then click **OK** to apply the settings and display a preview of the image.
Update Preview	Click this button to update the previewed image after settings have been changed.

7. In the **Photo Stitch 1 Parameters** dialog box, click **Update Preview**.

→ The previewed image is updated.

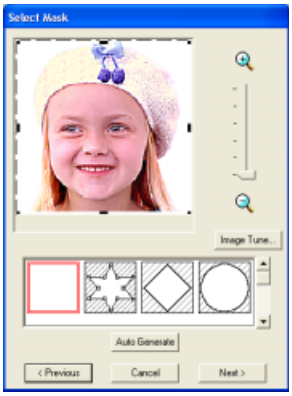


8. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

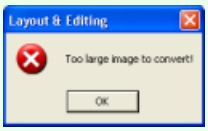
If Photo Stitch 2 (Color) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.



Note:

If the width or height of the image exceeds 500 mm, the following message appears. When this happens, adjust the original image size.



1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

Memo:

*With a single-colored background, click **Auto Generate** to automatically detect the outline of the image.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

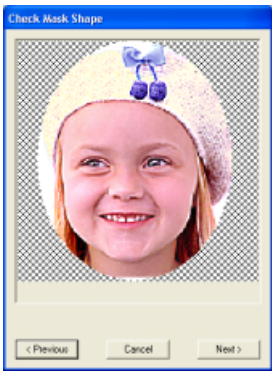
For details on the settings, refer to page 82.

Memo:

*To display the **Image Tune** dialog box, where you can adjust the image, click **Image Tune**. (For more details, refer to "Image Tune" on page 83.)*

3. In the **Select Mask** dialog box, click **Next**.

→ The image is analyzed, and the **Check Mask Shape** dialog box appears.

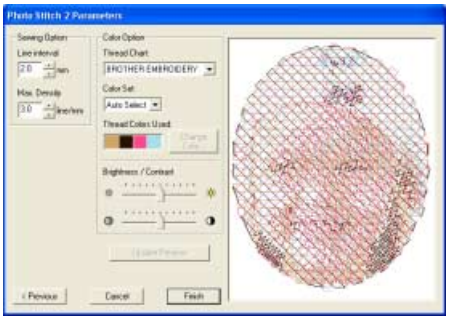


Memo:

Areas not set to be sewn are shown filled with a crosshatch pattern.

4. Click **Next**.

→ The **Photo Stitch 2 Parameters** dialog box appears.



5. Specify the settings for creating the embroidery pattern.

Memo:

- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Sewing Option

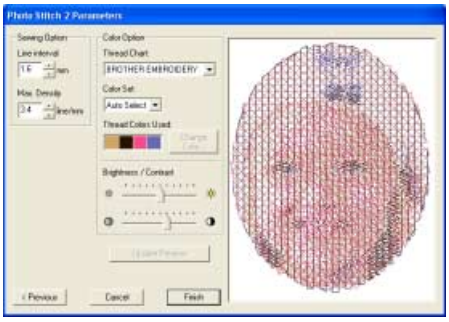
Line interval	Specifies the interval between parallel lines used to create the embroidery pattern. Range: 1.2 to 5.0 mm (0.05 to 0.2 inch) Default: 2.0 mm (0.08 inch) Line interval
Max. Density	Specifies the maximum density for areas of the created embroidery pattern sewn with the zigzag stitch. The embroidery pattern will be created with a density smaller than that set here. Range: 2.5 to 5.0 lines per mm (64 to 127 lines per inch) Default: 3.0 lines per mm (76 lines per inch)

Thread Color Setting

Thread Chart	You can select the brand of thread you want to use with the Color Set function. The colors will be selected automatically correspond with the Color Set selection. A user thread chart can also be selected.
Color Set	If **Auto Select** is selected, the most appropriate four colors will automatically be selected. Selecting a different option specifies the four colors used when creating the embroidery pattern. The color choices are: cyan (C), magenta (M), yellow (Y), black (K), red (R), green (G) and blue (B). Select one of the following combinations that contains the colors most used in the image. Color combinations: CMYK, RGBK, CRYK, BMYK
Thread Colors Used	Displays the four selected thread colors.
Change Color	In Thread Colors Used click on the color you want to change. Then click on Change Color to open the Thread Color dialog box. Select the new color and click ok. You will see the color change within the photo in the preview box within the Photo Stitch 2 Parameters dialog.
Brightness / Contrast	The top slider is used to adjust the brightness. Move the slider to the right to increase the brightness or to the left to decrease the brightness. The bottom slider is used to adjust the contrast. Move the slider to the right to increase the contrast or to the left to decrease the contrast. Click on Update Preview to see the changes made.
Update Preview	Click this button to update the previewed image after settings have been changed.

6. In the **Photo Stitch 2 Parameters** dialog box, click **Update Preview**.

→ The previewed image is updated.

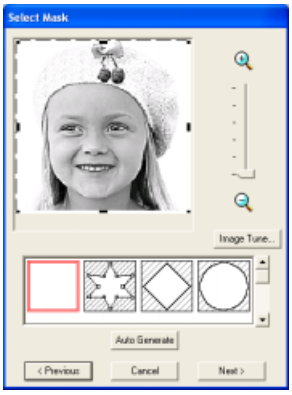


7. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

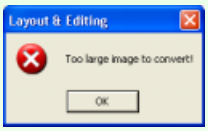
If Photo Stitch 2 (Mono) is selected

→ A **Select Mask** dialog box similar to the one shown below appears.



Note:

If the width or height of the image exceeds 500 mm, the following message appears. When this happens, adjust the original image size.



1. From the list at the bottom of the dialog box, select the desired shape that the image will be trimmed to (mask).

Memo:

*With a single-colored background, click **Auto Generate** to automatically detect the outline of the image.*

2. In the image preview box, move the handles of the mask until it surrounds the desired part of the image

For details on the settings, refer to page 82.

Memo:

*To display the **Image Tune** dialog box, where you can adjust the image, click **Image Tune**. (For more details, refer to "Image Tune" on page 83.)*

3. In the **Select Mask** dialog box, click **Next**.

→ A **Gray Balance** dialog box similar to the one shown below appears.

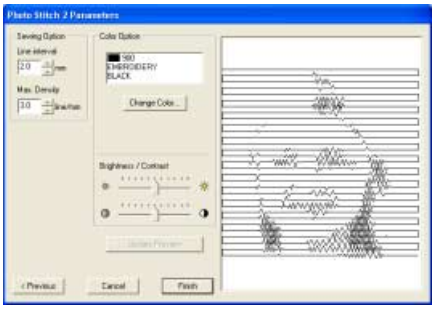
4. Move the slider to specify which parts of the image to create the embroidery pattern for.

Memo:

- *An embroidery pattern will be created from any areas remaining in black.*
- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

5. In the **Gray Balance** dialog box, click **Next**.

→ The **Photo Stitch 2 Parameters** dialog box appears.



6. Specify the settings for creating the embroidery pattern.

Memo:

- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Sewing Option

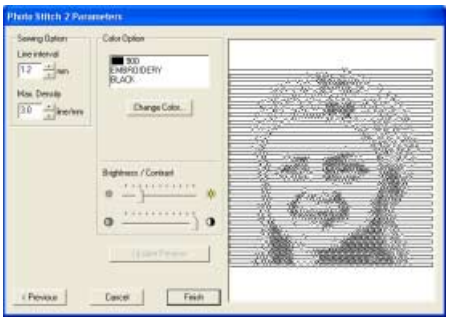
Line interval	Specifies the interval between parallel lines used to create the embroidery pattern. Range: 1.2 to 5.0 mm (0.05 to 0.2 inch) Default: 2.0 mm (0.08 inch) Line interval
Max. Density	Specifies the maximum density for areas of the created embroidery pattern sewn with the zigzag stitch. The embroidery pattern will be created with a density smaller than that set here. Range: 2.5 to 5.0 lines per mm (64 to 127 lines per inch) Default: 3.0 lines per mm (76 lines per inch)

Color Option

Change Color	Click on the **Change Color** button to open the **Thread Color** dialog box if you wish to change the color of the photo stitching. You can also change the brand of thread you wish to sew with. Select the color and click ok to make the color change.
Brightness / Contrast	The top slider is used to adjust the brightness. Move the slider to the right to increase the brightness or to the left to decrease the brightness. The bottom slider is used to adjust the contrast. Move the slider to the right to increase the contrast or to the left to decrease the contrast. Click on **Update Preview** to see the changes made.
Update Preview	Click this button to update the previewed image after settings have been changed.

7. In the **Photo Stitch 2 Parameters** dialog box, click **Update Preview**.

→ The previewed image is updated.



8. Click **Finish**.

→ An embroidery pattern is created and displayed in the Design Page.

Automatically converting an image to a cross stitch pattern (Cross Stitch)

If Cross Stitch is selected

→ The **Cross Stitch Attributes** dialog box appears.

1. Specify the settings for creating the embroidery pattern.

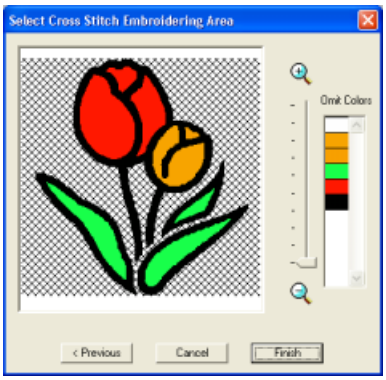
Memo:

- *To return to the previous dialog box, click **Previous**.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Cross size	Sets the horizontal and vertical size of the pattern. Range: 1.5 to 5.0 mm (0.06 to 0.20 inch) Default: 2.5 mm (0.1 inch)
Stitch times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: Single, Double, Triple Default: Single
Thread Chart	You can select the brand of thread you want to use in the created cross stitch pattern. A user thread chart can also be selected. The best corresponding thread colors from the selected thread chart will be selected.
Max. Number of Colors	Sets the number of colors used in the created pattern. The embroidery pattern is created using no more than the number of colors specified. Range: 2 to 50 Default: 8

2. Click **Next**.

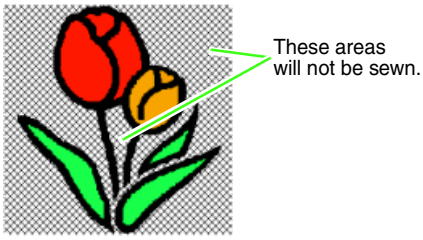
→ A **Select Cross Stitch Embroidery Area** dialog box similar to the one shown below appears.



3. In the image in the dialog box, click the areas to select whether or not they are to be sewn.

Memo:

- *Areas not set to be sewn are shown filled with a crosshatch pattern.*



- *To adjust the zoom ratio that the image is displayed in, move the slider between* *and* .
- *To return to the previous dialog box, click* ***Previous****.*

4. If necessary, in the **Omit Colors** list, click the colors to select whether or not they will be sewn.

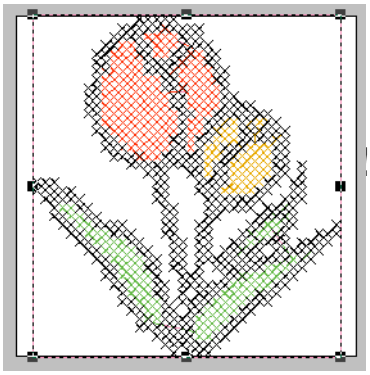
Memo:

Colors that are crossed out are set to not be sewn.

5. After selecting the desired settings, click **Finish**.

→ The cross stitch pattern is created and displayed in the Design Page.

In this example, the menu command **Display Image** - **Off** has been selected.



If Design Center is selected

→ Design Center starts up, and a Design Page is displayed with the image imported into it. For details, refer to “Manually Creating Embroidery Patterns From Images (Design Center)” on page 193.

Opening/Importing Embroidery Designs

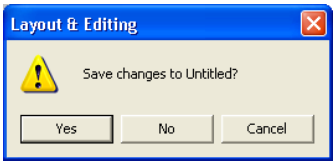
Creating a new embroidery design

Toolbar button:

1. Click , or click **File**, then **New**.

→ If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears.

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.



Memo:

- *To save the Design Page, click **Yes**.*
- *To abandon the Design Page, click **No**.*
- *To return to the Design Page, for example, to modify it or save it with another file name, click **Cancel**.*

2. Specify the Design Page settings.

Memo:

For more details, refer to "Specifying the Design Page Size and Color" on page 99.

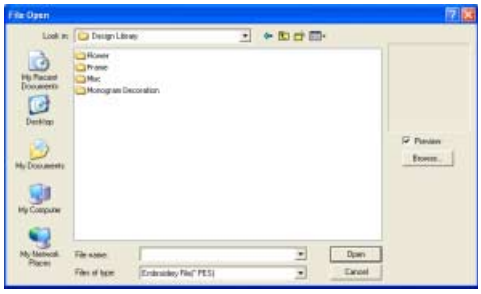
Opening a Layout & Editing file

An embroidery design that has previously been saved as a Layout & Editing file (.pes file) can be opened.

Toolbar button:

1. Click , or click **File**, then **Open**.

→ A **File Open** dialog box similar to the one shown below appears.



Memo:

This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.

2. Select the drive and the folder.

Memo:

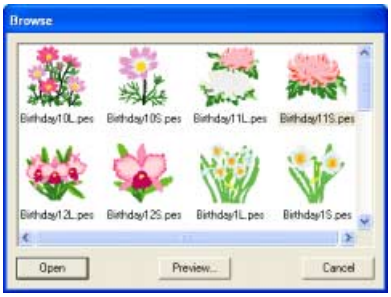
- *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Note:

- *Be sure to select a folder that contains.pes files.*
- *If a .pes file is saved with Pattern extending off the Design Page or with the number of stitches or number of colors for the design exceeding the Design Page limitations, a preview of the image cannot be displayed.*

3. To view the contents of the .pes files in the currently selected folder, click **Browse**.

→ A **Browse** dialog box similar to the one shown below appears.



Memo:

- *To return to the **File Open** dialog box, click **Cancel**.*
- *To see a more detailed design, select a file, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*

- *To open the displayed file, click **Open**.*
- *To return to the **Browse** dialog box, click **Cancel**.*

Note:

If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, a preview of the design cannot be displayed.

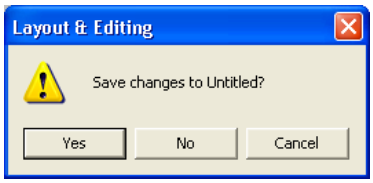
4. To open a file, select it, and then click **Open**, or double-click the file's icon.

→ If the current Design Page has already been saved or has not been edited, the contents of the selected file immediately appear in the Design Page.

Memo:

An embroidery design that is displayed in Explorer can also be opened by dragging to the Layout & Editing window.

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.



Memo:

- *To save the Design Page, click **Yes**.*
- *To abandon the Design Page, click **No**.*
- *To return to the Design Page, for example, to modify it or save it with another file name, click **Cancel**.*

"Saving" on page 177

Importing embroidery design files

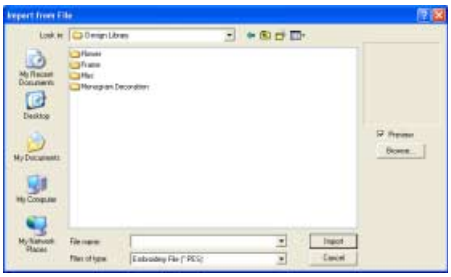
Embroidery designs from embroidery cards (.pec) and files created in the Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna/Viking (.hus, .vip, .shv), Janome (.jef, .sew), Singer (.csd, .xxx) and embroidery sewing machine (.phc) formats can be imported and added to the current Design Page.

With this function, you can also add .pes files to the Design Page, allowing you to combine several files created with this application.

Toolbar button:

1. Click , or click **File**, then **Import**, then **from File**.

→ An **Import from File** dialog box similar to the one shown below appears.



Note:

*Be sure to select the correct file name extension from the **Files of type** box.*

Memo:

This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.

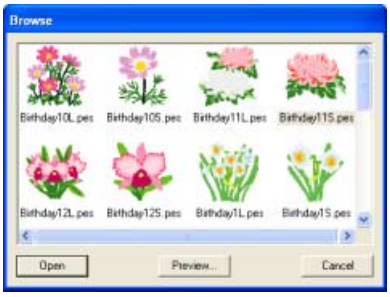
2. Select the drive and the folder.

Memo:

- *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*
- *To quit the operation and close the dialog box, click **Cancel**.*

3. To view the contents of the files in the currently selected folder, click **Browse**.

→ A **Browse** dialog box similar to the one shown below appears.



Memo:

- *This dialog box can be resized so that the folder contents can be viewed better. The size of the dialog box is retained until it is changed again.*
- *To return to the **Import from File** dialog box, click **Cancel**.*
- *To see a more detailed design, select a file, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*

- *To import the displayed file, click **Import**.*
- *To return to the **Browse** dialog box, click **Cancel**.*
- *Single or multiple embroidery designs displayed in Explorer can also be included by selecting them and while holding down the Ctrl key dragging to the Layout & Editing window.*

4. To import a design, select it, and then click **Import**, or double-click the file's icon.

→ The embroidery design is displayed in the Design Page.

Note:

- *When importing designs from other makers, be sure to choose a design that will fit in the Design Page.*
- *The colors of designs imported from .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew , .csd, .xxx and .phc files will be slightly different. If this happens, you can change the color with the menu command **Sew – Sewing Order/Color**.*

Memo:

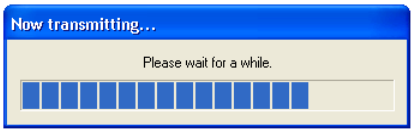
- *When importing some .pec files from embroidery cards, the **Select Import size** dialog box appears. If this happens, select the desired import size, and then click **OK** to import the embroidery design.*
- *To quit the operation and close the dialog box, click **Cancel**.*

Importing embroidery designs from an embroidery card

An embroidery design from an embroidery card inserted in the USB card writer module can be imported into the Design Page.

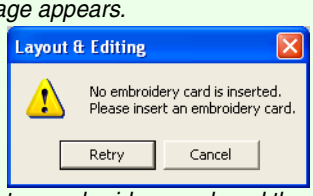
1. Click **File**, then **Import**, then **from Card**.

→ If a card writer module is connected and if an embroidery card is inserted into the card writer module, the following message appears and the embroidery designs are read from the card.



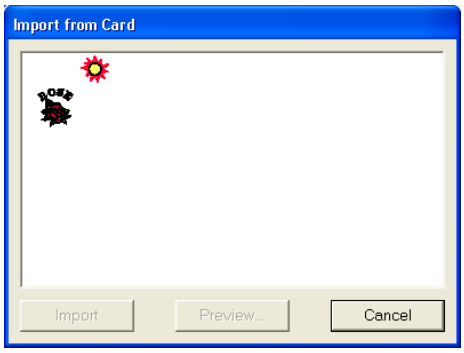
Note:

If a card writer module is connected but an embroidery card is not inserted, the following message appears.



- *Insert an embroidery card, and then click **Retry**.*
- *To quit the operation, click **Cancel**.*

2. After the card has been read, a dialog box similar to the one shown below appears.

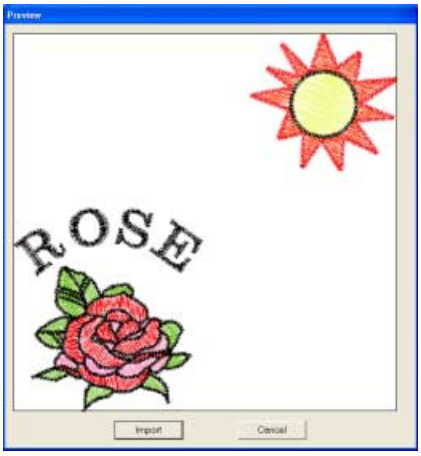


Memo:

This dialog box can be resized so that the designs can be viewed better. The size of the dialog box is retained until it is changed again.

3. Click a design to select it.

> **Memo:**
> - *To see a more detailed design, select a design, and then click **Preview**. A **Preview** dialog box similar to the one shown below appears.*



  - *To import the displayed design, click **Import**.*
  - *To return to the **Browse** dialog box, click **Cancel**.*
- *To quit the operation, click **Cancel**.*

4. Click **Import**, or double-click the design to import it.

> **Memo:**
> *When importing some designs, the **Select Import size** dialog box appears. If this happens, select the desired import size, and then click **OK** to import the design.*

> **Note:**
> *Due to copyright issues, some embroidery cards cannot be used with this function.*

Importing embroidery designs from Design Center

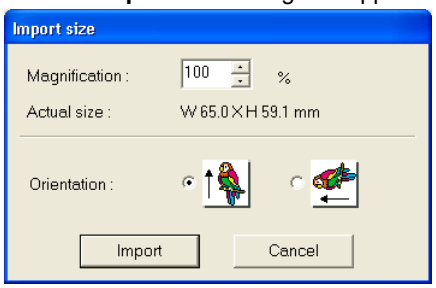
An embroidery design in Design Center can be imported directly into the Design Page.

Toolbar button:

1. Start up Design Center and open the file that you want to import into Layout & Editing.

2. Click , or click **File**, then **Import**, then **from Design Center**.

→ The **Import size** dialog box appears.



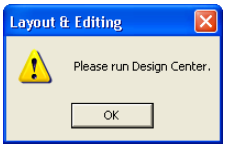
3. In the **Magnification** box, type or select the magnification factor.

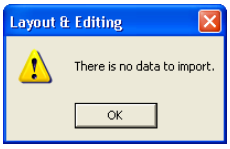
> **Note:**
> - *The embroidery design cannot be magnified to a size larger than the Design Page.*
> - *The magnification factor cannot be set below 25%.*

4. Under **Orientation**, select the desired orientation.

5. Click **Import** to import the embroidery design.

> **Memo:**
> - *To quit the operation and close the dialog box, click **Cancel**.*
> - *If Design Center has not been started up, if a .pem file has not been opened or if Design Center is not in the Sew Setting Stage, one of the following messages appear.*





> *Click **OK**, and then start up Design Center and open a .pem file.*

☞ *"Manually Creating Embroidery Patterns From Images (Design Center)" on page 193*

Specifying the Design Page Size and Color

The color and size of the Design Page in addition to the color of the background can be changed. You can select a Design Page size according to the size of hoop that you will be using with your embroidery machine. You can also customize the Design Page for designs that will be split into sections.

1. Click **Option**, then **Design Page Property**.

→ The **Design Page Property** dialog box appears.

2. Select the Design Page size.

To adjust the Design Page size according to the hoop size, select **Hoop Size**, and then select the desired hoop size from the selector.

To specify a custom Design Page size, select **Custom Size**, and then type or select the desired width and height for the Design Page. (The setting range is 100 to 1000 mm (3.9 to 39.4 inches).)
In order to make adjustments to the fabric with the layout adjustment function of your embroidery machine, select a Design Page size from the **Section Size (for Hoop Size)** selector. These Design Page sizes are 10 mm (0.39 inches.) smaller than regular embroidery hoops. (This function is not for multi-position hooping. For details on multi-position hoops, refer to "Selecting the Design Page size" on page 184.)

Memo:

- *The preview area shows the setting changes that you make.*
- *When **Hoop Size** is selected, the embroidery machine image shows the orientation of the Design Page (hoop) in relation to the machine.*

3. From the **Page** selector, select the desired color for the Design Page.

4. From the **Background** selector, select the desired color for the background.

5. Click **OK**.

Memo:

- *To return to the default settings (**100** × **100 mm** (**4"** × **4"**) of **Hoop Size**), click **Default**.*
- *Before an embroidery design created in a custom Design Page is saved or transferred to an original card, running stitches, which cannot be edited, are added at the edges of the design sections so that the design sections can easily be aligned during sewing. This alignment stitching appears in the **NOT DEFINED** color. (For more details, refer to "Embroidering" on page 191.)*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Note:

- *The Design Page sizes **130** × **300 mm**, **300** × **130 mm**, **100** × **172 mm**, and **172** × **100 mm**, indicated by "*", are used to embroider multi-position designs using a special embroidery hoop attached to the embroidery machine at three installation positions. Check that you have the multi-position embroidery hoop and that these multi-position designs can be embroidered using your embroidery machine.*
- *Do not select a hoop size larger than the embroidery hoop that can be used with your machine.*
- *Custom Design Page sizes cannot be saved for version 5 and earlier.*
- *Although a custom Design Page size can be specified, since processing will take too long when trying to create an extremely large design with the Photo Stitch function, the message "Too large image to convert" will appear if the size exceeds a width or height of 500 mm (19 3/4 inches.). After the message is closed, the photo is automatically selected, and is ready to be moved or reduced.*

"Specifying the Design Page size in Layout & Editing" on page 313 and "Changing the measurement units" on page 183

Memo:

The measurements for values displayed in the application can be in either millimeters or inches. For more details, refer to "Changing the measurement units" on page 183.

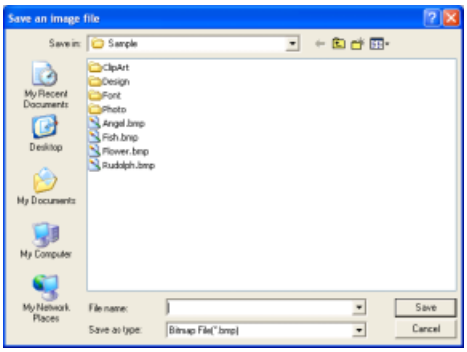
Saving the Image Data

The image can be saved as a file or outputted to the Clipboard.

Saving as a file

1. Click **Image**, then **Output**, then **to File**.

→ A dialog box similar to the one shown below appears.



2. Select the drive, the folder and the format in which you want to save the image data.

3. Type in the file name.

> **Memo:**
> - *The correct extension is automatically selected.*
> - *The image data can be saved in either of the following formats: Windows bitmap (.bmp), Exif (.jpg).*

4. Click **Save** to save the data.

> **Memo:**
> *To quit the operation, click **Cancel**.*

Outputting to the Clipboard

1. Click **Image**, then **Output**, then **to Clipboard**.

→ The image data in the Design Page is copied onto the Clipboard.

Editing Embroidery Designs

Selecting patterns

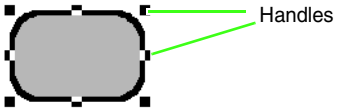
To apply settings to an existing pattern, you must first select it. The Select Object tool is used to select one or more patterns. Once a pattern is selected, you can move it, scale it, and change its direction by rotating it or inverting it.

1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Click the pattern that you want to select.

→ Handles appear around the pattern.



Memo:

- *The status bar shows the dimensions (width and height) of the pattern.*
- *To deselect the pattern, select a different pattern, click a blank area of the Design Page, or click any other button in the Tool Box.*

3. To select an additional pattern, hold down the Ctrl key and click the other pattern.

Memo:

- *You can also select patterns by dragging the pointer across the pattern that you want to select. As you drag the pointer, a selection frame is drawn. All patterns that are contained in that selection frame are selected when the mouse button is released.*
- *If you selected patterns that you did not want, click a blank area of the Design Page to deselect all patterns, and start again.*

Selecting patterns in the created order

With selected, press the Tab key to select the next object that was created. Hold down the Shift key and press the Tab key to select the previous object that was created.

If the Tab key (or the Shift and Tab keys) are pressed:

- and no object is selected, the first object (or the last object) that was created is selected.
- and multiple objects are selected, all objects are deselected except the soonest (or latest) object that was created.
- and the last (or first) object that was created is selected, the first (or last) object is selected.

Selecting all embroidery patterns

All patterns in the Design Page can easily be selected.

1. Make sure that on the Tool Box is selected.

2. Click **Edit**, then **Select All**.

Moving patterns

1. Move the pointer over a selected pattern or group of selected patterns.

→ The shape of the pointer changes to .

2. Drag the pattern to the desired location.

Memo:

- *To move the pattern horizontally or vertically, hold down the* Shift *key while dragging it.*
- *Pressing the arrow keys moves the selected pattern 0.5 mm (about 0.02 inch) in the direction of the arrow on the key. Holding down the arrow key for the desired direction continues moving the outline in that direction.*
- *If **Snap to Grid** is selected, each press of an arrow key moves the pattern one grid mark in the direction of the arrow on the key.*
- *The arrow keys cannot be used to move text on a path if just the text is selected. The path must also be selected in order to move using the arrow keys.*

Moving embroidery patterns to the center

The selected patterns can easily be moved to the center of Design Page.

1. Select one or more patterns.
2. Click **Edit**, then **Center**.

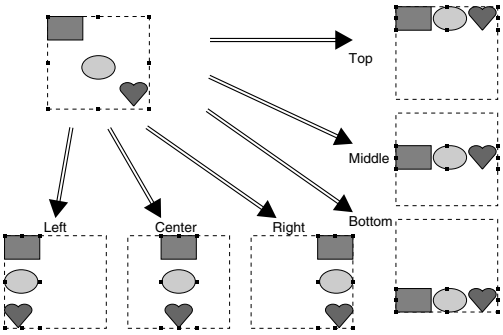
   → All selected patterns move to the center of Design Page.

Aligning embroidery patterns

The selected patterns can easily be aligned as specified.

1. Select the patterns which you want to align.
2. Click **Edit**, then **Align**, then **Left**, **Center**, **Right**, **Top**, **Middle**, or **Bottom**, depending on how you want to align the patterns.

   → The selected patterns are aligned as shown below.

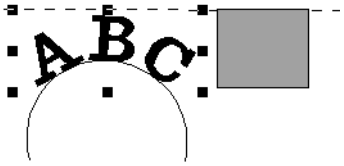


Memo:

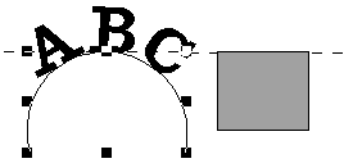
*To choose a different alignment, select the menu command **Edit** – **Undo**, and then repeat step* **2.**

Text on a path

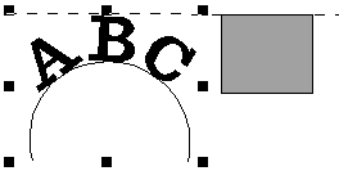
Text on a path can be aligned by selecting other patterns on the Design Page together with the text, the path, or both the text and the path. The selected patterns are aligned on their outlines.



1. Text is selected.



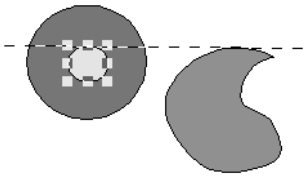
2. Path is selected.



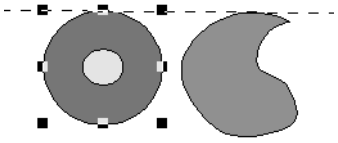
3. Both the text and path are selected.

Patterns set for hole sewing

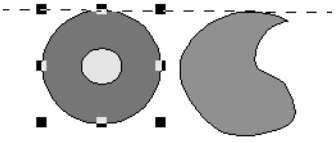
If just the inside pattern is selected, the pattern is aligned on the outline of the inside area. If the outside of the pattern is also selected, the pattern is aligned on the outline of the outside area.



1. Inside area is selected.



2. Outside area is selected.



3. Both the inside and outside areas are selected.

Scaling patterns

Scaling manually

1. Select the patterns that you want to resize.
2. Move the pointer over one of the handles of a selected pattern or group of patterns.

   → The shape of the pointer changes to ↔ , ↕ , ⤡ or ⤢ , depending on the handle that the pointer is over.

> **Memo:**
> - ↔ *is for scaling the width.*
> - ↕ *is for scaling the height.*
> - ⤡ *and* ⤢ *are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
> - *If the* Shift *key is held down while a handle is dragged, the pattern is enlarged or reduced from the center of the pattern.*

3. Drag the handle to adjust the selected pattern(s) to the desired size.

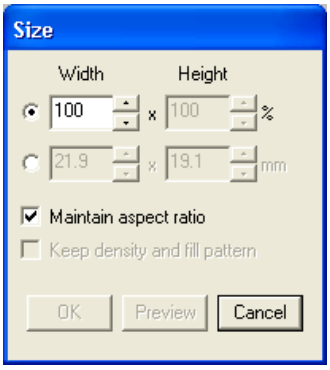
> **Memo:**
> - *As you drag the handle, the current size is displayed on the status bar.*
> - *For more precise resizing, select the menu command **Edit** – **Numerical Setting** – **Size**, as described below.*

> **Note:**
> - *Stamp settings remain independent from the patterns that they are applied to. If a pattern containing a stamp is edited, be sure to check the stamp after editing is finished.*
> - *Some patterns imported from embroidery cards cannot be scaled.*
> - *When scaling stitch patterns, the number of stitches remains the same, resulting in a loss of quality. To maintain the quality of the embroidery pattern, hold down the* Ctrl *key while scaling.*

Scaling numerically

1. Select the patterns that you want to resize.
2. Click **Edit**, then **Numerical Setting**, then **Size**.

   → The **Size** dialog box appears.



3. To change the width and height proportionally, select the **Maintain aspect ratio** check box.
4. Select the whether the width and height will be set as a percentage (%) or a dimension (millimeters or inches).
5. Type or select the desired width and height.

Memo:

- *Select **100%** to leave the pattern unchanged.*
- *If **Maintain aspect ratio** is selected, changing one dimension automatically changes the other so that the proportion of the width and height remains unchanged.*

6. To resize the selected pattern while maintaining the original density and fill pattern, select the **Keep density and fill pattern** check box.

Memo:

*The **Keep density and fill pattern** check box is available only if stitch data is selected.*

7. Click **OK**.

Memo:

- *To view the pattern at the new size in the Design Page, click **Preview**.*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Flipping patterns horizontally or vertically

1. Select the pattern that you want to flip (up/down) or vertically (left/right).

2. To flip the pattern horizontally, click **Edit**, then **Mirror**, then **Horizontal**, or click on the Toolbar.
To flip the pattern vertically, click **Edit**, then **Mirror**, then **Vertical**, or click on the Toolbar.

Note:

Some patterns imported from embroidery cards cannot be flipped.

Rotating patterns

Rotating manually

1. Select the pattern that you want to rotate.

2. Click **Edit**, then **Rotate**, or click on the Toolbar.

→ The handles around the selected pattern are replaced by smaller squares at the four corners of the selected pattern.

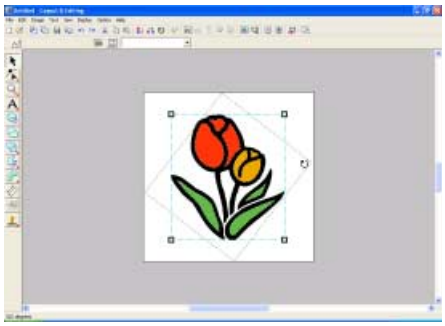
3. Move the pointer over one of the four rotation handles.

→ When the pointer is moved over a rotation handle, the shape of the pointer changes to .

4. Drag the rotation handle clockwise or counterclockwise to rotate the pattern in 1° increments.

Memo:

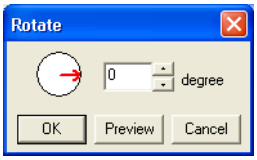
To rotate the pattern in 15° increments, hold down the Shift key while dragging the rotation handle.



Rotating numerically

1. Select the pattern that you want to rotate.
2. Click **Edit**, then **Numerical Setting**, then **Rotate**.

   → The **Rotate** dialog box appears.



3. Type or select the desired rotation angle.

> **Memo:**
> - *The angle can also be specified by moving the pointer over the red arrow inside of the circle, then dragging the red arrow to the desired angle. When the pointer is moved over the red arrow, its shape changes to* ↻ .
> - *Select **0 degree** to leave the pattern unchanged.*

4. Click **OK**.

> **Memo:**
> - *To view the pattern rotated the specified angle in the Design Page, click **Preview**.*
> - *To close the dialog box without applying the changes to the settings, click **Cancel**.*

> **Note:**
> *The range of values that can be entered is between 0 and 359 degrees, in 1-degree increments.*

Grouping embroidery patterns

Several individual patterns can be grouped so that the same changes apply to all of the patterns within the group. Grouped patterns can however still be edited independently.

1. Select several patterns.
2. Click **Edit**, then **Group**.

   → The selected patterns are grouped.

> **Memo:**
> - *If you select only the text fit to a path or only the path, both the path and text will be included in the group.*
> - *When selecting a pattern set as part of a hole sewing pattern, the entire hole sewing pattern will be included in the group.*
> - *To ungroup the patterns, select the group, and then click **Edit**, then **Ungroup**.*

Editing grouped patterns individually

Even after patterns are grouped, they can be edited individually.

1. To select a single pattern within a group, hold down the Alt key while clicking the pattern. To select multiple patterns within a group, or to select grouped and ungrouped patterns, hold down the Alt and Ctrl keys while clicking the patterns.

> **Memo:**
> *A light blue frame appears around the grouped patterns whenever the group or an individual pattern is selected.*

2. Edit the object as desired.

> **Memo:**
> *Grouping is cancelled if patterns are deleted to leave only one.*

Reshaping Embroidery Patterns

Selecting points

1. Click on the Tool Box.

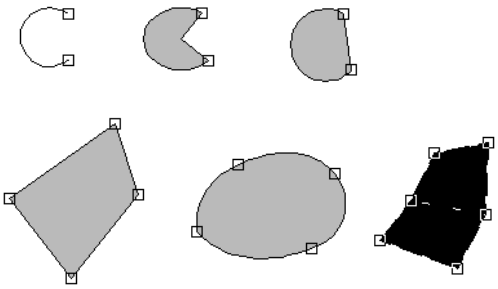
   → Two buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the pattern that you want to edit.

   → The points in the pattern appear as small empty squares.



> **Memo:**
> *The pattern can be a broken line, a curve, an arc, a fan shape, an arc & string, a manual punching pattern, or stitch data.*

4. To select a single point, click an empty square.

   To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.

   To select all points between the selected point and the next point selected, hold down the Shift key while clicking the next point.

   To select an additional point in the direction of the end point, hold down the Shift key and press the → or ↓ key. To select an additional point in the direction of the start point, hold down the Shift key and press the ← or ↑ key. Holding down the Shift key and pressing the opposite arrow key deselects the point.

   To deselect the current point and select the following point in the direction of the end point, hold down the Ctrl key and press the → or ↓ key. To deselect the current point and select the following point in the direction of the start point, hold down the Ctrl key and press the ← or ↑ key.

   → The selected point appears as a small black square.

> **Note:**
> *The points of some patterns cannot be selected.*

Moving points

1. Click on the Tool Box.

   → Two buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the pattern that you want to edit.

   → The points in the pattern appear as small empty squares.

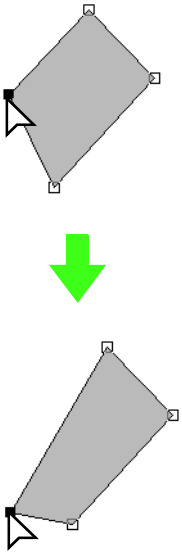
> **Memo:**
> *The pattern can be a broken line, a curve, an arc, a fan shape, an arc & string, a manual punching pattern, or stitch data.*

4. Click the point that you want to move.

   → The selected point appears as a small black square.

> **Note:**
> *If you click the outline of the pattern instead of a point, a new point is inserted.*

5. Drag the point to the new location.



Note:
You must drag a point that is selected. If you start dragging by clicking elsewhere on the outline of the pattern, a new point will be inserted or the selected point(s) will be deselected.

Memo:

- *All of the selected points move in the same direction.*
- *To move the point of a broken line, a curve, a manual punching pattern, or stitch data horizontally or vertically, hold down the* Shift *key while dragging it.*
- *Pressing the arrow keys moves the selected point 0.5 mm (about 0.02 inch) in the direction of the arrow on the key. Holding down the arrow key for the desired direction continues moving the outline in that direction.*
- *If **Snap to Grid** is selected, each press of an arrow key moves the point one grid mark in the direction of the arrow on the key.*
- *The arrow keys cannot be used to move the end points of an arc.*
- *Points in patterns set for hole sewing can also be moved. However, the point cannot be moved to cross an outline. In order to move the point in this way, cancel hole sewing first.*

Inserting points

New points can be inserted in order to change the shape of a pattern. In the case of a new point on a curve, you can also use the handle to reorient the tangent to the new point.

1. Click on the Tool Box.

→ Two buttons appear: .

2. Click .

→ The shape of the pointer changes to .

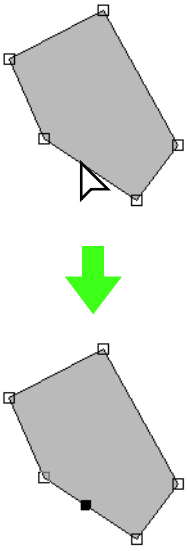
3. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.

Memo:
The pattern can be a broken line, a curve, a manual punching pattern, or stitch data.

4. Click the outline to add a point.

→ A new point appears selected (as a small black square and, in the case of a curve, with a control handle).



Memo:
If a manual punching block pattern was selected, a pair of new points are inserted.

Deleting points

1. Click on the Tool Box.

   → Two buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the pattern that you want to edit.

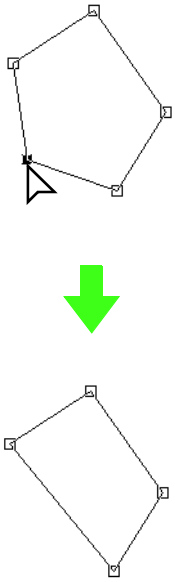
   Memo:
   The pattern can be a broken line, a curve, a manual punching pattern, or stitch data.

   → The points in the pattern appear as small empty squares.

4. Click the point that you want to delete.

   → The selected point appears as a small black square.

5. Click **Edit**, then **Delete**, or press the Delete key to remove the point.



Memo:
If a point of a manual punching block pattern was selected, the pair of points are deleted.

Transforming straight lines into curves or curves into straight lines

1. Click on the Tool Box.

   → Two buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the pattern that you want to edit.

   → The points in the pattern appear as small empty squares.

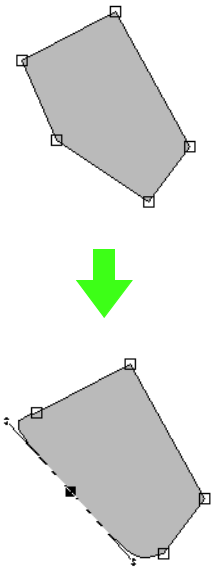
4. Click the point that you want to transform.

   → The selected point appears as a small black square.

5. To transform a straight line to a curve, click **Edit**, then **Point**, then click **To Curve**, or right-click the point, and then click **To Curve** on the menu that appeared.

   To transform a curve to a straight line, click **Edit**, then **Point**, then click **To Straight**, or right-click the point, and then click **To Straight** on the menu that appeared.

   → A point on curve is transformed to a corner, and a corner point is transformed to a point on a curve.



Memo:

If the point is on a curve, you can use the control handles to adjust the curve.

Smoothing out the path at a point

1. Click on the Tool Box.
   → Two buttons appear: .
2. Click .
   → The shape of the pointer changes to .
3. Click the pattern that you want to edit.
   → The points in the pattern appear as small empty squares.

4. Click the point where the path is to be smoothed out.
   → The selected point appears as a small black square.

5. Click **Edit**, then **Point**, then **To Smooth**, or right-click the point, and then click **To Smooth** on the menu that appeared.
   → The path at the point is smoothed out.

6. Drag the path to adjust it.

Symmetrically adjusting the control handles of a point

1. Click on the Tool Box.
   → Two buttons appear: .
2. Click .
   → The shape of the pointer changes to .
3. Click the pattern that you want to edit.
   → The points in the pattern appear as small empty squares.

4. Click the point where the control handles are to be adjusted symmetrically.
   → The selected point appears as a small black square.

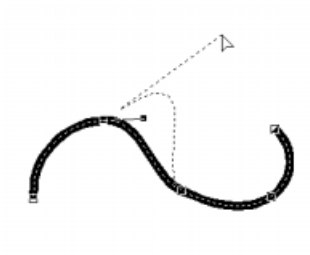
5. Click **Edit**, then **Point**, then **To Symmetry**, or right-click the point, and then click **To Symmetry** on the menu that appeared.
6. Drag the path to adjust it.
   → The control handles of the point are moved symmetrically.

Transforming to a pointed path

1. Click on the Tool Box.
   → Two buttons appear: .
2. Click .
   → The shape of the pointer changes to .
3. Click the pattern that you want to edit.
   → The points in the pattern appear as small empty squares.

4. Click the point where the path is to be transformed to a pointed one.
   → The selected point appears as a small black square.

5. Click **Edit**, then **Point**, then **To Cusp**, or right-click the point, and then click **To Cusp** on the menu that appeared.
   → The path is transformed to a pointed one at the selected point.



6. Drag the path to adjust it.

Moving entry/exit points and the center point

Moving the entry/exit points

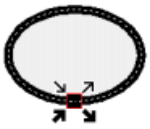
You can reposition the entry and exit points of objects created with the tools on the Tool Box in order to adjust the stitching.

1. Click on the Tool Box.
   → Two buttons appear: .
2. Click .
   → The shape of the pointer changes to .

> **Note:**
> *If the entry and exit points have been optimized (a check mark appears in front of the **Optimize Entry/Exit points** command on the **Sew** menu), the entry and exit points of the patterns cannot be edited. In order to use this tool for editing the entry and exit points, select the menu command **Sew** – **Optimize Entry/Exit points** to cancel the setting.*

3. Click the object that you want to edit.
   → The entry and exit points of the object appear.

> **Memo:**
> *If the region has the concentric circle stitch or radial stitch applied, the center point of the stitching also appears. (For details on moving the center point, refer to "Moving the center point" on page 111.)*



> **Note:**
> *The entry and exit points of stitch data, text, and manual punching patterns cannot be edited.*

This is the entry point for the outline stitching. The previous pattern is connected to this point.

This is the exit point for the outline stitching. Stitching continues from this point to the next pattern.

This is the entry point for the inside region stitching. The previous pattern is connected to this point.

This is the exit point for the inside region stitching. Stitching continues from this point to the next pattern.

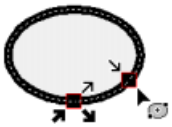
Memo:

If the outline or the inside region are set to not be sewn, the corresponding point does not appear.

Memo:

*If the sew type for a region is set to **Random Walking Stitch**, points indicating the entry point and exit point for the region do not appear.*

4. Drag the arrow for the point that you want to move to the desired location on the outline.



Note:

- *Only entry and exit points for patterns created with the Circle or Arc, Rectangle and Outline tools can be edited. Stitch pattern or patterns created with the Text tools or Manual Punch tools cannot be edited.*
- *If the menu command **Sew** – **Optimize Entry/Exit points** is selected to optimize the entry and exit points, all manual adjustments of the entry and exit points will be lost, and the positions of the points will be automatically optimized.*

Moving the center point

The center point for regions set to the concentric circle stitch or radial stitch can be repositioned for a more decorative effect.

1. Click on the Tool Box.

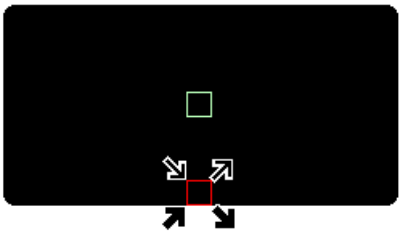
→ Two buttons appear: .

2. Click .

→ The shape of the pointer changes to .

3. Click the region set to the concentric circle stitch or radial stitch that you want to edit.

→ The entry and exit points and the center point of the object appear.



4. Drag the center point to the desired location.

Optimizing the entry/exit points

The positions of the entry and the exit points for the objects can be adjusted automatically in order to optimize stitching.

1. Click **Sew**, then **Optimize Entry/Exit points**.

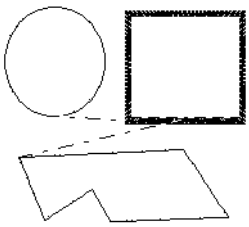
To optimize the entry and exit points, select this command so that a check mark appears. To cancel optimizing, select this command so that no check mark appears.

→ If a check mark appears beside **Optimize Entry/Exit points**, the entry and exit points for the stitching of connected objects with the same color are optimized (in other words, they are connected by the shortest distance possible).

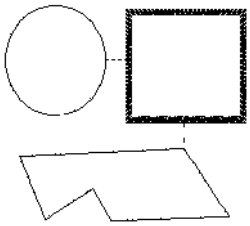
Note:

- *Only entry and exit points for patterns created with the Circle or Arc, Rectangle and Outline tools can be optimized.*
- *If the menu command **Sew** – **Optimize Entry/Exit points** is selected to optimize the entry and exit points, the entry and exit points cannot be moved with the Entry/Exit point tool.*

→ If the check mark does not appear beside **Optimize Entry/Exit points**, the entry and exit points are not optimized. If the optimizing of the entry and exit points is cancelled, the entry point and exit point positions are retained. In addition, the positions of the entry and the exit points can be manually changed with the Entry/Exit/Center point tool.



Optimize Entry/Exit points not selected



Optimize Entry/Exit points selected

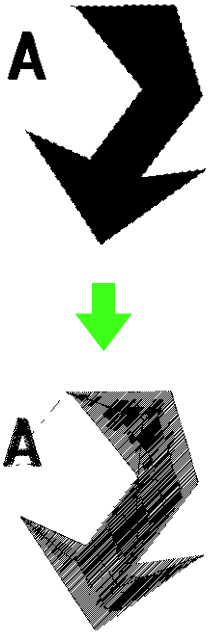
Editing a Stitch Pattern

Converting objects to a stitch pattern

Objects drawn with the tools in Layout & Editing can be converted into a stitch pattern, allowing you to make detailed changes by modifying the position of individual stitches.

1. Select the object that you want to convert.
2. Click **Sew**, then **Convert to Stitches**.

   The selected object is converted to stitch pattern.



→ The dotted line around the converted pattern indicates that it is a stitch pattern. Each stitch of the converted pattern can be edited with the Edit Point tool.

Memo:

- *Grouped objects, objects set for hole sewing, and text arranged on shapes and their shapes will each be converted to stitch pattern.*
- *Patterns that do not have sewing attributes applied are deleted when the object is converted to stitch pattern.*
- *Object means patterns created with Shape tools or Text tools or Manual Punch tools.*

Editing stitch points of stitch pattern

1. Click on the Tool Box.

   → Two buttons appear: .
2. Click .

   → The shape of the pointer changes to .
3. Click the object that you want to edit.

   → The stitch points in the stitch pattern appear as small empty squares.

   Note:
   Stitch pattern are surrounded with a dotted line.
   *If the object is not surrounded by a dotted line, it cannot be edited. Select the menu command **Sew** – **Convert to Stitch** to convert the object to stitch pattern.*
4. To select a single stitch point, click an empty square.

   → The selected stitch point appears as a small black square.

   Memo:
   If you click a feed, the points at both ends are selected.

   To select multiple stitch points, hold down the Ctrl key and click each of the other points that you want to select, or drag the pointer over the stitch points that you want to select.

Memo:

- *To select all stitch points (in the stitching order) between the selected stitch point and the next point selected, hold down the Shift key while clicking the next stitch point.*
- *To select an additional stitch point in the stitching order, hold down the Shift key and press the → or ↓ key. To select an additional stitch point in the opposite direction of the stitching order, hold down the Shift key and press the ← or ↑ key. Holding down the Shift key and pressing the opposite arrow key deselects the stitch point.*
- *To deselect the current stitch point and select the following point in the stitching direction, hold down the Ctrl key and press the → or ↓ key. To deselect the current stitch point and select the previous point in the stitching direction, hold down the Ctrl key and press the ← or ↑ key.*
- *To select all stitch points in the next color, press the Tab key. To select all stitch points in the previous color, hold down the Shift key and press the Tab key.*

→ Selected points appear as small black squares.

Note

When selecting stitch points, be sure to click the stitch point (do not click a blank area of the Design Page), otherwise all of the selected points will be deselected.

Moving stitch points

1. Drag the selected stitch points to the new location.

Memo:

- *To move the selected stitch point horizontally or vertically, hold down the Shift key while dragging it.*
- *Pressing the arrow keys moves the selected stitch point 0.1 mm in the direction of the arrow on the key.*
- *If **Snap to Grid** is selected, each press of an arrow key moves the pattern one grid mark in the direction of the arrow on the key.*
- *The arrow keys cannot be used to move text on a path if just the text is selected. The path must also be selected in order to move using the arrow keys.*

Inserting stitch points and feeds

1. Click a line between two stitch points to add a new point at that position.

Memo:

- *To insert a stitch point and change the previous line into a feed, hold down the Ctrl and Shift keys while clicking on the line.*
- *If there is a long distance between stitches, the needle may automatically drop, depending on the embroidery machine. To sew long jumps, perform this operation.*

Deleting stitch points

1. Press the Delete key to delete the selected stitch point.

Memo:

If the end point of a feed is deleted, that feed segment is deleted and the stitches before and after the feed are connected.

Editing entry/exit points for each color of the stitch pattern

1. Click on the Tool Box.

   → Two buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the object that you want to edit.

   → The stitch points in the object appear as small empty squares.

4. To select the entry point of the first thread color, press the Ctrl and Home keys.

   To select the exit point of the last thread color, press the Ctrl and End keys.

   To select the entry point of a given color, select at least one point in that color, and then press the Home key.

   To select the exit point of a given color, select at least one point in that color, and then press the End key.

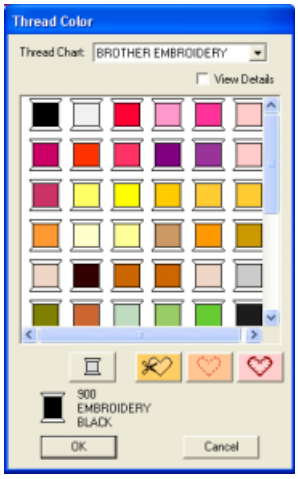
Changing colors of a stitch pattern

The colors of imported stitch patterns or objects converted to stitches can be changed in the following way.

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order/ Color**.
   → The **Sewing Order/Color** dialog box appears with each data in the pattern in a separate frame.

2. Select the frame for the data whose color you want to change.
3. Click .
   → The **Thread Color** dialog box appears.



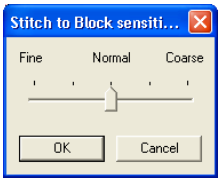
4. Select the desired color, and then click **OK**.
   → The object appears in the new color in the **Sewing Order/Color** dialog box and in the Design Page.
5. Repeat steps **2.** to **4.** for each data whose color you want to change.
6. Click **OK**.
   → The pattern is displayed with the new colors.

> **Memo:**
> *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Converting a stitch pattern to blocks

Imported stitch data or patterns converted to stitch pattern can be converted into blocks (manual punching data), allowing you to change some of their sewing attributes and to scale individual colors while keeping their stitching quality.

1. Select the stitch pattern imported into the Design Page where you want to apply the setting.
2. Click **Sew**, then **Stitch to Block**.
   → The **Stitch to Block sensitivity** dialog box appears.



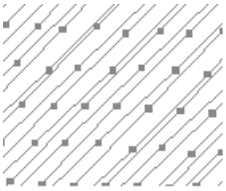
3. Move the slider to select the desired sensitivity.

> **Memo:**
> *The **Normal** setting should provide satisfactory results in most cases, but depending on the complexity of the pattern, you may need to select a setting more towards **Coarse** or **Fine**.*

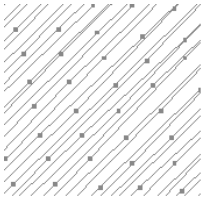
4. Click **OK**.
   → The data in the blocks are grouped so that any setting change will affect the whole pattern, and the Sewing Attributes bar appears as shown below.

Memo:

- *To quit the operation, click **Cancel**.*
- *To modify the sewing attributes of all blocks of the same color within the pattern, hold down the Alt key while selecting a block whose color or sew type settings you want to change. (An alternate method is to first ungroup the colors of the pattern by selecting the menu command **Edit** – **Ungroup**.) Use the zoom tools to zoom into the design to select the color more easily. All blocks of that color are selected and the block color and sew type appear in the Sewing Attributes bar.*
- *When you scale blocks, the number of stitches sewn automatically adapt to the new size of the blocks, allowing you to keep the original embroidery quality.*



Without **Stitch to Block**



With **Stitch to Block**

Note:

- *The **Stitch to Block** command cannot be used with some stitch pattern imported from embroidery cards.*
- *Some fill patterns are lost when scaled after setting the Stitch to Block function, therefore it is recommended to scale while holding down the Ctrl key or by selecting the menu command **Edit** – **Numerical Setting** – **Size**.*

Memo:

- *The selected color blocks can be moved or scaled individually, therefore, if you want to move the whole pattern once it has been ungrouped, be sure to carefully regroup each individual color pattern by selecting the menu command **Edit** – **Group**.*
- *You can further modify the pattern by using the Point Edit tool.*

☞ *"Specifying sewing attributes" on page 151, "Scaling patterns" on page 103 and "Selecting points" on page 106*

Splitting off parts of a stitch pattern

The Split stitch tool in the Tool Box allows you to split a pattern after tracing an enclosure around the parts that you want to cut off. You can then move the cutoff sections to rearrange the pattern, combine it with other patterns or even delete it.

Memo:

This tool is available only for stitch data, and when the Text, Outline, and Manual Punch tools are not selected.

Note:

Patterns created with the drawing or Text tools of Layout & Editing need to be converted into stitches before they can be cut with the Split stitch tool.

1. Click on the Tool Box.

2. Click the stitch data that you want to cut a section from.

Memo:

You can also click the Split stitch tool after selecting stitch data.

→ All other stitch data disappear from the display, and the shape of the pointer changes to .

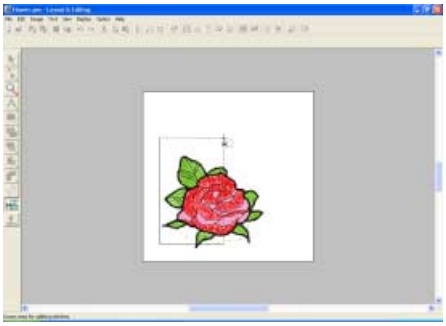
3. Click in the Design Page at the point where you want to start drawing the enclosing lines.

Memo:

In the Tool Box, only the Zoom tool is available, allowing you to zoom in on the stitch data to better view the area.

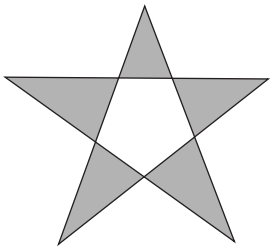
4. Continue clicking in the Design Page to specify each corner of the enclosure around the area to be cut off.

→ The dotted line that is drawn when you move the pointer changes to a solid line when the next point is specified.



Memo:

- *To remove the last point that was entered, click the right mouse button. Each successive right-click removes points, one by one, in the opposite order that they were entered. Once all points are deleted, the Tool Box buttons are available again, however, the application remains in Split stitch mode.*
- *An enclosure is valid only if it contains stitch data. If it contains no stitch data, an error message appears, and the enclosure is erased, but the application remains in Split stitch mode.*
- *Sections enclosed several times by lines of an intricate figure alternate between being selected and deselected. Therefore, in a figure like a pentagram for instance, only the points are selected, and the center is deselected as it has been enclosed twice.*



5. Double-click in the Design Page to specify the section to be split off.

6. Edit the cutoff section as desired.

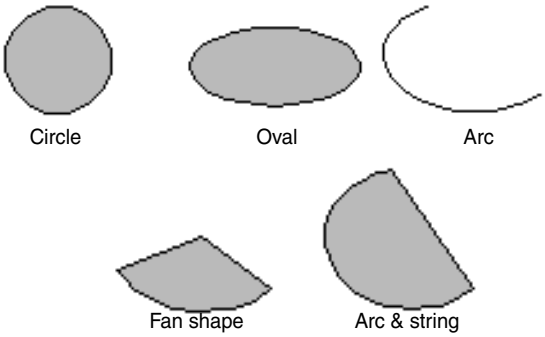
Note:

- *Only one cutoff section can be specified from the pattern at one time. Repeat the procedure for each piece of the pattern that you want to cut off.*
- *The cutoff piece moves to the end of the sewing order and the thread color order appears in the order selected for the original pattern.*

Drawing Shapes

The Circle or Arc tool allows you to create several curved patterns: regular circles (or ovals), arcs, fan shapes and arc & strings.

About circles and arcs



All of these patterns, except arcs have an outline and a inside region, and can independently be assigned different sewing attributes. Arcs are simple outlines.

> **Note:**
> *When drawing a shape with this tool, select the shape before drawing. You cannot, for example, draw a circle, then change it to an arc afterward.*
> *The setting is applied to all patterns that you will create with the Circle or Arc tool, until the setting is changed.*

Drawing a circle or an oval

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

> **Memo:**
> - *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 149 and "Sew type" on page 150.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then select **Circle**.

3. Drag the pointer in the Design Page.

→ The point where you start dragging is considered a corner of an imaginary rectangle around the oval. The point where you release the mouse button is the diagonally opposite point of the rectangle. The oval will fit inside this imaginary rectangle (its greater axis is along the longer edge of the rectangle, and its smaller axis is along the smaller edge).

> **Memo:**
> *To draw a circle, hold down the* Shift *key while dragging the pointer.*

Drawing an arc

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

Memo:

- *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 149 and "Sew type" on page 150.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Arc**.

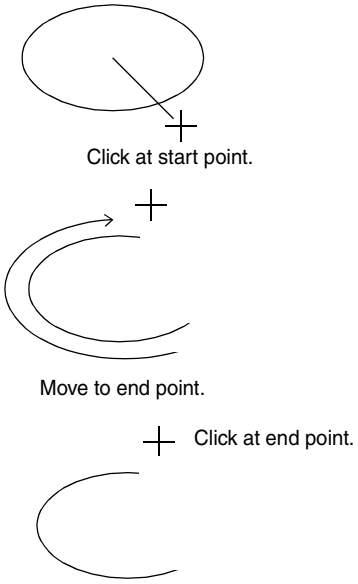
3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the arc, and then click.

→ The radial line disappears.

5. Move the pointer until the arc has the desired shape, and then click.



Drawing a fan shape

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

Memo:

- *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 149 and "Sew type" on page 150.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Fan Shape**.

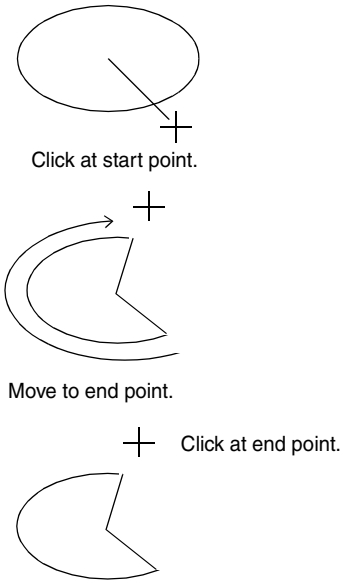
3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the fan shape, and then click.

→ The radial line disappears.

5. Move the pointer until the fan has the desired shape, and then click.



Drawing an arc & string

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

> **Memo:**
> - *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 149 and "Sew type" on page 150.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Click in the **Arc shape** selector, and then click **Arc & String**.

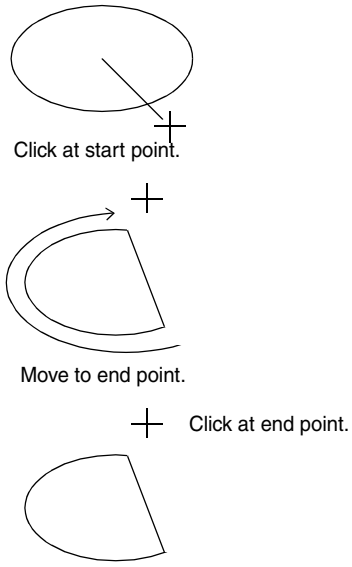
3. Proceed as you would to draw a circle or an oval.

→ A radial line appears on the oval when the mouse button is released.

4. Move the pointer to the start point of the arc & string, and then click.

→ The radial line disappears.

5. Move the pointer until the arc & string has the desired shape, and then click.



Selecting the circle/arc type

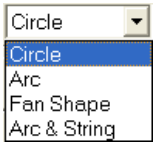
Arc shape

Use this selector to select the type of arc.

> **Memo:**
> *The **Arc shape** selector appears in the Sewing Attributes bar when on the Tool Box is selected.*

1. Click in the **Arc shape** selector.

→ The settings appear.



2. Click one of the settings.

→ The setting is applied to all patterns that will be created with the Circle or Arc tool, until the setting is changed.

Drawing a rectangle

With the Rectangle tool, you can draw rectangles with sharp or rounded corners. A rectangle will automatically have an outline and an inside region that can independently be assigned different sewing attributes.

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

> **Memo:**
> - *You can change the edge radius, color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Edge radius" on this page, "Color" on page 149 and "Sew type" on page 150.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the stitch. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

2. Drag the pointer in the Design Page.

→ The point where you start dragging is considered a corner of the rectangle. The point where the mouse button is released is the diagonally opposite corner of the rectangle.

> **Memo:**
> *To draw a square, hold down the* Shift *key while dragging the pointer.*

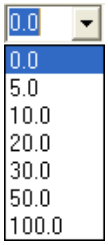
Specifying the radius of the rectangle corners

Edge radius

Use this selector to select the shape of the rectangle corners.

> **Memo:**
> *The **Edge radius** selector appears in the Sewing Attributes bar when* *on the Tool Box is selected. It also appears when a rectangle in the Design Page has been selected.*

1. Click in the **Edge radius** selector.



2. Type the desired radius (0.0 to 100.0 mm (0.00 to 3.93 inches)) and press the Enter key, or click the desired value.

→ The setting is applied to all patterns that will be created with the Rectangle tool, until the setting is changed.

→ If a rectangle was selected, the setting is also applied to that rectangle.

Example 1
Edge radius: 0.0 mm

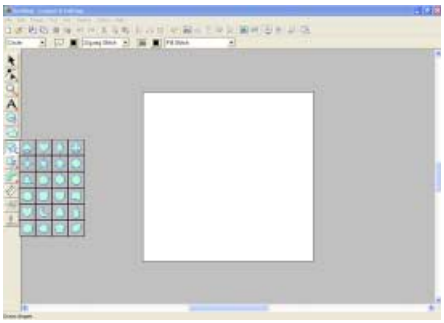
Example 2
Edge radius: 20.0 mm

Drawing various shapes

The Shape tools allow you to draw 24 types of shapes, such as hearts, stars or polygons. These shapes will have an outline and an inside region that can independently be assigned different sewing attributes.

1. Click on the Tool Box.

→ The buttons for the 24 types of shapes appear.



2. Click the button for the type of shape that you want to draw.

→ The shape of the pointer changes to that for the selected shape.

> **Memo:**
>
> - *You can change the color and sew type either before or after drawing the shape. For more details on changing these settings, refer to "Color" on page 149 and "Sew type" on page 150.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the stitch. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Drag the pointer in the Design Page.

→ The point where you start dragging is considered a corner of an imaginary rectangle around the shape. The point where you release the mouse button is the diagonally opposite point of the shape. The shape will fit inside this imaginary rectangle.

> **Memo:**
>
> *To draw the shape while maintaining the original height-to-width proportion, hold down the* Shift *key while dragging the pointer.*

About straight lines and curves

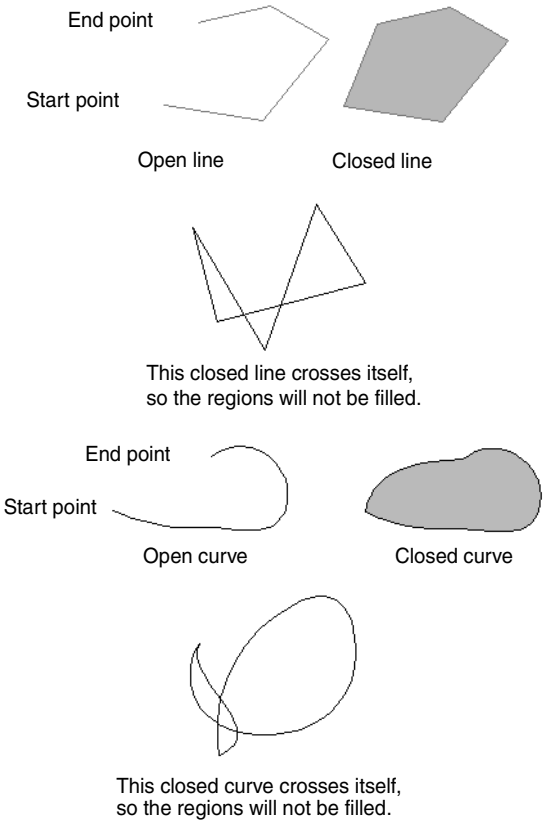
The Outline tools allow you to add straight lines and curves to your pattern.

If the straight line or curve is set to be open (**Open Path**), it will end at the last point entered. Since this type of pattern is a simple outline and does not have an inside region, line sew type and color settings can only be applied to the line itself.

If the straight line or curve is set to be closed (**Close Path**), the last point will automatically connect with the first one. Since this type of pattern has an outline and an inside region, each part can be assigned different sew types and colors. **However, if the line of the pattern crosses itself, the inside region cannot be filled, and the line must be uncrossed so that the fill can be applied.**

While creating the pattern, you can freely switch between drawing straight lines or curves, and once they are drawn, straight lines can be transformed into curves, and curves into straight lines.

Furthermore, if an image is used as a template, one tool can be used to semi-automatically extract the image boundary.



Drawing straight lines and curves

1. Click on the Tool Box.

→ Three buttons appear:

is for drawing straight lines. (Shortcut key: Z)

is for drawing curves. (Shortcut key: X)

is for semi-automatically drawing lines. (Shortcut key: C)

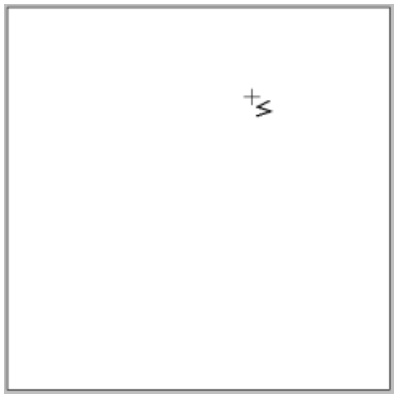
2. Click the button for the type of line that you want to draw.

→ The shape of the pointer changes to , or , and the Sewing Attributes bar appears similar to the one shown below.

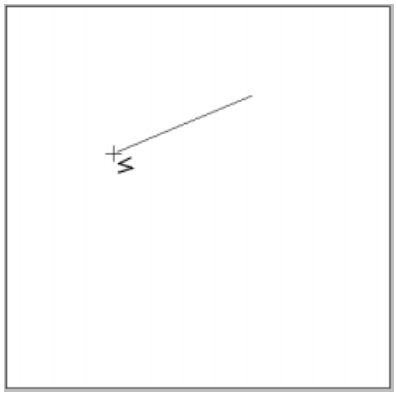
Memo:

- *You can change the path shape, color and sew type either before or after creating the shape. For more details on changing these settings, refer to "Path shape" on page 124, "Color" on page 149 and "Sew type" on page 150.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the shape. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click in the Design Page to specify the start point.



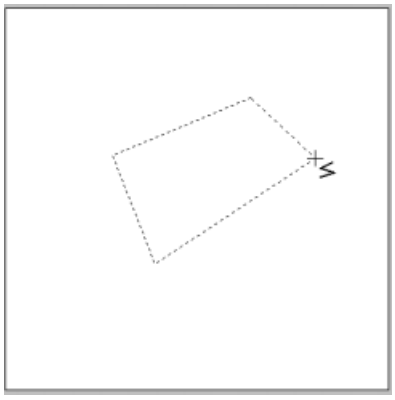
4. Click in the Design Page to specify the next point.



Memo:

To remove the last point that was entered, click the right mouse button.

5. Continue clicking to specify every point, and then double-click the last end point.

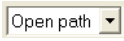


Note:

- *While drawing the pattern, you can freely switch between the different line types either by clicking a different button or by pressing the shortcut key.*
- *Even after the pattern is drawn, you can transform straight lines into curves and vice versa. For more details, refer to "Transforming straight lines into curves or curves into straight lines" on page 108.*
- *If **Close Path** is set, double-clicking will automatically draw a line between the last and the first points of the line.*
- *When drawing a straight line, hold down the Shift key while moving the pointer to draw vertically or horizontally.*
- *A template image is needed in order to draw using the Semi-Automatic tool. If there is no image, this tool will draw like the Straight Line tool.*

Selecting the attributes of line ends

Path shape



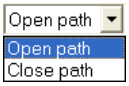
Use this selector to select whether the broken lines and curves will be open or closed.

Memo:

*The **Path shape** selector appears in the Sewing Attributes bar when on the Tool Box is selected. It also appears when a broken line or curve in the Design Page has been selected.*

1. Click the **Path shape** selector.

→ The settings appear.



2. Click the desired option.

→ The setting is applied to all patterns that will be created with the Outline tools, until the setting is changed.

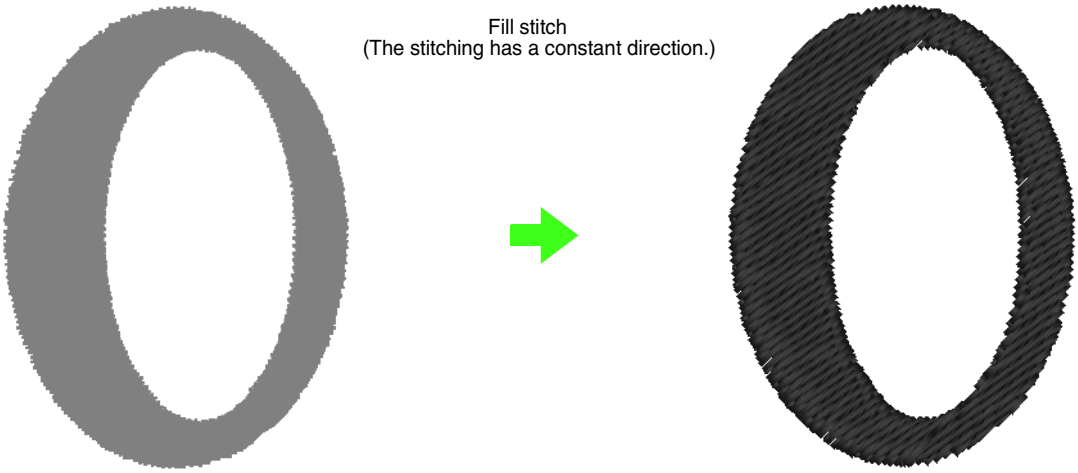
→ If a broken line or curve was selected, the setting is also applied to that broken line or curve.

Manually Creating Professional-Level Embroidery Patterns (Manual Punching)

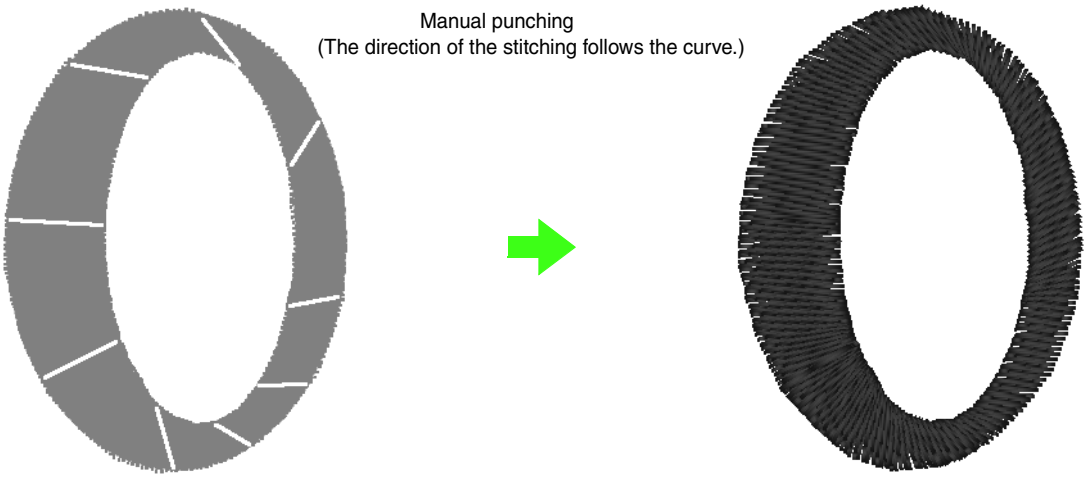
The Manual Punch tools are used to create patterns that look like manual embroidery. With manual punching, you can create patterns with any sewing order, direction and orientation that you want.

Letters that you design yourself constitute a typical example of patterns that look better using manual punching patterns. The illustrations below show two previews of the letter “O”.

The one shown below has been designed using two concentric ovals without a line sewing attribute, filling the larger oval with the fill stitch, and turning off the region sewing attribute inside the small oval. The pair was then set for hole sewing.



The letter shown below has been drawn using the Manual Punch tools. To do this, we duplicated the letter shown above, removed the inside region, and created a manual punching pattern using the outlines of the ovals as guides. The ovals were then deleted.



The stitch density for both letters was set to low in order to make it easier to see the difference between the two patterns on the preview display.

When creating a manual punching pattern, it is easier to use an image in the background as a guide. In the above example, we used two ovals that we removed after completing the manual punching pattern.

Another possibility is to load a template image and redraw it using manual punching patterns. The advantage of this method is that you have a better control on the thread orientation.

1. Open a template or prepare an image that you will use as a guide. (For more details, refer to “Importing Image Data” on page 76.)

2. Click on the Tool Box.

→ Five buttons appear:

is for creating straight block-type punching patterns. (Shortcut key: Z)

is for creating curved block-type punching patterns. (Shortcut key: X)

is for semi-automatically creating block-type punching patterns. (Shortcut key: C)

is for creating running-type punching patterns (the broken line is sewn). (Shortcut key: V)

is for creating feed-type punching patterns (the broken line is not sewn). (Shortcut key: B)

While creating a manual punching pattern, you can alternate between the various types. For example, you can start with a straight block-type pattern, then switch to a running-type pattern (to draw an outline of the block-type pattern), then switch to the feed type to move to the beginning of the next block-type pattern. The whole pattern, consisting of different types of punching patterns, will be considered a single pattern (all parts will have the same sew type and color).

In this example, we start with a straight block-type pattern, use the feed-type pattern to move the pointer, and then create a running-type pattern.

3. Click to start creating a straight block-type pattern.

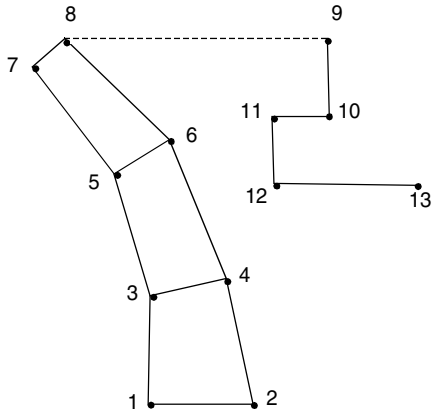
→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

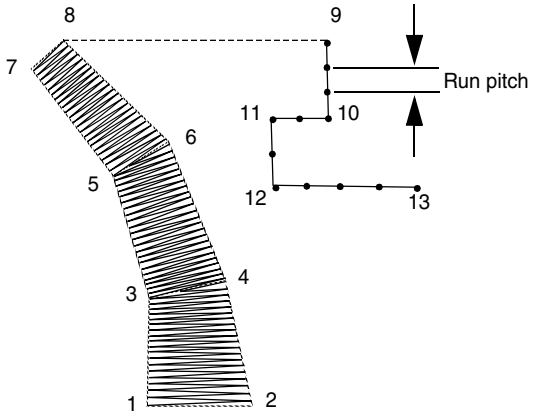
Memo:

- *You can change the color and sew type either before or after creating the pattern. For more details on changing these settings, refer to “Color” on page 149 and “Sew type” on page 150.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the pattern. (For more details, refer to “Specifying sewing attributes” on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

4. Click in the Design Page to specify point 1 (start point).

5. Refer to the illustration below, and click in the Design Page to specify points 2 through 8.





Memo:

To remove the last point that was entered, click the right mouse button.

6. After clicking point 8 (the last point of the block-type pattern), click (feed-type pattern button), and then in the Design Page to specify point 9 (the start point of the running-type pattern).

7. Click (running-type pattern button), and then click in the Design Page to specify points 10, 11, and 12, as shown in the above illustration.

8. To complete the pattern, double-click point 13 (the last point of the entire pattern).

Memo:

- *When entering points, change the punch type by pressing the appropriate shortcut key.*
- *A template image is needed in order to use the semi-automatic block-type punch tool. If there is no image, this tool will create a punching pattern like the straight block-type punch tool.*
- *Once the pattern is drawn, you can still transform straight block-type patterns into curved block-type patterns and vice versa. For details, refer to "Transforming straight lines into curves or curves into straight lines" on page 108.*

Adding Text

Entering Text

1. Click on the Tool Box.

→ Three buttons appear: .

2. Click .

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

3. If necessary, change the font, text size, color and sew type.

Memo:

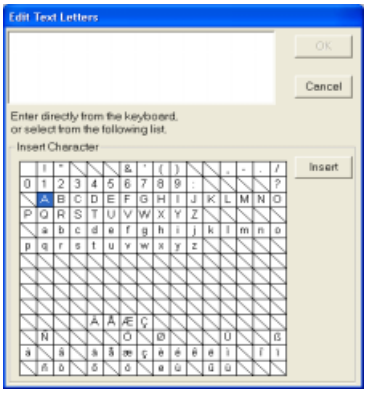
- *You can change the font, text size, color, and sew type either before or after creating the text. For more details on changing these settings, refer to "Font" on page 128, "Text Size" on page 130, "Color" on page 149 and "Sew type" on page 150.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box and the **Text Attribute Setting** dialog box to define other attributes of the text. (For more details, refer to "Specifying sewing attributes" on page 151 and "Specifying text attributes" on page 132.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

Note:

If one of the fonts provided with this application (01 to 35) or user-defined fonts is selected, the line sewing attributes cannot be changed.

4. Click in the Design Page where you want the text to appear.

→ The **Edit Text Letters** dialog box appears, containing a chart with all characters available with the selected font.



Note:
Text created using certain TrueType fonts may not be converted correctly into an embroidery pattern due to the shape of the character. These characters cannot be embroidered correctly. Before sewing your project, embroider a trial piece of fabric.
In addition, text created using some TrueType fonts cannot be converted at all. In this case, the converted text will be replaced with a question mark (?), or a warning message will appear.

5. Type the text.

Memo:
- *Press the* Enter *key to enter a new line of text.*
- *You can also enter a character by selecting it in the character table, then clicking* ***Insert****, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*
- *An enlarged image of the character appears below the pointer when it is moved over a character in the character table, providing a better view of the character.*

6. Click **OK**.

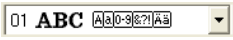
→ The text is displayed in the Design Page.

Memo:
- *To quit the operation, click* ***Cancel****.*
- *If you want to edit the entered text, select it, and then select the menu command* ***Text – Edit Letters****. Edit the text in the* ***Edit Text Letters*** *dialog box that appears. (For more details, refer to "Editing entered text" on page 130.)*

Note:
If you entered a character that is not available for the selected font, an error message appears. Click ***OK*** *to close the message and return to the* ***Edit Text Letters*** *dialog box, where you can correct the text.*

Selecting text attributes

Font

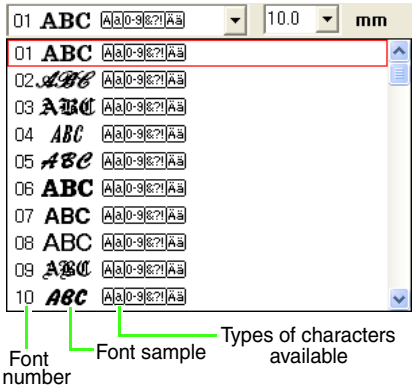


Use this selector to select a font for the text.

Memo:
The ***Font*** *selector appears when* A *on the Tool Box is selected. It also appears when text or a character in the Design Page has been selected.*

1. Click in the **Font** selector.

→ A list of fonts appears when clicking on the menu arrow at the right.



2. Click the desired font.

→ The setting is applied to all text patterns that you will create, until the setting is changed.

→ If text patterns or characters in a text pattern were selected, the setting is also applied to the selected text.

The available fonts and the types of characters available with each font are listed below.

01 ABC	Aa0-9&?!Ää
02 ABC	Aa0-9&?!Ää
03 ABC	Aa0-9&?!Ää
04 ABC	Aa0-9&?!Ää
05 ABC	Aa0-9&?!Ää
06 ABC	Aa0-9&?!Ää
07 ABC	Aa0-9&?!Ää
08 ABC	Aa0-9&?!Ää
09 ABC	Aa0-9&?!Ää
10 ABC	Aa0-9&?!Ää
11 ABC	Aa0-9&?!
12 ABC	Aa0-9&?!
13 ABC	Aa0-9&?!
14 ABC	Aa0-9&?!
15 ABC	Aa0-9&?!
16 ABC	Aa0-9&?!
17 ABC	Aa0-9&?!
18 ABC	A
19 ABC	A
20 ABC	Aa0-9&?!
21 ABC	A
22 ABC	Aa
23 A.B.C.	A
24 ABC	A
25 ABC	A
26 ABC	A
27 ABC	A
28 ABC	A
29 ABC	A 0-9
30 ABC	Aa0-9&?!Ää
31 ABC	Aa0-9&?!Ää
32 ABC	Aa0-9&?!Ää
33 ABC	Aa0-9&?!Ää
34 ABC	Aa0-9&?!Ää
35 ABC	Aa0-9&?!Ää

- Built-in Fonts

  Uppercase letters of the English alphabet

  Lowercase letters of the English alphabet

  Numerals

  Punctuation marks, brackets and other symbols

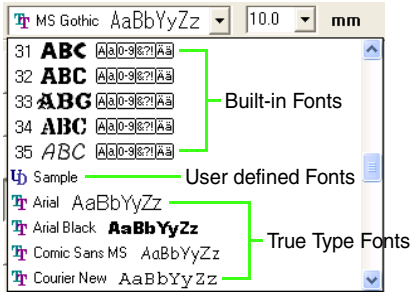
  Uppercase and lowercase accented letters

- User defined Fonts

  PEF files created with Font Creator and saved in the folder **My font** in the folder where PE-DESIGN was installed appear as user-defined fonts after the fonts listed in the table above.
  The UD icon appears on custom fonts.

- True Type Fonts

  The names and samples of installed TrueType fonts appear after the User defined Fonts.



Memo:

*TrueType font settings can be changed in the **TrueType Font Attribute Setting** dialog box, which is displayed by clicking the menu command **Text – TrueType Font Attribute Setting**. For more details, refer to "Specifying TrueType text attributes" on page 137.*

Note:

Some TrueType fonts may not convert well into clean embroidery patterns due to their design and shape.

"Entering Text" on page 127, "Reshaping Embroidery Patterns" on page 106 and "Specifying TrueType text attributes" on page 137

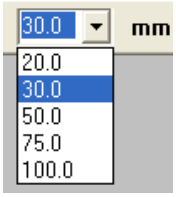
Text Size

Use this selector to select the size of the text.

Memo:

*The **Text Size** selector appears in the Sewing Attributes bar when A on the Tool Box is selected. It also appears when text or a character in the Design Page has been selected.*

1. Click in the **Text Size** selector.



2. Type the desired height (5 to 100 mm (0.20 to 3.93 inches)) and press the Enter key, or click the desired value.

   → The setting is applied to all text patterns that you will create, until the setting is changed.

   → If text patterns or characters in a text pattern were selected, the setting is also applied to the selected text.

"Entering Text" on page 127 and "Reshaping Embroidery Patterns" on page 106

Editing entered text

Text that has been entered can easily be edited.

1. Select the text that you want to edit.

2. Click **Text**, then **Edit Letters**.

→ The **Edit Text Letters** dialog box appears.

> **Note:**
> *You cannot edit more than one text pattern at a time. If you select more than one text pattern, this menu command is not available.*

3. The selected text is displayed in the text field.

4. Edit the text as needed.

> **Memo:**
> - *Press the* Enter *key to enter a new line of text.*
> - *You can also enter a character by selecting it in the character table, then clicking* ***Insert****, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*
> - *An enlarged image of the character appears below the pointer when it is moved over a character in the character table, providing a better view of the character.*

5. Click **OK**.

→ The edited text is displayed in the Design Page.

> **Memo:**
> - *To close the dialog box without applying the changes, click* ***Cancel****.*
> - *If text converted from a TrueType font is selected, the characters table displayed is for the font of the first letter in the text.*

> **Note:**
> *If you entered a character that is not available for the selected font, an error message appears. Click* ***OK*** *to close the message and return to the* ***Edit Text Letters*** *dialog box, where you can correct the text.*

☞ *"Entering Text" on page 127*

Selecting characters

1. Click on the Tool Box.

→ Two buttons appear:

2. Click .

→ The shape of the pointer changes to .

3. Click the text that you want to edit.

→ The points in the text appear as small empty squares.

4. To select a single character, click the point for the character that you want to select.

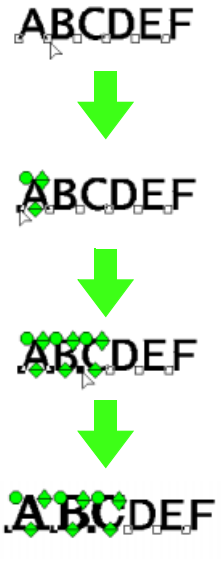
To select multiple characters, hold down the Ctrl key and click each point for the other characters, or drag the pointer over the points of characters that you want to select.

→ The points for the selected characters appear as a small black squares.

Memo:

- *To select all characters between the selected character and the next character selected, hold down the Shift key while clicking the next character.*
- *To select an additional character in the direction of the last character, hold down the Shift key and press the → or ↓ key. To select an additional character in the direction of the first character, hold down the Shift key and press the ← or ↑ key. Holding down the Shift key and pressing the opposite arrow key deselects the character.*
- *To deselect the current character and select the following character in the direction of the last character, hold down the Ctrl key and press the → or ↓ key. To deselect the current character and select the following character in the direction of the first character, hold down the Ctrl key and press the ← or ↑ key.*

5. Change the font, size, color, sew type and other attributes.



Memo:

With TrueType fonts, the outline can be set to be sewn or not, and settings can be selected for the color and sew type.

Specifying text attributes

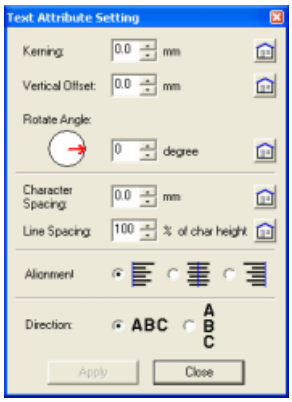
Various character attributes for text can be set in the **Text Attribute Setting** dialog box.

Toolbar button:

1. Select the text that you want to edit.

2. Click , or click **Text**, then **Text Attribute Setting**.

→ The **Text Attribute Setting** dialog box appears.



3. If necessary, change the text attributes.

Memo:

To return a parameter to its default setting, click *beside it.*

4. Click **Apply** to apply the effect of the setting.

Memo:

*To close the dialog box, click **Close**.*

Kerning	Sets the spacing between individual characters. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm Abcdef 5.0 mm (between “A” and “b”) A bcdef
Vertical Offset	Moves the text vertically. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm Abcdef 2.0 mm Abcdef

Rotate angle	Rotates the characters. Range: 0 to 359 degrees Default: 0	0 degree Abcdef 20 degrees Abcdef
Character Spacing	Sets the spacing between all characters. Range: -100 to 100 mm (-3.94 to 3.94 inches) Default: 0	0.0 mm Abcdef 2.0 mm A b c d e f
Line Spacing	Sets the spacing between lines as a percentage of the character height. Range: 0–1000% Default: 100%	100% A b c d e f g h i j k l 150% A b c d e f g h i j k l
Alignment	Aligns several lines of text to the left, center or right.	Left A b c d e f g h i j k l Center A b c d e f g h i j k l Right A b c d e f g h i j k l
Direction	Specifies whether characters will be positioned horizontally or vertically.	Horizontal A B C Vertical A B C

Memo:

- *Vertical text will be displayed vertically on the Design Page.*
- *Both **Kerning** and **Character Spacing** set the spacing between characters. **Character Spacing** is always applied to the entire text pattern, while **Kerning** can be applied to individual characters. Applying **Kerning** to the entire text in the pattern is the same as specifying **Character Spacing**. Refer to "Selecting characters" on page 131 for more details about selecting individual characters in a text pattern.*

☞ *"Specifying text arrangement" below and "Transforming text" on page 137*

Easy changes to the character size and attributes

You can easily use drag operations to change the size and text attributes (character spacing, vertical offset, rotation) for text, small text, and monogram characters.

1. Click → .

Memo:

For more details, refer to "Selecting characters" on page 131.

2. Click the point for the character that you want to select.

→ The handles appear on the character to show that it is selected.

Changing the size

1. Bring the pointer onto the handle.

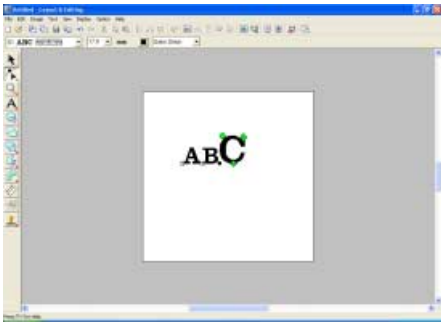
→ The shape of the pointer changes to .

2. Drag the handle.

→ The size of the character outline displayed with dotted lines changes.

3. When you release the mouse button, the character size is changed.

→ The new size is displayed on the Sewing Attributes bar.



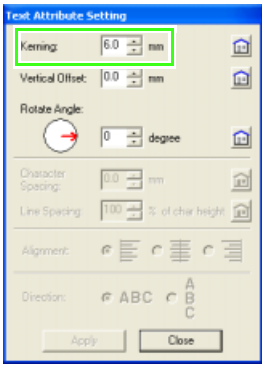
Changing the character spacing

1. Place the pointer onto the character body other than the ◆ ◆ ● handles and drag the character horizontally.

→ The character outline displayed with dotted lines moves.

2. When you release the mouse button, the character spacing is changed.

→ When the **Text Attribute Setting** dialog box is opened, the new kerning is displayed.



Changing the vertical offset

1. Bring the pointer onto the ◆ handle.

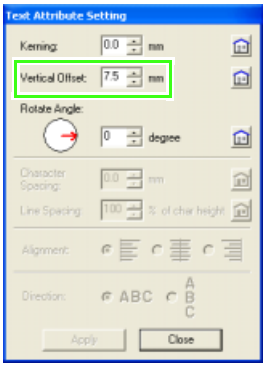
→ The shape of the pointer changes to A ↕ .

2. Drag the handle vertically.

→ The character outline displayed with dotted lines moves.

3. When you release the mouse button, the character offset is changed.

→ When the **Text Attribute Setting** dialog box is opened, the new vertical offset is displayed.



Rotating the characters

> **Memo:**
> *Monogram characters can not be rotated.*

1. Bring the pointer onto the ● handle.

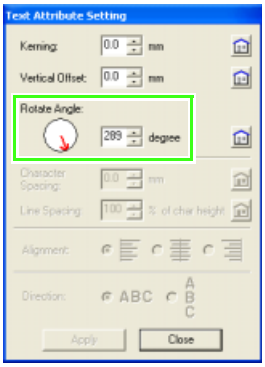
→ The shape of the pointer changes to A ↻ .

2. Drag the handle.

→ The character outline displayed with dotted lines rotates.

3. When you release the mouse button, the character angle is changed.

→ When the **Text Attribute Setting** dialog box is opened, the new rotation angle is displayed.

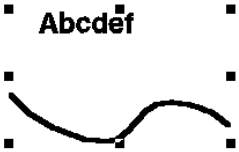


Specifying text arrangement

A line of text can be arranged along a path.

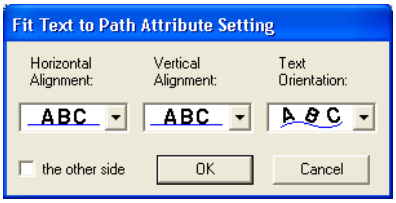
Toolbar button:

1. Select the text and a path.



2. Click , or click **Text**, then **Fit Text to Path Setting**.

→ The **Fit Text to Path Attribute Setting** dialog box appears.



3. From the **Horizontal Alignment**, **Vertical Alignment** and **Text Orientation** selectors, select the desired settings.

> **Memo:**
> *To position the text on the other side of the path, check **the other side** check box.*

4. Click **OK** to apply the settings.

> **Memo:**
> *To quit the operation, click **Cancel***

> **Note:**
> *When text arrangement is specified, the text transformation is cancelled. Only one string of text can be arranged on a single path.*

Horizontal Alignment	Sets the distribution of characters along the path.	ABC ABC ABC ABC A B C
Vertical Alignment	Sets the distance between the text and the path.	ABC ABC ABC
Text Orientation	Sets the orientation of the characters relative to the path.	A B C A B C
The other side	Sets the side for arrangement.	the other side the other side

☞ *"Canceling text arrangement" on page 137*

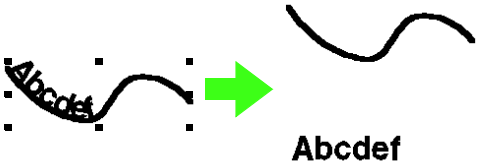
Canceling text arrangement

The text arrangement on a path can be cancelled.

Toolbar button:

1. Select text that is arranged on a path (Fit to Path).

2. Click , or click **Text**, then **Release Text from Path**.



"Specifying text arrangement" on page 135

Transforming text

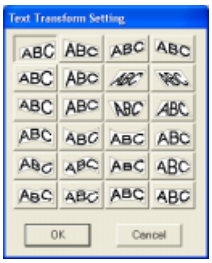
A preset transform shape can be applied to text.

Toolbar button:

1. Select the text that you want to transform.

2. Click , or click **Text**, then **Transform Text**.

   → The **Text Transform Setting** dialog box appears.



3. Select the desired transformation shape, and then click **OK**, or double-click the shape to apply the transformation.

   → Depending on the selected shape, a dotted line and appear around the text.

2. Click **Text**, then **TrueType Font Attribute**

Memo:

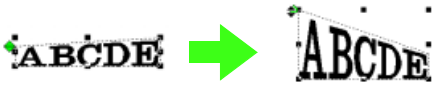
*To quit the operation, click **Cancel**.*

Note:

A text pattern created from a TrueType font contains data for both line and region sewing. Therefore, if this command is selected, depending on the form of the TrueType font, there may be a gap between the line and the region in the text.

"Canceling text transformation" below

4. Drag to transform the text.



Memo:

- *can only be dragged vertically.*
- *can only be dragged horizontally.*

Canceling text transformation

The original shape of the text can be restored.

Toolbar button:

1. Select the transformed text.

2. Click , or click **Text**, then **Clear Transformation**.

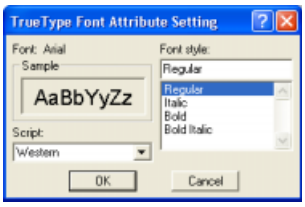
Specifying TrueType text attributes

Various character attributes, such as the style, can be specified for TrueType fonts converted to an embroidery pattern.

1. Select the TrueType text that you want to edit.

   Setting.

→ A dialog box similar to the one shown below appears. If any characters converted from a TrueType font are selected, the attributes for the selected characters are displayed.



Memo:

- *The name of the selected font appears beside **Font**.*
- *The **Sample** box shows a sample of the font with the selected attributes.*

3. To change the font style, select the desired style from the **Font Style** list.

4. To change the character set for the font, select the desired character set from the **Script** selector.

5. Click **OK** to set the attributes and to close the dialog box.

→ The attribute settings are applied to all text patterns that you will create from a TrueType font, until the setting is changed.

→ If a text pattern converted from a TrueType font was selected, the attribute settings are also applied to the selected text.

Memo:

*To close the dialog box without changing any settings, click **Cancel**.*

Note:

- *The settings for **Font Style** and **Script** differ depending on the TrueType font that is selected.*
- *If text created from multiple TrueType fonts is selected, this command is not available.*
  In addition, if text of the same font but different font styles or scripts is selected, this dialog box appears with the attribute settings for the first letter in the text.
  In either case mentioned above, selecting only one character from within text displays a dialog box containing only that character's attributes.

"Entering Text" on page 127 and "Specifying text attributes" on page 132

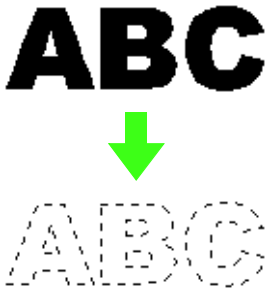
Converting text to outline pattern

Outline pattern can be created from text converted to a TrueType font.

1. Select the text that has been converted to a TrueType font.

2. Click **Text**, then **Convert to Outline Object**.

→ The selected text is converted to outlines.



No sewing attributes are specified for the converted outline; therefore, it appears as dotted lines. Specify the sewing attributes as necessary.

Memo:

In order to prevent the pattern from losing its shape, group the outlines or specify hole sewing.

"Creating Outlined Characters (Using Text Converted to Outline Object)" on page 323

Entering Small Text

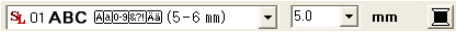
If the Small Text tool is used, beautiful embroidery can be created from small characters of 6 mm (0.24 inch) or less. FIVE fonts are available.

1. Click on the Tool Box.

→ Three buttons appear: .

2. Click .

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

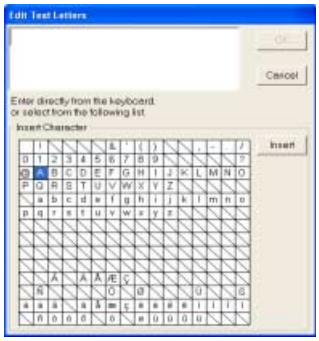


3. If necessary, change the font, text size and color.

> **Memo:**
> - *You can change the font, text size and color either before or after creating the text. For more details on changing these settings, refer to "Font" on page 128, "Text Size" on page 130, "Color" on page 149 and "Sew type" on page 150.*
> - *You can also use the settings in the **Text Attribute Setting** dialog box to define other attributes of the text. (For more details, refer to "Specifying text attributes" on page 132.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

4. Click in the Design Page where you want the text to appear.

→ The **Edit Text Letters** dialog box appears, containing a table with all characters available with the selected font.



5. Type the text.

> **Memo:**
> - *Press the Enter key to enter a new line of text.*
> - *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.*
> - *An enlarged image of the character appears below the pointer when it is moved over a character in the character table, providing a better view of the character.*

6. Click **OK**.

→ The text is displayed in the Design Page.

> **Memo:**
> - *To quit the operation, click **Cancel**.*
> - *If you want to edit the entered text, select it, and then select the menu command **Text – Edit Letters**. Edit the text in the **Edit Text Letters** dialog box that appears. (For more details, refer to "Editing entered text" on page 130.)*
> - *The Small Text tool is used to create text patterns where the jump stitches between the characters do not need to be cut.*

> **Note:**
> - *If you entered a character that is not available for the selected font, an error message appears. Click **OK** to close the message and return to the **Edit Text Letters** dialog box, where you can correct the text.*
> - *Reduce the thread tension to less than what is used when embroidering normal designs.*
> - *Sew at a speed slower than what is used when embroidering normal designs. (For details on adjusting the thread tension and sewing speed, refer to the Instruction Manual provided with your embroidery machine.)*
> - *For best results when sewing small font patterns, do not cut the jump stitches between the characters. (For details on setting the machine for thread cutting, refer to the Instruction Manual for the embroidery machine.)*

Entering Monograms

The monogram function allows you to create monograms composed of one to three or less uppercase letters and arrange a decorative pattern around them.

1. Click on the Tool Box.

→ Three buttons appear: .

2. Click .

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

Memo:

- ***Diamond*** *and* ***Script*** *are fonts exclusively for monograms. You can also use other fonts.*
- *If a TrueType font was selected, the Sewing Attributes bar appears as shown below so the thread color and sew type for the line can be selected.*

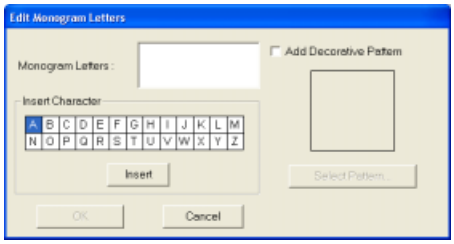
3. If necessary, change the font, text size, color and sew type.

Memo:

- *You can change the font, text size, color, and sew type either before or after creating the monogram. For more details on changing these settings, refer to "Monogram Font" on page 141, "Monogram Size" on page 141, "Color" on page 149 and "Sew type" on page 150.*
- *You can also use the settings in the* ***Sewing Attribute Setting*** *dialog box to define other attributes of the monogram. (For more details, refer to "Specifying sewing attributes" on page 151.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

4. Click in the Design Page where you want the monogram to appear.

→ The **Edit Monogram Letters** dialog box appears.



5. Type the monogram text (uppercase characters).

Memo:

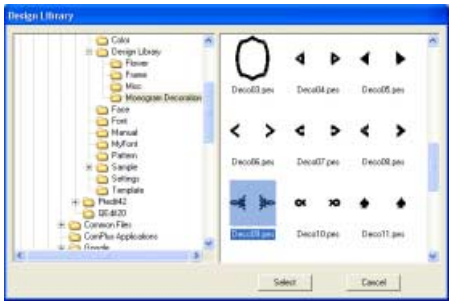
- *You can also enter a character by selecting it in the character table, then clicking* ***Insert****, or simply by double-clicking it.*
- *You can enter up to three uppercase characters with the monogram function.*

Note:

You cannot insert multiple lines. If you press the Enter *key, the dialog closes and the monogram pattern is displayed in the Design Page.*

6. To add a decorative pattern around or at the sides of the monogram, select the **Append Decorative Pattern** check box, and then click **Select Pattern**.

→ The **Design Library** dialog box appears.



7. Click a decorative pattern to select it, and then click **Select** (or double-click the pattern) to close the **Design Library** dialog box and display the pattern in the preview box of the **Edit Monogram Letters** dialog box.

8. Click **OK**.

> **Memo:**
> *To quit the operation, click **Cancel**.*

→ The monogram is displayed in the Design Page with the selected decorative pattern.

9. Click on the Tool Box, select the decorative pattern, and then adjust its size and position.

> **Memo:**
> *Drag the handle to adjust the selected pattern to the desired size. For details adjusting the monogram size, refer to "Scaling patterns" on page 103.*
> *The shape of the pointer changes to when the selected object can be moved.*

10. If necessary, change the thread color and sew type in the **Sewing Attributes** bar for the monogram.

Editing monograms

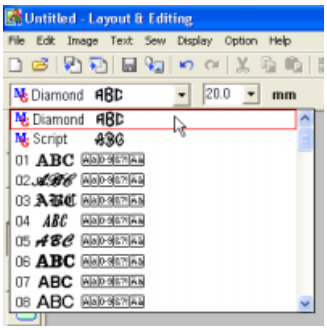
Monogram Font

Use this selector to select a font for the monograms.

> **Memo:**
> *The **Monogram Font** selector appears in the Sewing Attributes bar when on the Tool Box is selected. It also appears when a monogram pattern in the Design Page has been selected.*

1. Click in the **Font** selector.

→ A list of monogram fonts appears.



> **Note:**
> *Any of the 35 normal fonts or a TrueType font can be selected as the monogram font.*

2. Click the desired font.

→ The setting is applied to all monogram patterns that you will create, until the setting is changed.

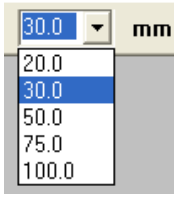
→ If a monogram pattern was selected, the setting is also applied to the selected monogram.

Monogram Size

Use this selector to select the size of the monogram.

> **Memo:**
> *The **Monogram Size** selector appears in the Sewing Attributes bar when on the Tool Box is selected. It also appears when a monogram pattern in the Design Page has been selected.*

1. Click in the **Monogram Size** selector.



2. Type the desired height (5.0 to 100.0 mm (0.20 to 3.93 inches)) and press the Enter key, or click the desired value.

→ The setting is applied to all monogram patterns that you will create, until the setting is changed.

→ If a monogram pattern was selected, the setting is also applied to the selected monogram.

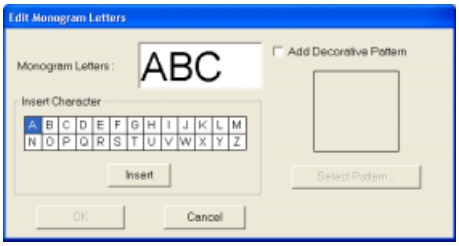
Editing the monogram text

1. Select the monogram pattern that you want to edit.

> **Note:**
> *You cannot edit more than one monogram pattern at a time. If you select more than one monogram pattern, this menu command is not available.*

2. Click **Text**, then **Edit Letters**.

→ The **Edit Monogram Letters** dialog box appears, where the characters of the selected monogram pattern are displayed in the text field.



3. Edit the text as needed.

> **Memo:**
> - *You can also enter a character by selecting it in the character table, then clicking **Insert**, or simply by double-clicking it.*
> - *To change the decorative pattern, click **Select Pattern**, and then select the new pattern in the **Design Library** dialog box that appeared. Then, select the old decorative pattern in the Design Page and delete it.*
> - *To remove the decorative pattern, select it in the Design Page, and then delete it.*

> **Note:**
> *You cannot insert multiple line. If you press the Enter key, the dialog closes and the monogram pattern is displayed in the Design Page.*

4. Click **OK**.

→ The edited monogram pattern is displayed in the Design Page.

> **Memo:**
> *To close the dialog box without applying the changes, click **Cancel**.*

☞ *"Entering Monograms" on page 140*

Editing single characters

The color and size can be set separately for each letter in the monogram pattern, and other character attributes (kerning and vertical offset) can be specified.

1. Click on the Tool Box.

→ Three buttons appear: .

2. Click .

→ The shape of the pointer changes to .

3. Click the monogram pattern that you want to edit.

→ The handles appear on the character to show that it is selected.

> **Memo:**
> *The size of the selected character , the kerning, and the vertical offset can be changed by dragging a handle or character body. For details, refer to "Easy changes to the character size and attributes" on page 133.*

4. To select a single character, click the point for the character that you want to select.

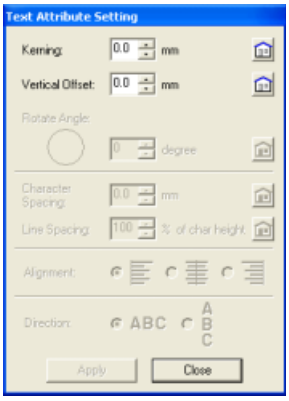
To select multiple characters, hold down the Ctrl key and click each point for the other characters, or drag the pointer over the characters that you want to select.

→ The points for the selected characters appear as a small black squares, and the Sewing Attributes bar appears similar to the one shown below.

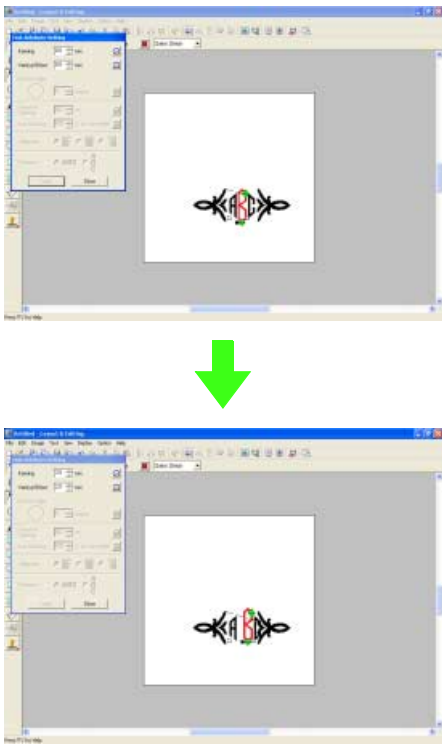
5. Change the color or sew type.

6. Click , or click **Text**, then **Text Attribute Setting**.

→ The **Text Attribute Setting** dialog box appears.



7. Change the text attributes and click **Apply**.



Applying and Editing Stamps

Stamps can be applied to regions of objects drawn with the Circle or Arc tool, Rectangle tool, Outline tools, Text tools and the Manual Punch tools. Some stamp patterns are provided with this application; however, by using Programmable Stitch Creator, you can edit the patterns that are provided or you can create your own.

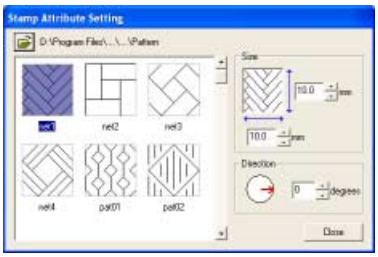
Applying a stamp

1. Click on the Tool Box.

→ Two buttons appear: .

2. Click .

→ The shape of the pointer changes to , and the **Stamp Attribute Setting** dialog box appears.



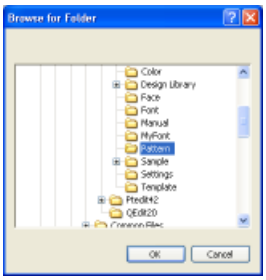
Memo:

The path to the currently selected folder appears to the right of in the dialog box.

3. In the dialog box, select a stamp pattern (.pas file with stamp settings applied).

Memo:

- *Engraving and embossing stamp settings appear as red- and blue-filled areas.*
- *.pas files with no stamp settings are also listed.*
- *To select a different folder, click .*



*In the **Browse for Folder** dialog box that appeared, select the desired folder, and then click **OK** (or double-click the folder) to close the **Browse for Folder** dialog box and display the stamp patterns from the selected folder in the preview window.*

4. To change the width and height of the stamp, type or select the desired size (1 to 100 mm (0.04 to 3.94 inches)) under **Size** in the **Stamp Attribute Setting** dialog box.

5. To change the orientation of the stamp, move the pointer over the red arrow inside of the circle under **Direction**, and then drag the red arrow to the desired angle.

Memo:

- *The dialog box remains displayed so that the size and orientation of the stamp can be adjusted at any time.*
- *To close the dialog box, click **Close**.*
- *To open the dialog box again after closing it, click .*

6. Click the object where you want to apply the stamp to select it.

→ "Marching lines" appear around the selected object, and the shape of the pointer changes to whenever it is moved over the selected object.

7. Click the desired locations within the object where you want to apply the stamp.

→ The stamps appear as dotted lines in the object.

Memo:

- *The whole stamp appears, even if it is larger than the object that it has been applied to, however, only the parts that are enclosed within the object will be sewn.*
- *Stamps can only be applied to objects drawn with the Circle or Arc tool, Rectangle tool, Outline tools, Text tools and the Manual Punch tools and that have the satin stitch, fill stitch and programmable fill stitch applied.*
- *To apply several stamps within the same object, continue clicking the object as often as needed.*
- *If the pointer cannot fit within the selected object, the stamp cannot be applied.*
- *The **Stamp Attribute Setting** dialog box appears only after a stamp tool is selected.*
- *Stamps are only sewn within the object that they have been applied to.*

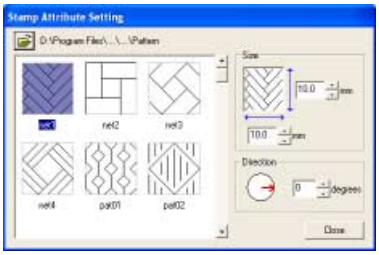
Editing a stamp

1. Click on the Tool Box.

→ Two buttons appear: .

2. Click .

→ The shape of the pointer changes to , the **Stamp Attribute Setting** dialog box appears, and stamps that have been applied are indicated by pink dotted lines.



Memo:

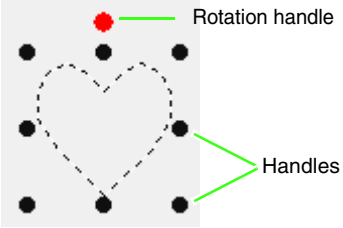
If an object was already selected, "marching lines" appear around the region, and its stamps are indicated by dotted lines.

3. Click the object with the stamp that you want to edit.

→ "Marching lines" appear around the selected object.

4. Click the stamp that you want to edit.

→ Round handles appear around the stamp, and a rotation handle appears at the top of the stamp.



Note:

Only one stamp can be selected at a time. If you select another stamp, the previously selected stamp becomes deselected.

5. To change the stamp pattern, select a different pattern in the **Stamp Attribute Setting** dialog box, and then click **Apply**.

To change the stamp size and orientation, specify the desired settings in the **Stamp Attribute Setting** dialog, or adjust it by dragging the handles or rotation handle.

To move a stamp, drag it to another location within the object or partially positioned on the object.

To delete the stamp, select the menu command **Edit** – **Delete**, or press the Delete key.

Memo:

- *When a pattern with a stamp applied is moved, the stamp is moved together with the pattern. However, changes to the size and orientation of the pattern do not affect the size and orientation of the stamps. After editing the shape of an object, it may be necessary to check the region and adjust the stamps.*
- *Stamps appear only after a stamp tool is selected.*
- *Stamps are only sewn within the region that they have been applied to.*
- *To close the dialog box, click **Close**.*

"Scaling patterns" on page 103 and "Rotating patterns" on page 104

Applying Sewing Attributes to Lines and Regions

The Sewing Attributes bar allows you to set the following attributes:

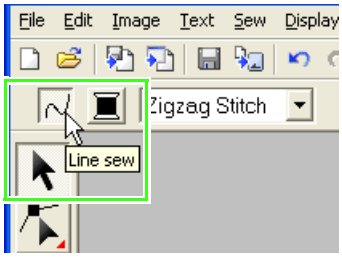
- geometric attributes (arc shape, rectangle edge radius, and path shape)
- text attributes (font, size)
- embroidery attributes (thread color and sew type, outline and inside region on/off)

The sewing attributes that are available depend on the tool selected in Tool Box, and the type of embroidery pattern selected.

Example 1: When the Select Object tool is selected, but no object or pattern is selected

Example 2: When a text tool is selected, or text is selected

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears. In the following instructions, we will refer to the elements of the Sewing Attributes bar according to these labels.



As a general rule, the different characteristics available for a given pattern can be set either just before creating the pattern, or after the pattern is created. For example, when drawing a rectangle, you can set the colors and the corner radius just after starting the rectangle drawing mode. When the rectangle is created, you can select it and change its characteristics.

The only exception to that rule is when you use the circle and arc drawing mode: you must decide what kind of pattern you want (circle, arc, etc.) before actually creating it. In addition, you will not be able to change the pattern type once the pattern is created.

Geometric attributes

Circle	**Arc shape**: Selects the type of arc. (For more details, refer to “Drawing Shapes” on page 118.)
0.0 mm	**Edge radius**: Sets the corner radius of rectangles. (For more details, refer to “Edge radius” on page 121.)
Open path	**Path shape**: Opens and closes broken lines and curves. (For more details, refer to “Path shape” on page 124.)

Text attributes

01 ABC	**Font**: Selects a font for text. (For more details, refer to “Font” on page 128.)
10.0 mm	**Text Size**: Selects the size for text. (For more details, refer to “Text Size” on page 130.)

Embroidery attributes

	Line sew: Switches on/off sewing for the line. When sewing for the outline is switched off, it is not sewn (and you cannot set its color or sew type). (For more details, refer to “Line sew” on page 148.)
	Region sew: Switches on/off sewing for the region. When sewing for the inside region is switched off, it is not sewn (and you cannot set its color or sew type). (For more details, refer to “Region sew” on page 148.)
	Line color, **Region color**, **Text color**, **Punch color**: Sets the thread color for outlines, inside regions, text and manual punching patterns. (For more details, refer to “Color” on page 149.)
	Special colors (For more details, refer to “Special colors” on page 150.)
Zigzag Stitch	**Line sew type**: Sets the sew type for the outlines. (For more details, refer to “Sew type” on page 150.)
Fill Stitch	**Region sew type**: Sets the sew type for an inside region, text and manual punching patterns. (For more details, refer to “Sew type” on page 150.)

Setting the thread color and sew type

All patterns can be assigned at least one color and sew type. Patterns with an outline and an inside region can be assigned two different thread colors and sew types. If a gradation is set, an additional color can be added to the region. (For details on gradations, refer to “Creating a gradation” on page 162.) In addition, each character in a text pattern can be assigned individual thread colors and sew types.

Patterns with an outline and a inside region: text converted from TrueType fonts, circles, fan shapes, arcs & strings, rectangles, 24 heart and star shapes closed broken lines, and closed curves. For these patterns, it is possible to switch on and off sewing for the outline and the regions.

Patterns with only an outline: arcs, open broken lines, and open curves. For these patterns, it is still possible to switch on and off sewing for the outline.

Patterns with only a region: text created with fonts provided with this software and manual punching patterns. For these two types of patterns, it is not possible to switch on and off sewing of the inside region.

Manual punching patterns: You can set a color and a sew type for manual punching patterns.

Line sew

Clicking this button switches on/off sewing for an outline.

Memo:

- *The **Line sew** button is available only when the Select Object tool is selected and no patterns are selected, when you select a pattern that has an outline (text converted from a TrueType font, circles, arcs, fan shapes, arcs & strings, rectangles, 24 heart and star shapes, closed broken lines, curves), or when you click , , , or on the Tool Box to start drawing such a pattern.*
- *When line sewing is switched off, the line is not sewn (and you cannot set its color or sew type).*

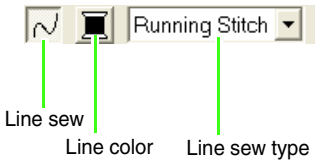
1. Click the **Line sew** button.

This button has two settings:

On: The **Line color** button and the **Line sew type** selector are displayed.

Off: The **Line color** button and the **Line sew type** selector are not displayed.

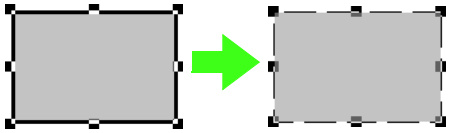
Clicking the button switches between the two settings.



→ The settings are applied to all patterns that you will create with an outline, until the setting is changed.

→ If a pattern is selected, the settings are applied to the selected pattern.

Line sewing on: Line sewing off:



2. To switch on outline sewing, click the **Line sew** button again.

“Color” on page 149 and “Sew type” on page 150

Region sew

Clicking this button switches on/off sewing for an inside region.

Memo:

- *The **Region sew** button is available only when the Select Object tool is selected and no patterns are selected, when you select a pattern that has an inside region (text, circles, fan shapes, arcs & strings, rectangles, 24 heart and star shapes, closed broken lines, curves), or when you click , , , or on the Tool Box to start drawing such a pattern.*
- *When region sewing is switched off, the region is not sewn (and you cannot set its color or sew type).*

1. Click the **Region sew** button.

This button has two settings:

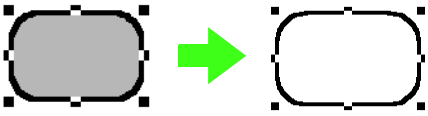
On: The **Region color** button and the **Region sew type** selector is displayed.

Off: The **Region color** button and the **Region sew type** selector are not displayed.

Clicking the button switches between the two settings.

→ The settings are applied to all patterns that you will create with an inside region, until the setting is changed.

→ If a pattern is selected, the settings are applied to the selected pattern.



2. To switch on region sewing, click the **Region sew** button again.

☞ *"Color" on page 149 and "Sew type" on page 150*

> **Note:**
> *The Region sewing attribute cannot be set inside the closed path region in case a pattern outline across by itself although the pattern is drawn by the straight line or the curved line tool with closed path attribute.*

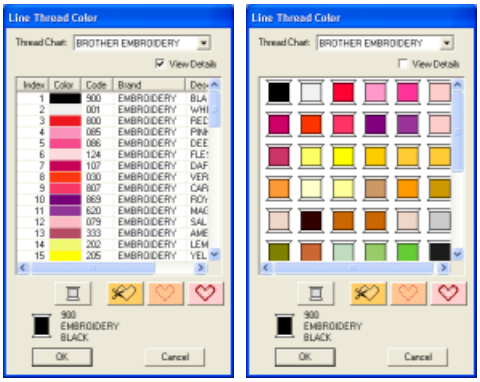
■ Color

Click this button to set the thread color for outlines, inside regions, texts and manual punching patterns.

> **Memo:**
> - *The **Line color** and **Region color** buttons appear in the Sewing Attributes bar (if they have not been switched off with the **Line sew** or **Region sew** buttons) when the Select Object tool is selected and no patterns are selected.*
> - *When you enter one of the drawing modes or text input mode, or select an existing pattern, the color button for the corresponding pattern appears.*

1. Click the **Color** button.

→ A **Thread Color** dialog box similar to the one shown below appears.



> **Memo:**
> - *If the **View Details** check box is selected, the dialog box shown on the left appears. If the check box is cleared, the dialog box shown on the right appears.*
> - *In the View Detail mode, to display the colors arranged according to their tones (from warm colors to cold colors), click **Color** in the heading for the list of thread colors. Click **Color** again to reverse the order (from cold colors to warm colors). To return the list to its original display, click **Index** in the heading.*

2. From the **Thread Chart** selector, select a thread brand or your user thread chart.

3. From the list of thread colors, select the desired color.

> **Memo:**
> - *The color can also be selected by double-clicking it.*
> - *For details on the four buttons under the list, refer to "Special colors" on page 150.*

4. Click **OK**.

> **Memo:**
> *To quit the operation, click **Cancel**.*

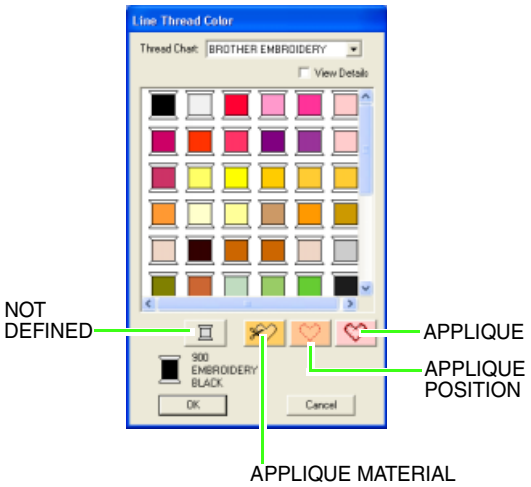
→ This setting is applied to all patterns of the same type that you will create, until the setting is changed. The color button of each category shows the current color for that category.

→ If a pattern is selected, the setting is applied to the selected pattern.

For details on specifying a user thread chart or for information on how machines handle thread colors, refer to "Editing User Thread Color Lists" on page 162.

"Line sew" on page 148 and "Region sew" on page 148

Special colors



→ **NOT DEFINED**: Embroidery machines that feature automatic thread color display will automatically switch the display to the specified color. If you are using such a machine and if you want to be able to select manually the color for a monochrome pattern, you can select **NOT DEFINED**.

- **Colors for creating appliqués**: You can create appliqués using the three special colors shown in the above illustration.
  APPLIQUE MATERIAL marks the outline of the region to cut from the appliqué material.
  APPLIQUE POSITION marks the position on the backing material where the appliqué must be sewn.
  APPLIQUE sews the appliqué on the backing material.

Memo:

By using the Applique Wizard, appliqués can easily be created. For details, refer to "Creating appliqués (Applique Wizard)" on page 167.

Sew type

Use these to set the sew type for outlines, inside regions, text, and manual punching patterns.

Memo:

- *The **Line sew type** and **Region sew type** selectors appear in the Sewing Attributes bar (if they have not been switched off with the **Line sew** or **Region sew** buttons) when the Select Object tool is selected.*
- *When you enter one of the drawing modes or select an existing pattern, the sew type selector for the corresponding pattern appears.*

1. Click in a sew type selector.

→ The available settings that appear differ depending on the object that is selected.

Object type	**Line sew type** settings	**Region sew type** settings
Text (built-in fonts, user-defined fonts Monogram)	None	**Satin Stitch**, **Fill Stitch**, and **Prog. Fill Stitch** (programmable fill stitch)
Text (TrueType fonts)	**Zigzag Stitch**, **Running Stitch**, **Triple Stitch**, **Motif Stitch**, and **E/V Stitch**	
Text (Small font)	None	None
Manual punching pattern	None	**Satin Stitch**, **Fill Stitch**, **Prog. Fill Stitch** (programmable fill stitch), **Piping Stitch**, and **Motif Stitch**
Others	**Zigzag Stitch**, **Running Stitch** **Triple Stitch**, **Motif Stitch**, and **E/V Stitch**	**Satin Stitch**, **Fill Stitch**, **Prog. Fill Stitch** (programmable fill stitch), **Piping Stitch**, **Motif Stitch**, **Cross Stitch**, **Concentric Circle Stitch**, **Radial Stitch**, **Spiral Stitch**, and **Random Walking Stitch**

2. Click the desired sew type.

→ This setting is applied to all patterns of the same type that you will create, until the setting is changed.

→ If a pattern is selected, the setting is applied to the selected pattern.

Note:
*You can set the sewing attributes for the selected line and region sew types in the **Sewing Attribute Setting** dialog box. When you select **Prog. Fill Stitch**, **Motif Stitch** or **Piping Stitch** with the **Use Motif** check box selected, you also need to select their pattern in the **Sewing Attribute Setting** dialog box, as there is no default pattern setting.*

"Line sew" on page 148, "Region sew" on page 148 and "Specifying sewing attributes" below

Specifying sewing attributes

Various sewing attributes for lines and regions can be set in the **Sewing Attribute Setting** dialog box

Toolbar button:

1. Click one of the Tool Box buttons used to draw or select objects.
2. Click in the Toolbar
   → The **Sewing Attribute Setting** dialog box appears.

Beginner mode:

Expert mode:

Memo:
- *An alternate method to start this dialog box is to select the menu command **Sew – Setting Attribute**.*
- *The sewing attributes displayed in the dialog box depend on the selected sew type.*

3. To display only basic sewing attributes and simpler settings, click **To Beginner mode**. To display all of the sewing attributes and settings available for the selected sew type, click **To Expert mode**.

Memo:
- *Settings that cannot be selected in Beginner mode are retained from the previous setting in Expert mode.*
- *To hide the preview box, click **Hide Hint**. To display the preview box, click **Show Hint**. When the **Hide Hint** button is displayed, allowing you to view a stitching sample when the pointer is moved over the setting. The preview box shows the setting changes that you make.*

4. If necessary, change the sewing attributes displayed under **Line Sew** or **Region Sew**.

Memo:

- *In some cases, you may need to scroll through the settings, or resize the dialog box by dragging one of its corners in order to view all of the sewing attributes.*
- *The method for entering settings varies according to the attribute. When entering numerical values in Expert mode, click the arrow buttons to select the value or enter the value directly. In Beginner mode, use the slider to change the settings. If appears, click the button to return to the default setting.*

For details on the different sewing attributes and settings, refer to "Line sewing attributes" on page 153 and "Region sewing attributes" on page 155. In addition, frequently used sewing attributes can be saved. For details, refer to "Saving the settings in a list" on page 165.

Note:

All settings made in the dialog box are retained and will be applied regardless of the mode, until they are changed.

5. Click the **Apply** button in the dialog box to apply the new sewing attributes.

6. Click **Close** to close the dialog box.

Line sewing attributes

The available attributes differ depending on the selected sew type.

Zigzag stitch

Under sewing	Sets underlay stitching on or off. Use underlay stitching in order to prevent shrinking during stitching. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn. Default: Off
Zigzag width	Sets the width of the zigzag. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Density	Sets the number of lines per millimeter (inch). Range: 1.0–7.0 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Half Stitch	Sets half stitching on or off. If one side of the zigzag stitching is dense, a half stitch could be sewn automatically to provide a more even density. Available for text and objects created with the drawing tools. Default: Off On: Off:
Sharp Corners	Sets how pointed corners are sewn. Default:

Running stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Run times	Sets the number of times that the border will be sewn. Range: 1–5 Default: 1

Triple stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)

Motif stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 10.0 mm (0.39 inch)	
Motif		Select a pattern for the motif stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
	Width (horizontal length)	Sets the pattern width (the direction along the line). Range: 2.0–100.0 mm (0.08–3.94 inch) Default: 5.0 mm (0.20 inch)
	Height (vertical length)	Sets the pattern height (the direction perpendicular to the line). Range: 2.0–100.0 mm (0.08–3.94 inch) Default: 5.0 mm (0.20 inch)
	H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
	V-Arrange (vertical arrangement)	Sets the vertical arrangement of the pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
	Spacing	Sets the spacing (the direction along the line) of patterns. Minimum: Depending on the pattern Maximum: 100.0 mm (3.94 inches) Default: 0.0 mm

E/V stitch

E Stitch **V Stitch**	Selects the E stitch or V stitch.	
	Interval	Sets the distance between stitches. Range: 1.0–20.0 mm (0.04–0.79 inch) Default: 5.0 mm (0.20 inch) E stitch: V stitch:
	Stroke width	Sets the pattern height (the direction perpendicular to the line). Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.5 mm (0.10 inch) E stitch: V stitch:
	Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch) E stitch: V stitch:
	Run time(s)	Sets the reverse stitching for the running stitches. With the V stitch, the “V” is included in the run times. Range: 1, 3, 5 Default: 1
	Stroke times	Sets the number of strokes of the yarn carrier. Available only if **E Stitch** is selected. Range: 1–3 Default: 1
	Arrange	Sets the inside/outside arrangement of the E stitch or V stitch. E stitch: V stitch:

Region sewing attributes

The available attributes differ depending on the selected sew type.

Satin stitch

Under sewing	Sets under lay stitching on or off. Use under lay stitching in order to prevent shrinking during stitching. On: Under lay stitching will be sewn. Off: Under lay stitching will not be sewn. Default: Off [Type] Specifies the type of under lay stitching sewn. With text and manual punching patterns Edge: The stitching sewn under the edge of the pattern. Zigzag: Zigzag stitching is sewn under the areas of the pattern. All: Stitching is sewn under the edge and areas of the pattern. With other patterns Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern with 45° and – 45° angle to the specified sewing direction. Edge: Zigzag: All: Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0–7.0 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. This setting can be specified for patterns other than manual punching patterns. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern. Default: Off For details on this attribute, refer to“Creating a gradation” on page 162.
Direction	[Type] Specifies the type of sewing direction. This setting can be specified for patterns other than manual punching patterns. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the satin stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. This setting can be specified for patterns other than manual punching patterns. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern’s sewing direction to prevent pattern shrinkage during sewing. Range: 0.0–2.0 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)

Memo:

For details on manual punching, refer to "Manually Creating Professional-Level Embroidery Patterns (Manual Punching)" on page 125.

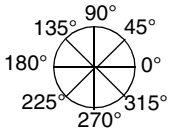
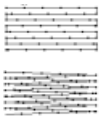
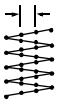
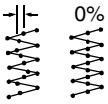
Fill stitch

Under sewing	Sets under lay stitching on or off. Use under lay stitching in order to prevent shrinking during stitching. On: Under lay stitching will be sewn. Off: Under lay stitching will not be sewn. Default: Off [Type] Specifies the type of under lay stitching sewn. With text and manual punching patterns Edge: The stitching sewn under the edge of the pattern. Zigzag: Zigzag stitching is sewn under the areas of the pattern. All: Stitching is sewn under the edge and areas of the pattern. With other patterns Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern with 45° and – 45° angle to the specified sewing direction. Edge: Zigzag: All: Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0–7.0 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. This setting can be specified for patterns other than manual punching patterns. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to"Creating a gradation" on page 162.
Direction	[Type] Specifies the type of sewing direction. This setting can be specified for patterns other than manual punching patterns. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Stitch Type	Specifies the shape of stitching on the edges. Available settings: , Default: (for all objects other than text) (for text)
Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:

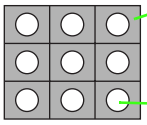
Step Pitch	Sets the pitch of the stitching. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch:
Frequency	Sets the spacial frequency steps. Range: 0–99% Default: 30% 30% 0%
Pull Compensation	Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 0.0–2.0 mm (0.00–0.08 inch) Default: 0.0 mm (0.00 inch)

Programmable fill stitch

Under sewing	Sets under lay stitching on or off. Use under lay stitching in order to prevent shrinking during stitching. On: Under lay stitching will be sewn. Off: Under lay stitching will not be sewn. Default: Off [Type] Specifies the type of under lay stitching sewn. With text and manual punching patterns Edge: The stitching sewn under the edge of the pattern. Zigzag: Zigzag stitching is sewn under the areas of the pattern. All: Stitching is sewn under the edge and areas of the pattern. With other patterns Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern with 45° and – 45° angle to the specified sewing direction. Edge: Zigzag: All: Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0–7.0 lines per mm (25–178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. This setting can be specified for patterns other than manual punching patterns. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to"Creating a gradation" on page 162.
Direction	[Type] Specifies the type of sewing direction. This setting can be specified for patterns other than manual punching patterns. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the object being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 90° 135° 45° 180° 0° 225° 315° 270°
Half Stitch	Sets half stitching on or off. Available for text, manual punching patterns, and for geometric shapes when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:

Pull Compensation			Lengthens the sewing region in the stitch pattern's sewing direction to prevent pattern shrinkage during sewing. Range: 2.0–10.0 mm (0.08–0.39 inch) Default: 0.0 mm (0.00 inch)
Programmable fill			Select a pattern for programmable fill stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pas file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
	Width (horizontal length)		Sets the programmable fill pattern width. Range: 5.0–10.0 mm (0.20–0.39 inch) Default: 7.5 mm (0.30 inch)
	Height (vertical length)		Sets the programmable fill pattern height. Range: 5.0–10.0 mm (0.20–0.39 inch) Default: 7.5 mm (0.30 inch)
	Direction		Allows you to rotate the angle of the programmable fill patterns. Range: 0–359 degrees Default: 0 degrees 
	Offset	Direction	Sets the direction of the offset as **row**/**column**. **row** **column**
		Value	When the pattern's arrangement is offset, sets the amount of offset. Range: 0–99% Default: 0%
	Base Sewing Specifies the base stitching.	**Stitch Type**	Specifies the shape of stitching on the edges. Available only when the **Base Sewing** check box is selected. Available settings: , Default: (for all objects other than text) (for text) 
		Step Pitch	Sets the pitch of the stitching for the base of a programmable fill stitch. Available only when the **Base Sewing** check box is selected. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch: 
		Frequency	Sets the spacial frequency steps of the stitching for the base of a programmable fill stitch. Available only when the **Base Sewing** check box is selected. Range: 0–99% Default: 30% 30% 0% 

Pattern



The stitching for the base (area other than the pattern indicated by the diagonal lines) of the programmable fill stitch can be set.

The pattern is sewn with the specified stitching.

Motif stitch

Motif	Selects whether to use pattern 1 or pattern 2 for the motif stitch. If you choose to use both patterns, the data is created to sew alternating rows of the two. **Pattern1 only**: Uses only pattern 1 (Default) **Pattern2 only**: Uses only pattern 2 **Pattern1 and 2**: Uses pattern 1 and pattern 2		
	Pattern1 **Pattern2**		Select a pattern for the motif stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
		Width (horizontal length)	Sets the motif pattern width (the direction along the line). Range: 2.0–100.0 mm (0.08–3.94 inches) Default: 5.0 mm (0.20 inch)
		Height (vertical length)	Sets the motif pattern height (the direction perpendicular to the line). Range: 2.0–100.0 mm (0.08–3.94 inches) Default: 5.0 mm (0.20 inch)
		H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the motif pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
		V-Arrange (vertical arrangement)	Sets the vertical arrangement of the motif pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
		H-Spacing (horizontal spacing)	Sets the horizontal spacing (the direction along the line) of motif patterns. Minimum: Depending on the pattern A negative value can be specified. Maximum: 100.0 mm (3.94 inches) Default: 0.0 mm H-Spacing:
		V-Spacing (vertical spacing)	Sets the vertical spacing (the direction perpendicular to the line) of motif patterns. Minimum: Depending on the pattern A negative value can be specified. Maximum: 100.0 mm (3.94 inches) Default: 0.0 mm V-Spacing:
	Direction		Allows you to rotate the angle of the motif stitch. This setting can be specified for patterns other than manual punching patterns. Range: 0–359 degrees Default: 0 degrees 90° 45° 135° 180° 0° 225° 315° 270°
	Row Offset		Sets the amount of offset for each row. Range: 0.0–10.0 mm (0.00–0.39 inch) Default: 0.0 mm (0.00 inch)
	Run Pitch		Sets the pitch of the sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 10.0 mm (0.39 inch)

Cross stitch

Size	Sets the horizontal and vertical size of the pattern. In Expert mode, the set value is converted automatically and displayed in the box for the other measurement units. Range: 1.5–5.0 mm (0.06–0.20 inch) or 5–17 counts Default: 2.5 mm (0.10 inch) or 10 counts
Times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: **Single**, **Double**, **Triple** Default: **Single**

Concentric circle stitch, radial stitch and spiral stitch

For details on moving the center point of the concentric circle stitch and the radial stitch, refer to “Moving the center point” on page 111.

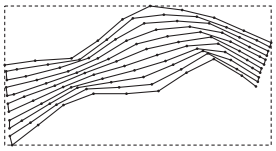
Density	Sets the number of lines per millimeter. Range: 0.2–7.0 lines per mm (5–178 lines per inch) Default: 2.0 lines per mm (51 lines per inch)
Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)

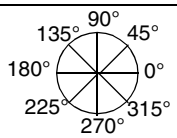
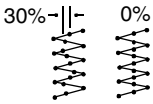
Random Walking Stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 2.0 mm (0.08 inch)
Space	Sets the spacing between adjacent stitches. Range: 2.0–50.0 (0.08-1.97 inches) Default: 10.0 mm (0.39 inch)

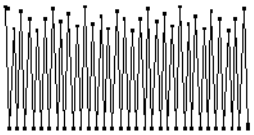
Piping stitch

Stitches run parallel through the length of adjacent blocks.



Direction	Specifies the sewing angle. Available for stitching other than manual punching patterns. The stitching will be made in the direction of the angle set. Range: 0-359 degrees Default: 0 degrees 
Density	Sets the number of lines per millimeter. Set when **Use Motif** is OFF. Range: 0.1–5.0 lines per mm (3–127 lines per inch) Default: 1.0 lines per mm (25 lines per inch)
Run pitch	Sets the pitch of the line sewing. Set when **Use Motif** is OFF. Range: 1.0–10.0 mm (0.04–0.39 inch) Default: 4.0 mm (0.16 inch)
Frequency	Sets the spacial frequency steps. Set when **Use Motif** is OFF. Range: 0–99% Default: 30% 
Use Motif	Sets motif stitching on or off. On: Motif stitching is sewn. Off: Motif stitching is not sewn. Default: Off For details on this attribute, refer to “Motif stitch” on page 154. (However, **Direction** is not available.)

Manual punch

Feathered edge	Sets which edge of the stitching that the feathered edge is applied to. Set when the block sewtype is Satin Stitch, Fill Stitch, or Prog. Fill Stitch. Top: Feathered edge is sewn on the top edge. Bottom: Feathered edge is sewn on the bottom edge. When creating data with a Manual Punch tool, the top edge is the side containing the first and third points, and the bottom edge is the side containing the second and fourth points. Feather edge applied to the top: 	
		Select a pattern for the feathered edge. Click , and then, in the **Browse** dialog box that appeared, double-click the desired pattern, or select it, and then click **OK**.
	Length	Sets the length of the feathered edge. Range: 0.2–100.0 mm (0.01–3.94 inches) Default: 3.0 mm (0.12 inch)

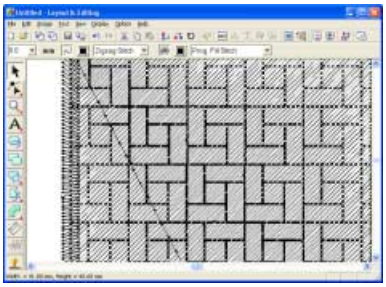
Notes on programmable fill stitches and stamps

When setting the sew type and pattern directions of a programmable fill stitch or a stamp, lines will not be sewn if the sew type and pattern direction settings cause a stitch to be sewn in the same direction as a line in the stitch pattern.

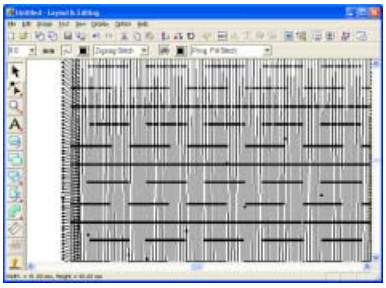
Use the Preview function to view exactly how the stitch pattern will be sewn, and then set the stitch direction and pattern direction according to the selected sew type or to the effect that you want to produce. To get an even better view, make test samples of different settings.

Examples of programmable fill stitching:

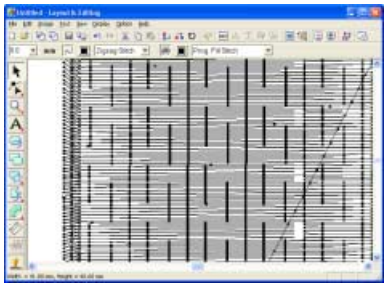
Example 1
Stitch direction: 45° (default)



Example 2
Stitch direction: 90°



Example 3
Stitch direction: 0°



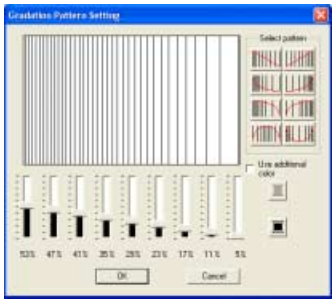
"Displaying a preview of the embroidery" on page 172 and on "Creating Custom Stitch Patterns (Programmable Stitch Creator)" on page 256

Creating a gradation

The density of one or two colors can be adjusted at various locations to create a custom gradation pattern.

1. In Expert mode of the **Sewing Attribute Setting** dialog box, select the **Gradation** check box under **Region sew**.
2. Click **Pattern**.

   → The **Gradation Pattern Setting** dialog box appears.



3. To change the thread color, click . Select a color in the **Thread Color** dialog box that appeared, and then click **OK**.
4. To select a preset gradation pattern, click the desired pattern under **Select pattern**.
5. Move the sliders to adjust the density of the gradation pattern.

   Memo:

   The preview area shows the setting changes that you make.

6. To blend two colors, select the **Use additional color** check box, click under **Use additional color**. Select a color in the **Thread Color** dialog box that appeared, and then click **OK**.
7. Click **OK**.

   Memo:

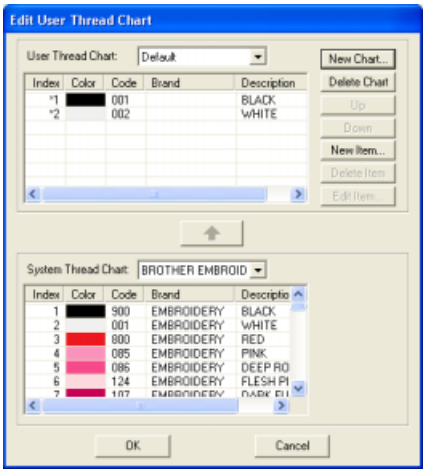
   - *If the **Use additional color** check box is cleared, the gradation settings are applied to the remaining color.*
   - *To close the dialog box without applying the changes to the gradation pattern, click **Cancel**.*

Editing User Thread Color Lists

User thread charts can be created and edited to contain a list of threads that are used most often or a list of all threads that you have. Thread data from system thread charts can be included or new thread data can be added.

1. Click **Option**, then **Edit User Thread Chart**.

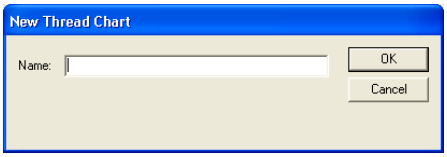
   → The Edit User Thread Chart dialog box appears.



Creating a new thread chart

1. Click **New Chart**.

   → The **New Thread Chart** dialog box appears.



2. Type in the name of the chart, and then click **OK** to save the chart with the entered name.

   Memo:

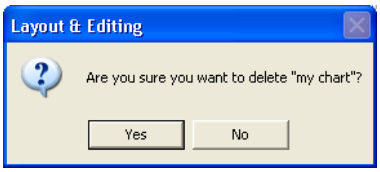
   *A saved chart can be selected from the **User Thread Chart** selector, then edited.*

Deleting a chart

1. From the **User Thread Chart** selector, select the chart that you want to delete.

2. Click **Delete Chart**.

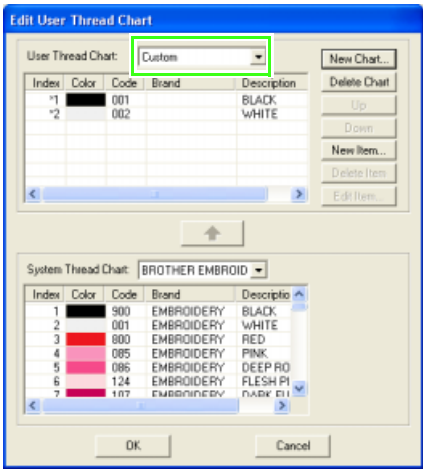
→ The following message appears.



3. Click **Yes** to delete the selected chart.

Editing a chart

1. From the **User Thread Chart** selector, select the chart that you want to edit.



> **Note:**
> *If no chart is selected, the editing operation cannot be performed.*

Adding an item from a system thread chart

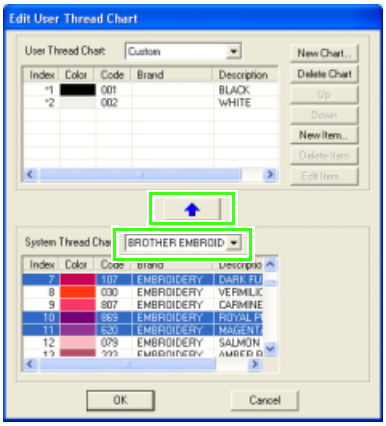
1. From the **System Thread Chart** selector, select the brand of thread that you want to add.

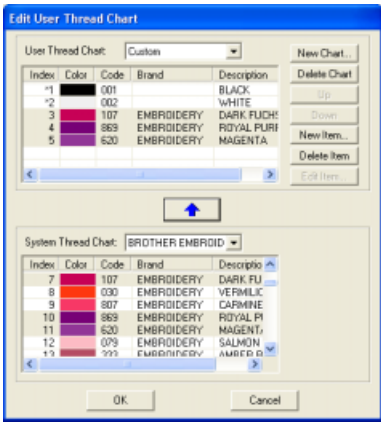
2. From the list at the bottom of the dialog box, click the thread colors that you want to add.

> **Memo:**
> *To add multiple items, hold down the* Shift *or* Ctrl *keys while selecting thread colors.*

3. Click ↑.

→ The selected items are added to the list in the user thread chart.





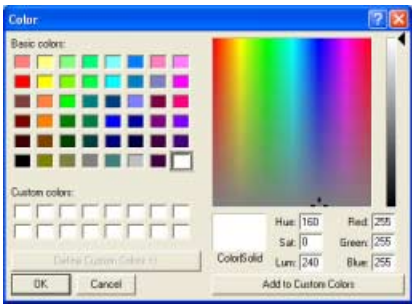
Adding a new item

1. Click **New Item**.

→ The **Edit Thread** dialog box appears.

2. To create a new color, click **Mix**.

→ A dialog box similar to the one shown below appears.

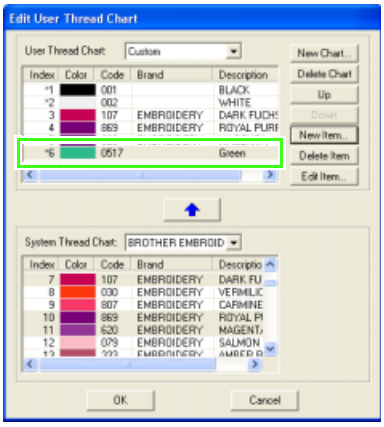


3. Specify the color, and then click **OK** to add the specified color to the **Edit Thread** dialog box.

4. If necessary, type in the code, brand and description into the appropriate boxes.

> **Memo:**
> *Only numbers can be entered for the code.*

5. Click **OK** to add the new item to the user thread chart.



> **Memo:**
> *An asterisk (*) appears in front of the index number of newly added items.*

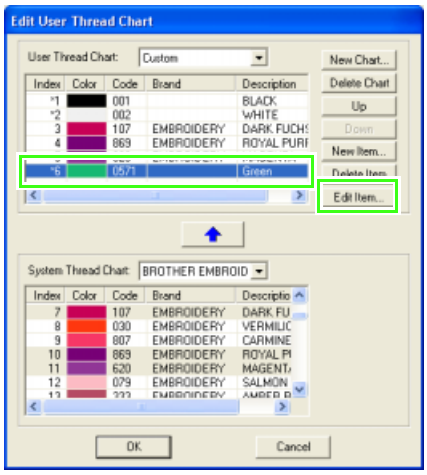
Deleting an item

From the list for the user thread chart, select the item to be deleted, and then click **Delete Item** to delete the item from the user thread chart.

Editing an item

An item registered in the list for a user thread chart can be edited to change the color or thread number.

1. From the list for the user thread chart, select the item to be edited, and then click **Edit Item**.



→ The following dialog box appears.

2. Edit the item details in the same way as adding an item.

> **Memo:**
> *As with newly added items, an asterisk (*) appears in front of the index number of edited items.*

Changing the order of items

From the list for the user thread chart, select the item to be moved, and then click **up** or **down** to change the order of the item.

Note:

Thread colors in embroidery patterns created with this software may appear differently on the embroidering machine.

1. Embroidery machines without a function for displaying thread color information

The specified thread information cannot be displayed on some machines.

2. Embroidery machines with a function for displaying thread colors

Of the thread information specified in the embroidery pattern, only the thread colors are displayed on the machine. However, the thread color names that are displayed are limited to the machine's preset thread color names. Therefore, use thread color names in the embroidery pattern that are closest to the machine's preset thread color names.

3. Machines with a thread color index

Some machines can display the thread information (such as the color, the color name as well as the brand name and thread number) specified with this software. The machines can display the color, the color name as well as the brand name and thread number.

However, for items edited or added by the user (items marked with an asterisk (*)), only the thread number is displayed.

Memo:

*The edited user thread chart can also be used on a different computer. Simply copy **chart2.btc** from the **Color** folder in the **PE-DESIGN Ver7** folder (application folder) on the original computer to the **Color** folder at the same path on the destination computer.*

Saving frequently used sewing attributes

Frequently used sewing attributes can be saved together, and recalled when specifying sewing attributes.

Memo:

*Settings in both **Beginner mode** and **Expert mode** can be saved.*

Opening the Sewing Attribute Setting dialog box

1. Click one of the Tool Box buttons used to draw or select objects.

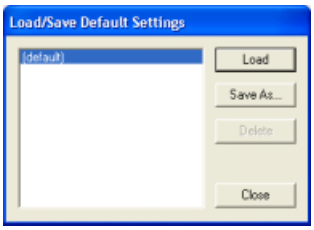
2. Click in the Toolbar

   → The **Sewing Attribute Setting** dialog box appears.

Saving the settings in a list

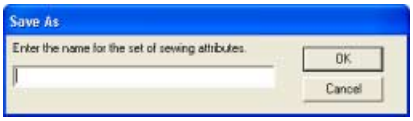
1. If necessary, change the settings in the **Sewing Attribute Setting** dialog box, and then click .

   → The **Load/Save Default Setting** dialog box appears.



2. Click **Save as**.

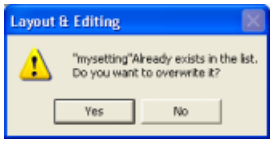
   → The **Save As** dialog box appears.



3. Type in a name for the group of settings, and then click **OK** to register the group in a list.

Memo:

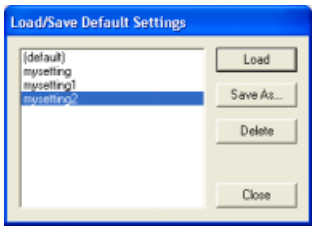
*If the name for the settings entered in the **Save As** dialog box is already registered, the following message appears.*



- *To overwrite the previously registered settings, click **OK**.*
- *If you do not want to overwrite the existing settings, click **Cancel**, and then type in a different name for the settings.*

Deleting a group of settings from the list

1. In the **Load/Save Default Setting** dialog box, select the group of settings to be deleted.

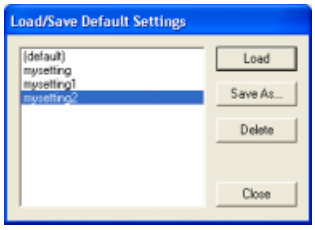


2. Click **Delete** to delete the selected group of settings from the list.

> **Memo:**
> *(default) cannot be deleted.*

Recalling a group of settings from the list

1. In the **Load/Save Default Setting** dialog box, select the group of settings to be recalled.



> **Memo:**
> *Only one group of settings can be selected.*

2. Click **Load**.

   → The **Load/Save Default Setting** dialog box closes, and the settings in the **Sewing Attribute Setting** dialog box change to the saved settings.

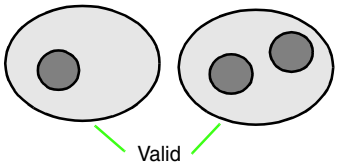
> **Memo:**
> *To change the saved settings and save the changes, change the settings in the **Sewing Attribute Setting** dialog box, click , then click **Save as**, and then click **OK** without changing the group name for the settings.*

> **Memo:**
> *The saved setting can also be used on a different computer. Simply copy **sastu.txt** from the **Settings** folder in the **PE-DESIGN Ver7** folder (application folder) on the original computer to the **Settings** folder at the same path on the destination computer.*

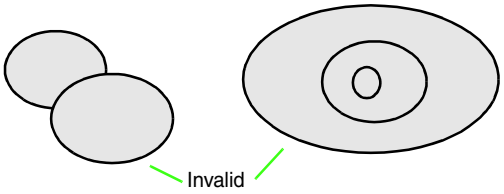
Preventing overlapping stitching (hole sewing)

By specifying hole sewing, the stitching in overlapping regions will not be sewn twice. Hole sewing can be set only when one region completely encloses another.

1. Select a pair of patterns, for example, a circle included in an oval.



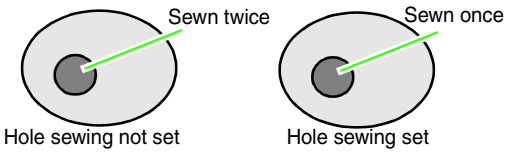
> **Memo:**
> *For a pair to be valid, one of the patterns must be completely enclosed within the other pattern, and not contain text, manual punching patterns or stitch data.*



2. Click **Sew**, then **Set Hole Sewing**.

   → If the selected pair can be set for hole sewing, the following message appears.

→ If the selected pair cannot be set for hole sewing, the following message appears.



3. Click **OK** to remove the message.

> **Memo:**
> - *Once a pair of patterns has been set for hole sewing, they will move together if you try to move one of the patterns.*
> - *When setting hole sewing to three or more objects, first set hole sewing to two objects. After this, select the first two grouped objects and the next one object and repeat the hole sewing setting.*
> - *The outline of patterns created with the Outline, Fan Shape and Arc & String tools can be edited with the Point Edit tool.*

> **Note:**
> *To see better what the hole sewing setting does, previewing the patterns before and after setting hole sewing (For details, refer to "Displaying a preview of the embroidery" on page 172.)*

Canceling hole sewing

1. Select a pattern that has been set for hole sewing.

2. Click **Sew**, then **Cancel Hole Sewing**.

The pair of patterns can now be moved independently.

Creating appliqués (Applique Wizard)

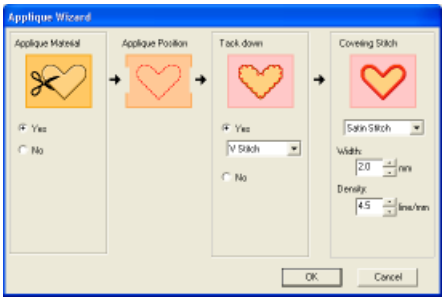
The Applique Wizard provides instructions for easily creating appliqués.

1. Select a pattern with a closed shape, such as a circle or square.

> **Memo:**
> - *A pattern with lines that cross over themselves cannot be selected.*
> - *The pattern selected for creating the appliqué will be deleted after the Applique Wizard is used.*

2. Click **Sew**, then **Appliqué Wizard**.

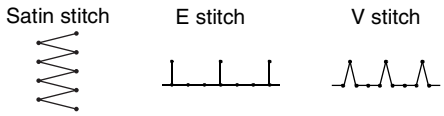
→ The **Appliqué Wizard** dialog box appears.



3. Under **Appliqué Material**, select whether (**Yes**) or not (**No**) the outline of the appliqué is to be sewn onto the appliqué fabric as a guide for cutting it out.

4. The **Appliqué Position**, (guideline for attaching the applique piece) is set to be sewn automatically.

5. Under **Tack down**, select whether (**Yes**) or not (**No**) the appliqué is to be basted onto the base fabric. If **Yes** is selected, select the basting stitch from the selector. You can also select which stitch (satin stitch, E stitch or V stitch) to use for the basting.



6. Under **Covering Stitch**, select the sew type and other attributes for finishing the appliqué.

7. Click **OK** to finish the Applique Wizard and display the design in the Design Page.

> **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

Zooming

You can zoom in to work on details of the embroidery pattern or you can zoom out to work on any part of the embroidery pattern that cannot be viewed in the work area.

Zooming in

1. Click on the Tool Box.

   → Five buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the area that you want to view enlarged.

> **Memo:**
> *To zoom in on a specific area, move the pointer near the desired area, and then drag the pointer diagonally over the desired area.*

Zooming out

1. Click on the Tool Box.

   → Five buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the area that you want to view reduced.

Displaying at actual size

1. Click on the Tool Box.

   → Five buttons appear: .

2. Click 1:1.

   → The Design Page is displayed at its actual size.

Displaying selected patterns to fill the window

1. Select the objects that you want to zoom on.

2. Click on the Tool Box.

   → Five buttons appear: .

3. Click .

   → The Design Page is zoomed to display only the selected objects.

Zooming Design Page to window

1. Click on the Tool Box.

   → Five buttons appear: .

2. Click .

   → The entire Design Page is displayed to fit within the window.

Checking Embroidery Patterns

Measuring the distance between two points

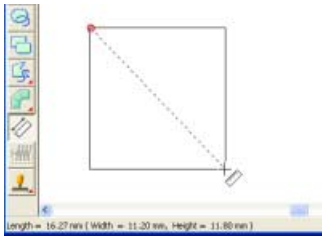
1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Move the pointer to the beginning of the part of the object that you want to measure, and then hold down the mouse button.

→ A small circle appears, indicating the start point of the measurement.

3. Drag the pointer to view the measurement in the status bar. The value beside **Length** shows the length along a straight line between the start point and the end point. The value beside **Width** shows the horizontal distance between the start point and the end point. The value beside **Height** shows the vertical distance between the start point and the end point.

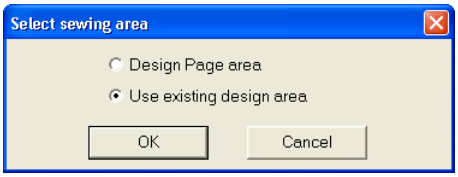


Specifying the sewing area

The sewing area can be specified.

1. Click **Sew**, then **Select Sewing Area**.

→ The following dialog box appears.



2. Select the desired sewing area (**Design Page area** or **Use existing design area**).

3. Click **OK**.

> **Memo:**
> *To quit the operation, click **Cancel**.*

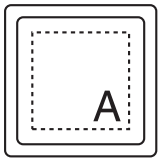
→ If **Design Page area** was selected, the patterns will be sewn so that the needle position when you start sewing is aligned with the center of your Design Page.

> **Memo:**
> *When **Design Page area** is selected, the dimension of the pattern matches the size of the Design Page, therefore reducing the ability to move a pattern around the layout screen of your embroidering machine.*

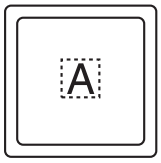
→ If **Use existing design area** was selected, the patterns will be sewn so that the needle position when you start sewing is aligned with the center of the actual patterns.

> **Memo:**
> *When **Use existing design area** is selected, the actual pattern size is maintained, therefore allowing greater mobility when using the layout functions of your embroidering machine.*

Design Page (on your screen)



Sewing area = Design Page area



Sewing area = Use existing design area

☞ *"Specifying the Design Page Size and Color" on page 99*

Checking and editing the sewing order/color

The sewing order of pattern colors as well as the sewing order of pattern objects of the same color can be checked and modified as necessary.

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order/ Color**.

→ A **Sewing Order/Color** dialog box similar to the one shown below appears.

Memo:

The dialog box can be made longer so that all parts of the pattern can be viewed.

To enlarge each pattern to fill its frame, click .

To display in one frame all patterns of the same color that will be sewn together, click .

2. Click **OK** to apply the settings and to close the dialog box.

Memo:

- *When multiple patterns are combined into one frame, ⊞ appears to the left of the number of that frame.*

  Click ⊞ to display the combined patterns in separate frames.

  ⊟ appears under the first frame, and each frame is displayed with a subnumber following the first, to indicate its sewing order within the patterns of the same color.

  Click ⊟ to recombine all of the patterns back into one frame.
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Selecting a pattern

1. Select a pattern in the **Sewing Order/Color** dialog box.

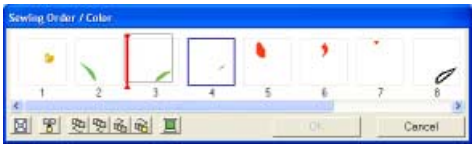
→ The selected pattern has a pink line around it, and "marching lines" appear around the corresponding pattern in the Design Page.

Memo:

- *To select multiple patterns, hold down the Shift or Ctrl key while clicking the frames for the desired patterns. In addition, multiple frames can be selected by dragging the pointer over them.*
- *When the **Sewing Order/Color** dialog box is closed, the pattern that was selected in the dialog box remains selected in the Design Page, unless it is a locked pattern.*

Editing the sewing order

The sewing order can be changed by selecting the frame containing the pattern that you want to move, then dragging the frame to the new location. A vertical red line appears, indicating the position where the frame is being moved.



An alternative method for moving the frames is by clicking the buttons at the bottom of the dialog box.

To move the selected pattern to the beginning of the sewing order, click .

To move the selected pattern ahead one position in the sewing order, click .

To move the selected pattern back one position in the sewing order, click .

To move the selected pattern to the end of the sewing order, click .

Memo:

When dragging a frame containing combined patterns, the patterns will display in separate frames after you release them. Click to the left of the first pattern for that color to recombine them into one frame. Dropping a frame containing combined patterns next to another frame containing combined patterns of the same color displays all patterns in separate frames.

Note:

- *Pieces of patterns that have been cut with the Split stitch tool appear at the end of the sewing order, depending on the sewing order of the original pattern and can be edited as any other pattern.*
- *The sewing order of the separate pattern sections cannot be edited. It is automatically determined by the order set for the whole design.*
- *Objects with no sewing attributes appear in a dotted frame, and there is no number for the sewing order below the frame.*

Combining patterns of the same color

When a Design Page contains a combination of patterns, those patterns with the same color can be grouped together from the **Sewing Order/Color** dialog box. Simply drag the frame of the patterns with the same color to position them beside each other.

Memo:

Check the stitching after changing the sewing order to be sure that overlapping patterns will not be sewn in the wrong order.

Editing the color

1. Select the frame for the pattern whose color you want to change, and then click .

   → The **Thread Color** dialog box appears.

Memo:

- *To switch between displaying the thread color number and brand and the thread color name in the list of thread colors, select the **View Details** check box.*
- *To display the colors arranged according to their tones (from warm colors to cold colors), click **Color** in the heading for the list of thread colors. Click **Color** again to reverse the order (from cold colors to warm colors). To return the list to its original display, click **Index** in the heading.*

2. Select the desired color, and then click **OK**.

   → The object appears in the new color in the **Sewing Order/Color** dialog box and in the Design Page.

3. Click **OK**.

   → The pattern is displayed with the new color.

Memo:

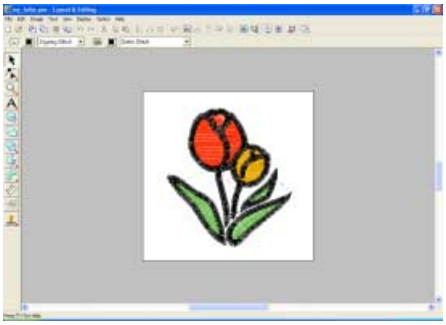
*To close the dialog box without applying the changes to the settings, click **Cancel**.*

Displaying a preview of the embroidery

Once the embroidery design is complete, you can display a preview of it in order to see how the stitching is connected, or you can display a realistic preview of it in order to see how the design will appear once it is sewn.

1. To display a preview of the embroidery design, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

→ A preview of the embroidery design appears.

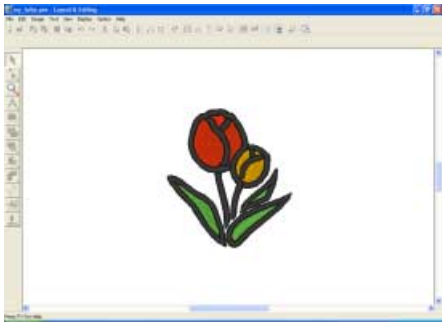


> **Memo:**
> *To zoom in (or out), click on the Tool Box, click (or), and then click the desired area of the embroidery design.*

2. To leave the preview display, repeat step **1.**, or press the Esc key.

3. To display a realistic preview of the embroidery design, click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

→ A realistic preview of the embroidery design appears.



> **Memo:**
> *To zoom in (or out), click on the Tool Box, click (or), and then click the desired area of the embroidery design.*

4. To leave the realistic preview display, repeat step **3.**, or press the Esc key.

> **Note:**
> *The embroidery design cannot be edited while the realistic preview is displayed.*

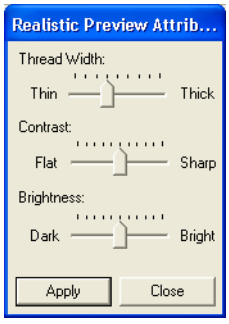
Changing realistic preview settings

Set the realistic preview settings for the desired realistic preview display.

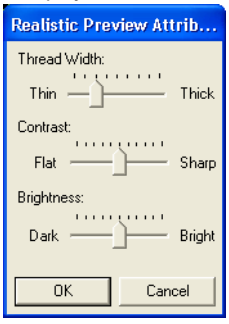
1. Click **Display**, then **Realistic Preview Attribute Setting**.

→ A **Realistic Preview Attribute** dialog box similar to the ones shown below appears.

When a realistic preview is displayed



When a realistic preview is not displayed



2. Use the **Thread Width** slider to set how wide the thread will appear.

3. If necessary, use the **Contrast** slider to set the contrast.

4. If necessary, use the **Brightness** slider to set how bright the display is.

5. Click **Apply** to display a realistic preview of the patterns with the new settings (when the realistic preview is displayed).

   Or, click **OK** to save the settings for the next time that the Realistic Preview function is select (when the realistic preview is not displayed).

> **Memo:**
> *To close the dialog box without applying the changes to the settings, click **Close** or **Cancel**.*

"Displaying a preview of the embroidery" on page 172

Checking the stitching

The actual stitching as it will be performed by the embroidery machine can be viewed using the stitch simulator. You can choose to view the stitching simulation of whole designs or, for large designs created on a custom-sized Design Page, view it by pattern section.

Toolbar button:

1. Click , or click **Display**, then **Stitch Simulator**.

   The **Stitch Simulator** dialog box appears, and the embroidery design is cleared from the Design Page.

   To begin the stitching simulation, click .

> **Memo:**
> - *During the stitching simulation, the play button ( ) changes to a pause button ( ).*
> - *A marker ( ) indicates the current position in the simulation.*
> - *To get a better view of the stitching, zoom in on the design before opening the **Stitch Simulator** dialog box.*

To reverse the simulation to the beginning of the previous color, click .

To advance the simulation to the beginning of the next color, click .

To reverse the stitching by a specific number of stitches, type or select the desired number of stitches, and then click .

To advance the stitching by a specific number of stitches, type or select the desired number of stitches, and then click .

To reverse the stitching to the previous design section, click .

To advance the stitching to the next design section, click .

> **Memo:**
> and *appear only for design created on custom-sized Design Pages.*

To stop the simulation and return to the previous display, click .

> **Memo:**
> *The slider shows the current location in the simulation. In addition, the slider can be moved to change the position in the simulation.*

Drag the slider indicated by to adjust the simulation stitching speed.

Memo:

- *The first number beside indicates the number of the current stitch, and the second number indicates the total number of stitches.*
- *The first number beside indicates the number of the color being drawn, and the second number indicates the total number of colors used.*
- *The first number beside indicates the pattern section that is displayed, and the second number indicates the total number of hoop sections in the pattern. This indicator appears only for patterns created on custom-sized Design Pages.*

2. Click in the upper-right corner of the dialog box to close the dialog box.

Memo:

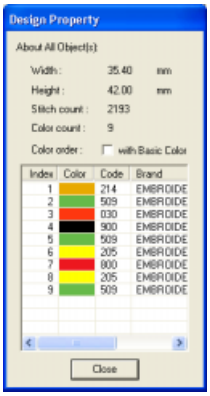
*If a pattern was selected when the **Stitch Simulator** dialog box was displayed, only the selected pattern is drawn in the simulation.*

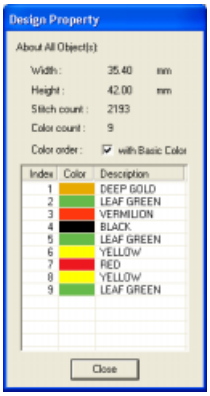
Checking embroidery design information

Sewing information such as dimensions, needle count, color count and color order of patterns can be checked in the **Design Property** dialog box.

1. Click **Option**, then **Design Property**.

→ The **Design Property** dialog box appears.

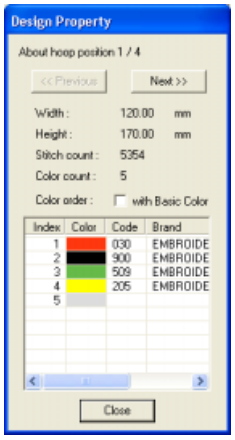




Memo:

- *You can select and check the properties of individual objects within the embroidery pattern by selecting the pattern before opening this dialog box.*
- *To display the colors as the machine's preset color names, select the **With Basic Color** check box.*
- *This dialog box can be resized. The size of the dialog box is retained until it is changed again.*
- *To close the dialog box, click **Close**.*

→ If the Design Page was set to **Custom Size** and no object in the Design Page is selected, the sewing information for the entire Design Page is displayed hoop by hoop, and a **Design Property** dialog box similar to the one shown below appears.



Note:

If a pattern is larger than the Design Page or if it is positioned so that it does not completely fit within the Design Page, the error message "Please change the object size or position." appears instead of this dialog box. After the design causing the error is displayed selected, change its size or position. (If more than one design causes the error message to appear, they will be displayed in the sewing order.)

Memo:

- *The Design Page is automatically zoomed in on or zoomed out from to fit in the entire window.*
- *The first line of the dialog box shows the position of the displayed design section within the embroidery hoop installation order.*
- *Only the design within the corresponding section appear in the Design Page and are outlined in red.*
- *To display information for other design sections, click **Previous** or **Next**.*
- *The design sections are displayed in order from left to right, top to bottom. Pattern sections that do not contain any stitching will not be displayed.*
- *To close the dialog box, click **Close**.*

Note:

*The **Previous** button cannot be clicked when the design corresponding to the first hoop is already displayed. In addition, the **Next** button cannot be clicked when the design corresponding to the last hoop is already displayed.*

Viewing design in the reference window

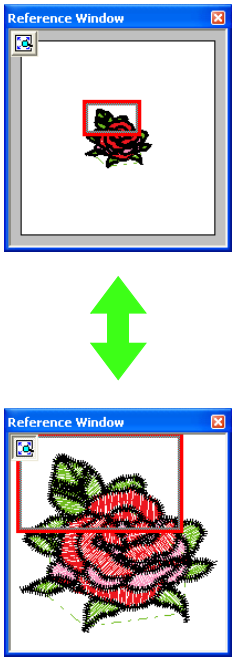
A design in the Design Page is displayed in the Reference Window, giving you an overall view of the design while you work on a detailed area. The display area frame (red rectangle) indicates the part of the pattern displayed in the Design Page.
To switch between displaying and hiding the Reference window, click **Display**, then **Reference Window**, or press the shortcut key (F11).

Zooming

The design displayed in the Reference Window can be reduced to fit completely within the Reference Window or enlarged to display only the pattern.

1. Click .

→ The pattern is displayed so that it fills the Reference Window.



Moving the display area frame

The part of the design displayed in the Design Page can be selected from the Reference Window.

1. Move the pointer over the display area frame.

   → The shape of the pointer changes to .

2. Drag the display area frame so that it surrounds the desired part of the design.

   → The selected part of the design is displayed in the Design Page.

Redrawing the display area frame

Instead of moving the display area frame, the frame can be redrawn to display the desired part of the pattern in the Design Page.

1. Click the area to be displayed, or drag the pointer over the desired part of the design in the Reference Window.

   → The display area frame is redrawn, and the selected part of the design is displayed in the Design Page.

Scaling the display area frame

1. Move the pointer over a corner of the display area frame.

→ The shape of the pointer changes to ↖↘ or ↗↙, depending on the corner that the pointer is over.

Memo:

↖↘ and ↗↙ are for scaling the height and width.

2. Drag the corner to adjust the display area frame to the desired size.

Saving and Printing

Saving

Overwriting

Once the image or design has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button:

1. Click , or click **File**, then **Save**.

→ If the image or design has already been saved at least once, the file is saved immediately.

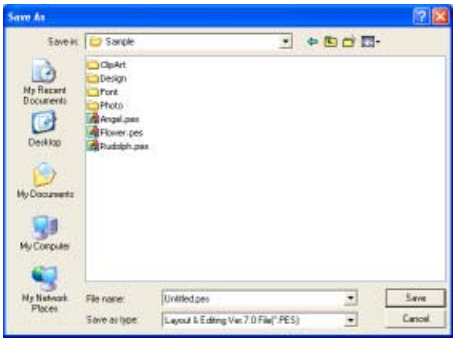
→ If no file name has been specified or if the file cannot be found, the **Save As** dialog box appears.

Saving with a new name

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or design. The files are saved as .pes files.

1. Click **File**, then **Save As**.

→ A **Save As** dialog box similar to the one shown below appears.



2. Select the drive and the folder, and then type in the file name.

> **Note:**
> - *If you select a file type of a previous software version, saved .pes files can be opened with that version of the software; however, all saved design will be converted to stitch pattern.*
> - *Custom-sized Design Pages cannot be saved in a software version prior to version 6.*
> - *Custom-sized Design Pages will be saved in one file, but the stitch pattern is saved separately for all hoop sizes.*

3. Click **Save** to save the data.

> **Memo:**
> - *To quit the operation, click **Cancel**.*
> - *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
>
>
>
>
> - *To overwrite the file, click **Yes**.*
> - *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

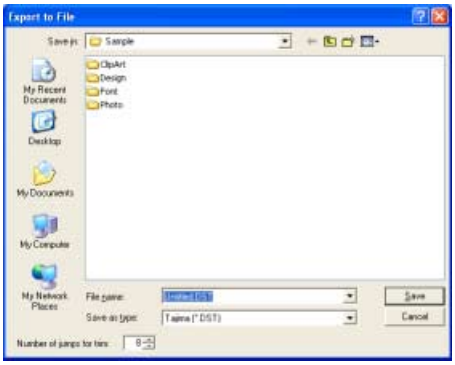
→ The new file name appears in the title bar of the Layout & Editing window.

Outputting design in a different format

The data shown in the Design Page can be exported as a file of a different format (.dst, .hus, .exp, .pcs, .vip, .sew, .jef, .csd, .xxx, and .shv).

1. Click **File**, then **Export**.

→ A dialog box similar to the one shown below appears.



2. Select the drive and the folder, and then type in the file name.

3. Select the format (.dst, .hus, .exp, .pcs, .vip, .sew, .jef, .csd, .xxx, or .shv) in which you want to export the file.

> **Memo:**
> *With the DST format, jump codes are used to indicate when the thread must be cut in order to change the thread color. Since the number of codes differ depending on the embroidery machine being used, type or select the appropriate value in the* ***Number of jumps for trim*** *box. (This setting can only be specified if the .dst format is selected.)*

> **Note:**
> - *Some patterns imported from embroidery cards cannot be exported.*
> - *Patterns designed on a custom-sized Design Page will be exported as a simple file, and will not be split into sections.*

Writing an embroidery design to an original card

You can save a displayed embroidery design onto an original card in order to transfer it to a embroidery machine.

> **Memo:**
> *For details on writing two or more files to an original card, refer to "Writing Embroidery Design Files to an Original Card" on page 284.*

> **Note:**
> *Be sure that the hoop size of the design does not exceed the hoop that will be used on the embroidering machine.*

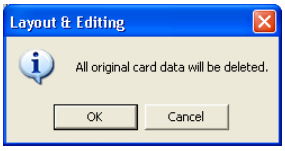
Toolbar button:

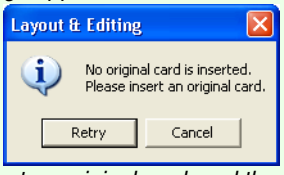
1. Insert an original card into the USB card writer module.

> **Note:**
> - *The original card is inserted correctly when you hear it snap into place.*
> - *The embroidery machine must be turned off before original cards are inserted or removed. However, it is not necessary to turn off the computer when original cards are inserted or removed from the USB card writer module.*

2. Click , or click **File**, then **Write to Card**.

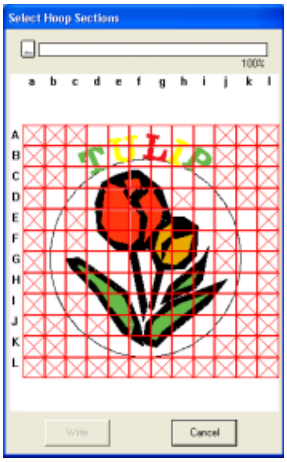
→ The following message appears.



> **Note:**
> - *If the original card is not brand new, make sure that the design already stored on the card are no longer needed.*
> - *If no original card is inserted, the following message appears*
>
> 
>
>
> - *Insert an original card, and then click* ***Retry****.*
> - *To quit the operation, click* ***Cancel****.*
> - *If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, the design cannot be saved on an original card.*

Memo:

Designs created on a custom-sized Design Page are written to cards split into their various sections.
If the total size of the design exceeds the capacity of the original card or if your Design Page is set to a custom size of 90 × 90 cm (3.54" × 3.54"), and is split into over 80 sections, you will need to split the design into sections and write them onto several original cards.
*In this case, the **Select Hoop Sections** dialog box appears to let you select the sections that can be written in the available space on the card.*



The progress bar at the top of the dialog box shows the available space on the card as you select design sections to be written to the card. The space used by the selected design sections appears in blue. If you select several pattern sections which exceed the size limit, the space used appears in red.
*Click each design section to select it, and then click **Write** to write the selected design sections to the card. To deselect a design section, simply click it again. (The **Write** button is available only when a section is selected and the space on the card is sufficient to receive the selected design.)*

3. Click **OK**.

→ The message "Now transmitting" appears while the current embroidery design is transferred to the original card, and then the following message appears.

Memo:

*To quit the operation, click **Cancel**.*

4. Click **OK** to close the message.

Memo:

"Overwriting" on page 177 and "Saving with a new name" on page 177

Adding comments to saved .pes files

You can enter comments and information about the pattern to a saved .pes file.

1. Click **File**, then **Property**.

→ The **File property** dialog box appears.

Memo:

The stitch count is the total of all stitches.

2. To enter or change the information, type it in.

3. Click **OK** to save the entered information.

Memo:

- *The entered information will be saved to the file the next time that it is saved.*
- *To quit the operation and close the dialog box, click **Cancel**.*
- *Files can be searched for in Design Database according to the entered information.*

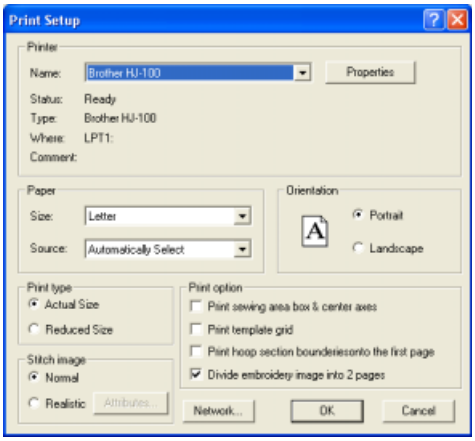
Printing

Specifying print settings

Before printing, you may need to change the print settings for the embroidery design files that you want to print.

1. Click **File**, then **Print Setup**.

→ A **Print Setup** dialog box similar to the one shown below appears.



2. Under **Paper** and **Orientation**, select the appropriate settings.

3. Under **Print type**, **Print Option** and **Stitch image**, select how the data is to be printed.

Print type

Actual Size: Select this option to print the design in actual size and the sewing information (dimensions of the embroidery, the sewing color order and the stitch count, the hoop position) on separate pages. If the design size is larger than the paper size, depending on the Design Page settings, a reduced version of the large design and the different pattern sections in actual size are printed.

Reduced Size: Select this option to print a reduced image together with all of the above-mentioned information on a single page for Design Pages set to **Hoop Size**, and on the same page as the image for each hoop section of custom-sized Design Pages.

Print option

Print sewing area box & center axes: Select this check box to print black lines to indicate the sewing area (refer to “Specifying the sewing area” on page 169) and the center axes for the data. (This setting is only available when **Actual Size** is selected.)

Print template grid: Select this check box to print green lines to represent the grid printed on the embroidery sheet included with the hoop.

Print hoop section boundaries onto the first page: Select this check box to print the design sections of a design for which the Design Page has been set to a custom size or to a multi-position hoop. The pattern sections are printed in red.

Divide embroidery image into 2 pages: Select this check box to print in actual size and on A4- or Letter-size paper design that is larger than the paper size by dividing them in two and printing each half on different pages. (This setting is only available when **Actual size** is selected in the **Print Setup** dialog box and when the Design Page is set to the larger hoop sizes [300 × 200 mm (11 3/4" × 7 3/4"), 200 × 300 mm (7 3/4" × 11 3/4"), 180 × 300 mm (7" × 11 3/4"), 300 × 180 mm (11 3/4" × 7") when set to **Hoop Size**, and 170 × 290 mm (180 × 300 mm) 6.69" × 11.41" (7" × 11 3/4") or 290 × 190 mm (300 × 200 mm) 11.41" × 7.48" (11 3/4" × 7 3/4") when set to **Custom Size**].) With this split printing feature, / or / is printed in the lower-right corner of the paper to indicate which half is printed.

Stitch image

Normal: Select this option to print the design as lines and dots.

Realistic: Select this option to print a realistic image of the design. To change the settings of the realistic image, click **Attributes**. (For details, refer to “Changing realistic preview settings” on page 172.)

Note:

- *If the **Divide embroidery image into 2 pages** check box is cleared and you print on a larger paper size, the design does not print in two halves. Likewise, if you print on a smaller paper size, the design might be cut off.*
- *The stitch and hoop position information is printed on a separate page, after the image or design section halves.*

4. Click **OK**.

> **Memo:**
> - *To change the printer settings, click **Properties**.*
> - *To quit the operation, click **Cancel**.*

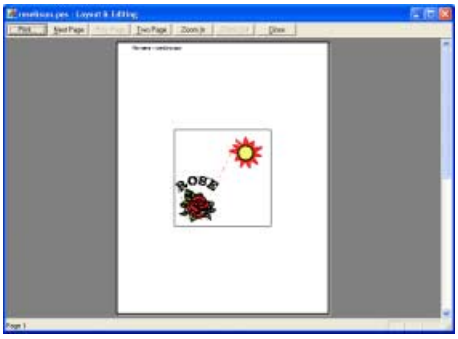
"Displaying a preview of the embroidery" on page 172

Checking the print image

You can preview the contents of the Design Page, including the separate hoop sections of large-size embroidery patterns, and check the sewing color order, the dimensions and the stitch count before printing.

1. Click **File**, then **Print Preview**.

→ If **Actual Size** was selected in the **Print Setup** dialog box, the Layout & Editing window appears as shown below.



> **Memo:**
> - *To enlarge and reduce the page, click **Zoom In** or **Zoom Out**. Enlarge the image either by clicking **Zoom In**, or by clicking directly the location that you want to enlarge. To reduce the size of the image, click **Zoom Out**.*
> - *To display the following page, click **Next Page**. (For Design Pages set to **Hoop Size**, this button is not available if **Reduced Size** was selected in the **Print Setup** dialog box.)*
> - *To go back to the display of the embroidery, click **Prev Page**. (For Design Pages set to **Hoop Size**, this button is not available if **Reduced Size** was selected in the **Print Setup** dialog.)*
> - *To display two pages at the same time, click **Two Page**. (The **Two Page** button becomes the **One Page** button.)*
> - *To display one page at a time, click **One Page**.*
> - *To open the **Print** dialog box, click **Print**.*
> - *If you need to view an image in detail, displaying only one page at a time allows you to enlarge it more.*
> *If you want to check the sewing information for individual objects in your embroidery design, select the menu command **Option – Design Property**.*

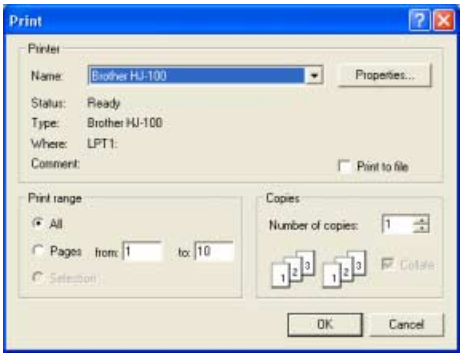
"Specifying print settings" on page 180, "Printing" below and "Checking embroidery design information" on page 174

Printing

You can print the Design Page together with its sewing information.

1. Click **File**, then **Print**.

→ A **Print** dialog box similar to the one shown below appears.



2. Select the necessary settings.

3. Click **OK** to begin printing.

> **Memo:**
> - *To change the printer settings, click **Properties**.*
> - *To quit the operation, click **Cancel**.*

4. Follow the instructions for the printer to finish printing.

→ Depending on the **Print Type** setting, one or two pages will be printed for one pattern or one hoop position.

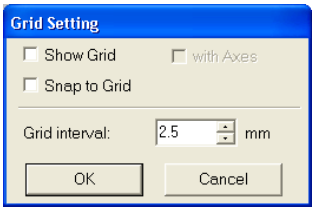
Changing Software Settings

Changing the grid settings

A grid of dotted lines or solid lines can be displayed or hidden, and the spacing for the grid can be adjusted.

1. Click **Display**, then **Grid Setup**.

   → The **Grid Setting** dialog box appears.



2. To display the grid, select the **Show Grid** check box.
   To hide the grid, clear the **Show Grid** check box.

3. To use the grid for aligning patterns or creating patterns of the same size, select the **Snap to Grid** check box.

   Memo:
   *The pointer will move by the amount set in **Grid interval**.*
   The snap feature works whether or not the grid is displayed.

4. To set the grid spacing, type or select a value in the **Grid interval** box. (The setting range is 0.1 to 25.4 mm (0.04 to 1.0 inch).)

5. To display the grid as solid lines, select the **with Axes** check box.
   To display the grid as dotted lines, clear the **with Axes** check box.

   Note:
   *When the **Show grid** check box is selected and the **with Axes** check box is cleared, only the intersecting points of the grid will be displayed.*

6. Click **OK** to apply the changes and to close the dialog box.

   Memo:
   *To close the dialog box without applying the changes to the grid, click **Cancel**.*

Changing the measurement units

The measurements for values displayed in the application can be in either millimeters or inches.

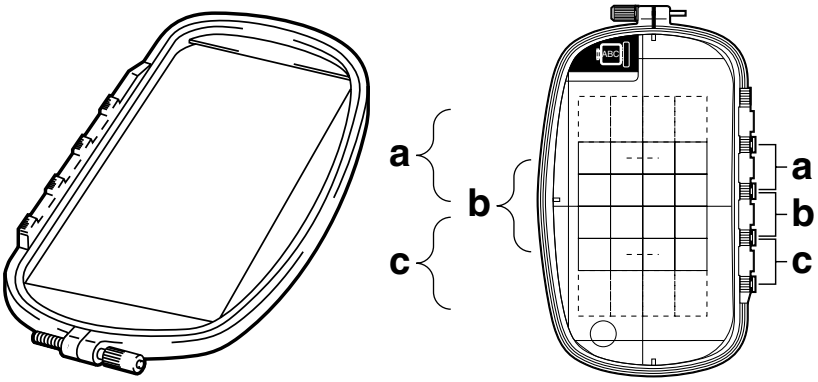
1. Click **Option**, then **Select System Unit**, and then select the desired measurement units (**mm** or **inch**).

   "Changing the grid settings" on this page and "Specifying the Design Page Size and Color" on page 99

Information for Optional Large-Size Hoop Users

Creating design for multi-position hoops

This program enables you to create multi-position design that you can stitch in any multi-position hoop attached to your embroidery machine.



Example of multi-position hoop: 100 × 172 mm hoop

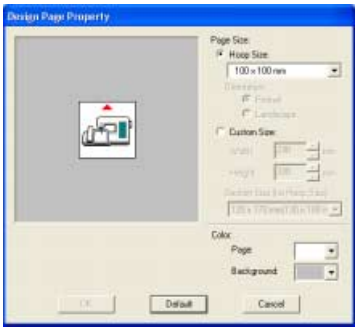
Although the size of the design that can be embroidered using an multi-position hoop is 130 × 180 mm (or 100 × 100 mm, depending on the sewing area of the embroidery machine), first determine which of the three installation positions (indicated as a, b, and c in the illustration above) the multi-position hoop will be installed at and determine the orientation of the design.

When creating the design, each design section can only be as large as the sewing area of the embroidery machine.

Selecting the Design Page size

1. In Layout & Editing, click **Option**, then **Design Page Property**.

→ The **Design Page Property** dialog box appears.



2. Select **Hoop Size**, and then choose a Design Page size of 130 × 300 mm, or 100 × 172 mm, from the selector.

Memo:

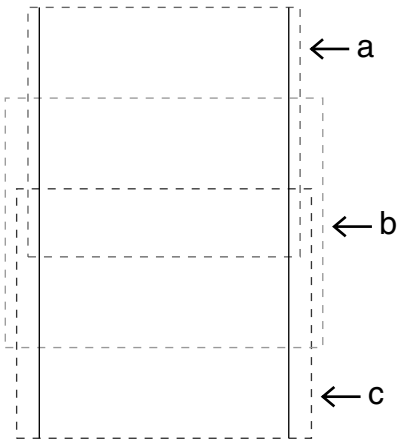
- *Settings for multi-position hoops are indicated by " ∗ ".*
- *Choose the appropriate setting after checking the size of the hoop available for your machine.*

Note:

Multi-position hoop settings are not available in the Design Page Property dialog box of Design Center.

Creating the design

1. The Design Page appears on the screen as shown below.

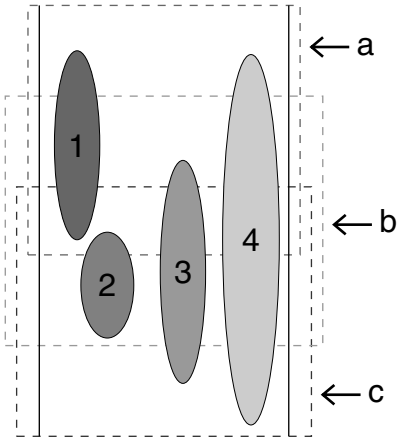


Memo:

Area a: Embroidering area when the multi-position hoop is installed at the top installation position.
Area b: Embroidering area when the multi-position hoop is installed at the middle installation position.
Area c: Embroidering area when the multi-position hoop is installed at the bottom installation position.
The dotted lines separate each area.

2. Create the design, making sure that it meets the following conditions.

- The size of one pattern must be no larger than 100 × 100 mm (or 130 × 180 mm).



- Each pattern must completely fit within a single area (a, b, or c).
  1: The position of this pattern is correct since it fits completely within area a.
  2: The position of this pattern is correct since it fits completely within either area b or area c.
  3: The size of this pattern is acceptable, but its position must be corrected since it does not fit completely within any of the areas.
  (It will be necessary to correct the position in order to fit in either b or c.)
  4: This pattern must be corrected since it is too large.
  (It will be necessary to correct the position and size in order to fit in either a, b, or c.)

Note:

If a pattern does not meet the conditions mentioned above, a warning will appear when continuing to the next step.

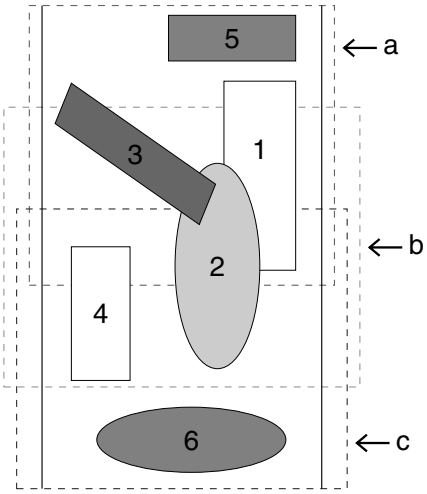
Optimizing hoop changes

With the Optimize hoop change function, the sewing order of patterns in a Design Page for multi-position hoops is automatically optimized, therefore reducing the risk of the embroidery being sewn incorrectly or the fabric not feeding evenly when the hoop position is changed too often.

1. Click **Sew**, then **Optimize hoop change**.

Memo:

- *A check mark appears when this function is turned on; no check mark is displayed when this function is turned off.*



- *When the Optimize hoop change function is turned on, the sewing order that you have set is optimized to reduce the number of times that the hoop installation position is changed.*
  For the example shown on this page, the sewing order is: a (pattern 1) → b (pattern 2) → a (patterns 3 & 5) → c (patterns 4 & 6)
  If the Optimize hoop change function is turned off, each pattern is sewn according to the sewing order that you have set.
  For the example shown on this page, the sewing order is: a (pattern 1) → b (pattern 2) → a (pattern 3) → c (pattern 4) → a (pattern 5) → c (pattern 6)
  Therefore, since the number of times for changing the hoop installation position is not optimized, it may be changed more often than if it was optimized.

Note:

Since the pattern may not be sewn correctly or the fabric may not feed evenly if the hoop installation position is changed too often, we recommend turning on the Optimize hoop change function. Turning on this function will change the sewing order that you have set, therefore, check the sewing order before you begin embroidering.

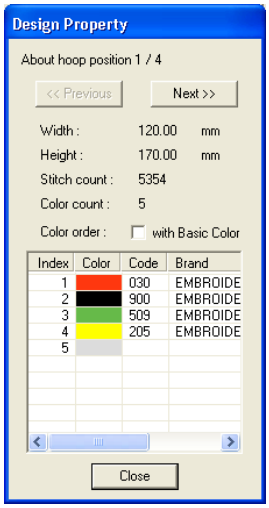
Checking the pattern

Note:

Make sure that no pattern has been selected before clicking this command. If a pattern has already been selected, only the information for that pattern is displayed.

1. Click **Option**, then **Design Property**.

→ At the same time that the **Design Property** dialog box appears, the Design Page is automatically zoomed in or out to fit in the entire window.



Memo:

- *The first line of the dialog box shows the position in the hoop installation order for the currently displayed pattern.*
- *Only the patterns that would be sewn at the current position in the hoop installation order appear in the Design Page, and the embroidering area for the current hoop position is outlined in red.*
- *To display information for patterns at other positions in the hoop installation order, click **Previous** or **Next**. At this time, the corresponding pattern and hoop position appear in the Design Page.*

Note:

If a pattern is larger than the embroidery area or if a pattern is positioned so that it does not completely fit within an embroidery area, the error message "Please change the object size or position." appears instead of this dialog box. After the pattern causing the error is displayed selected, change its size or position.

Saving the design

1. Click **File**, then **Save** or **Save As**, and then save the design.

   → The entire design is saved as a single file (.pes).

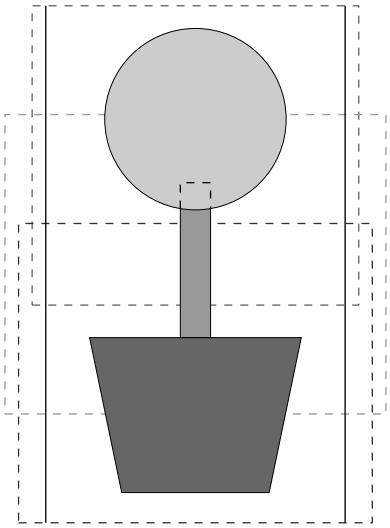
> **Memo:**
>
> *If the file size or the number of color changes is larger than the specified number, or if one of the patterns does not completely fit within an embroidery area, the message "Please change the object size or position. Do you want to save the data anyway?" appears.*

Writing the design to an original card

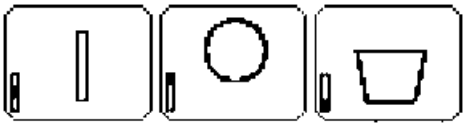
1. If your design is displayed in the Design Page, click **File**, then **Write to Card**, or click on the Toolbar, and then write the design to an original card.

   A design for a multi-position hoop is created by considering the pattern in each hoop installation position as one pattern, then combining them.

   Therefore, when this type of design is written to an original card, one multi-position hoop design is saved as a combination of multiple patterns.



If the design shown above is written to an original card and the written pattern is checked on the embroidery machine, it appears as shown below.



: This pattern is sewn when the hoop is installed at the top installation position (position a).

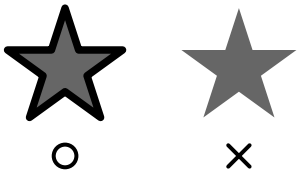
: This pattern is sewn when the hoop is installed at the middle installation position (position b).

: This pattern is sewn when the hoop is installed at the bottom installation position (position c).

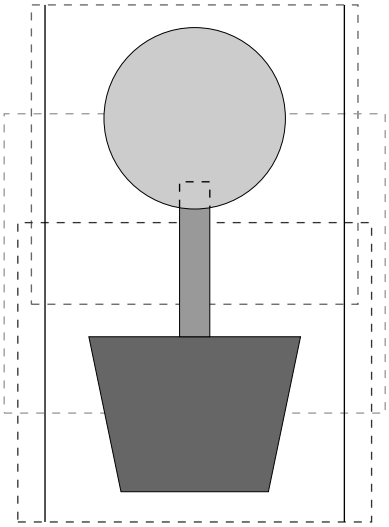
Therefore, the frame installation position sewing order for the pattern shown above is b, a, then c.

Notes on embroidering using the multi-position hoop

- Before embroidering your design, sew a trial sample of the design on a scrap piece of fabric from your design, making sure to use the same needle and thread.
- Be sure to affix stabilizer material to the back of the fabric and tightly stretch the fabric within the hoop. When embroidering on thin or stretch fabrics, use two layers of stabilizer material. If no stabilizer material is used, the fabric may become over-stretched or wrinkled or the embroidery may not be sewn correctly.
- For more ways to stabilize large designs, refer to “Attaching stabilizer to the fabric” on page 189
- Use the zigzag stitch for sewing the outlines in order to prevent embroidering outside the outlines.



- For patterns that require the hoop to be installed at different installation positions, design the embroidery pattern so that the various parts of the pattern overlap in order to prevent misalignment while embroidering.



Printing a Design Page for a multi-position hoop

If a Design Page for a multi-position hoop is selected, a complete image of the Design Page is printed on the first page, followed by an image of each design section and its sewing information (dimensions of the embroidery, the hoop position, the sewing color order and the stitch count), so the number of pages depends on your design.

- If a 130 × 300 mm Design Page is selected, the pattern is divided into sections of 130 × 180 mm with each section printed on a separate page.
- If a 100 × 172 mm Design Page is selected, the pattern is divided into sections of 100 × 100 mm with each section printed on a separate page.

The Design Page is printed as described below.

When **Actual Size** is selected:

On the first page, the entire Design Page is printed at actual size. (However, for a 130 × 300 mm Design Page, a reduced image of the Design Page is printed.) Afterwards, the pattern in each section of the Design Page is printed, starting with that sewn with the first hoop installation position, and is followed by the sewing information for that pattern on separate pages.

When **Reduced Size** is selected:

On the first page, the entire Design Page is printed at actual size. (However, for a 130 × 300 mm Design Page, a reduced image of the Design Page is printed.) Afterwards, the pattern in each section of the Design Page is printed, starting with that sewn with the first hoop installation position, on the same page as the sewing information for that pattern.

Memo:

*When the menu command **File** – **Print Preview** is selected, each section of the design is displayed as described above.*

Embroidering large-size embroidery design (custom size)

Attaching stabilizer to the fabric

Stabilizer must always be used when embroidering to stabilize the fabric. There are many types of stabilizer; the type that you will use depends on the type of fabric that you are embroidering on. For large-size designs that are split into sections, the stabilizer must be adhered to the fabric, for example, by using iron-on stabilizer, sticky stabilizer or spray adhesive.

When using spray adhesive, spray the adhesive onto a hooped piece of stabilizer that is strong enough for the entire large-size embroidery. In some cases, you may need to use two pieces of stabilizer for your embroidery.

Note:

- *For best results, attach the stabilizer to the fabric (as described on this page). Without the correct stabilizer, the design may become misaligned due to puckering in the fabric.*
- *Be sure to check the recommendations on the stabilizer package.*

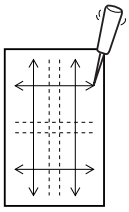
Marking the embroidering position

Using the template for the size of hoop that you are using, mark the embroidering position on the fabric.

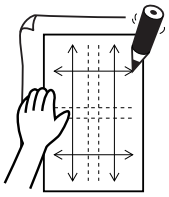
Memo:

- *The templates are included in the package.*
- *The templates are also in the **Template** folder and can be printed out with a printer.*
- *Template PDF files have been described within actual size completely. Please confirm the printing property of your Acrobat program. If some printing properties such like "Reduce/Enlarge to fit page" would be "Checked", the Acrobat will resize the PDF automatically. So, please "Uncheck" these properties before your printing out.*

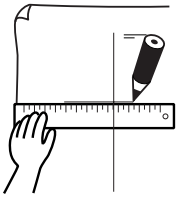
1. Punch a hole at the end of each arrow on the template.



2. Place the template on the fabric, and then insert the tip of a marking pen into each hole to mark the fabric.

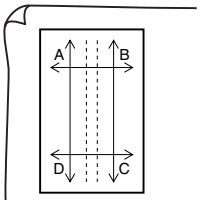


3. Connect the points marked on the fabric to draw reference lines.

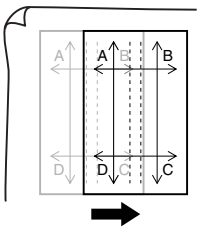


For a large embroidery pattern, reposition the template to draw the embroidering position for each section of the embroidery pattern.

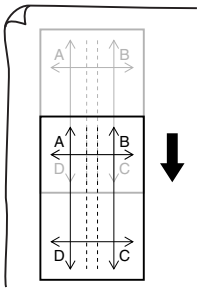
1. Place the template on the fabric, and mark points A, B, C and D.



2. To mark an area to the right of the previously marked area, align points A and D on the template with marks B and C on the fabric.

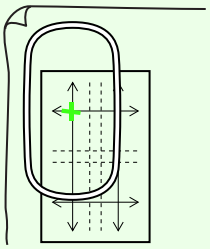


To mark an area below the previously marked area, align points A and B on the template with marks C and D on the fabric.



Note:

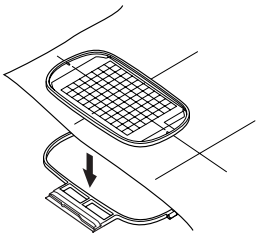
- ***The intersection of the horizontal and vertical line indicates the center of the embroidery hoop.***
- *While carefully considering how the fabric will be hooped, place the template on the fabric, and then draw lines to indicate the embroidering position. In addition, because all embroidery areas are not drawn on the template for large embroidery hoops, be careful that the embroidery area does not extend from the marked area on the fabric as shown below.*



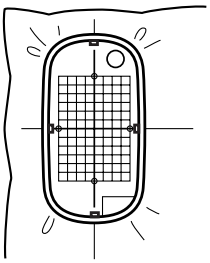
Hooping the fabric

Using the hoop's plastic embroidery sheet, align the reference lines on the embroidery sheet with the marks on the fabric. Then, hoop the fabric while making sure that the fabric remains correctly aligned.

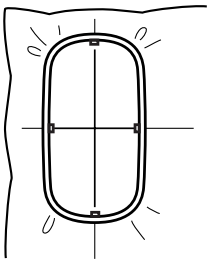
1. Insert the embroidery sheet into the inner ring of the embroidery hoop, and then place them on top of the fabric with the centerline on the embroidery sheet aligned with the reference lines (drawn on the fabric) for the first pattern section to be sewn.



2. Keeping the reference lines on the embroidery sheet aligned with the reference lines for the first pattern section, place the fabric and inner ring of the embroidery hoop into the outer ring of the hoop, and then pull the fabric so that it is tight.



3. Finish hooping the fabric, and then remove the embroidery sheet.



Note:

- *Place the fabric and hoop on a level surface, and then make sure that the inner ring is pressed in well enough that the top edge of the inner ring aligns with the top edge of the outer ring.*
- *If the embroidery sheet is not used, the marks on the embroidery hoop can be used to hoop the fabric vertically and horizontally.*
  However, since the center point on some embroidery machines is off center, the embroidery sheet should be used for best results.
- *Another way to hoop the fabric is to use sticky stabilizer that can be hooped separately, tear away the protective paper, then carefully align the fabric onto the sticky surface using the embroidery sheet as a guide.*
- *Tip: The fabric can be hooped more easily if double-sided tape is affixed to the back of the inside frame, which is placed on top of the fabric, and then the fabric is clamped between the inside frame and the outside frame.*

Embroidering

Now, we are ready to embroider the design.

1. When large-size embroidery design are transferred to the embroidery machine, the patterns appear on the embroidery machine display as shown below. For this example, select the first embroidery pattern section (Aa).

Memo:

*If there is no stitching in section Aa, select the first section that contains stitching. Select the menu command **Option – Design Property** to check the embroidering order.*

2. Attach the embroidery hoop to the embroidery machine, and then using the machine's layout adjusting functions, align the needle position with the intersection of the lines drawn on the fabric.

3. Embroider the selected pattern.

4. Remove the embroidery hoop from the embroidery machine, and then remove the fabric from the hoop.

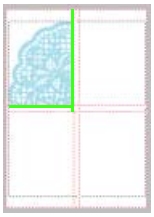
5. Hoop the fabric for the next design section. (For details, refer to "Hooping the fabric" on page 190.)

Memo:

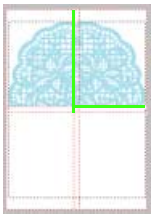
*When an embroidery design created in a custom Design Page is saved or transferred to an original card, alignment stitching (single lines of running stitches with the color **NOT DEFINED**, with a pitch of 7.0 mm, and starting with fixed stitches with a pitch of 0.3 mm) is added at the edges of the design sections. (The alignment stitching appears in the print preview and is printed in red.)*

*Example for hooping fabric using the alignment stitching with **Largelace.pes** (**Largelace.pes** can be found in the **Sample\Design** folder.):*

1) Embroider the upper-left design section.
→ Alignment stitching is sewn below and on the right side of the embroidered design section.

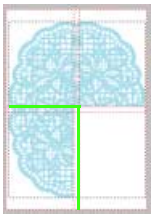


2) Hoop the fabric for the upper-right design section with the left side of the hoop aligned on the alignment stitching on the right side of the design section sewn in step 1, and then embroider the design.
→ Before the design section is embroidered, alignment stitching is sewn on the left side. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 1. After the design section is embroidered, alignment stitching is sewn below the design section.



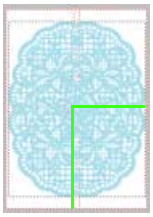
3) Hoop the fabric for the lower-left design section with the top of the hoop aligned on the alignment stitching at the bottom of the design section sewn in step 1, and then embroider the design.

→ Before the design section is embroidered, alignment stitching is sewn at the top. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 1. After the design section is embroidered, alignment stitching is sewn on the right side of the design section.



4) Hoop the fabric for the lower-right design section with the left side of the hoop aligned on the alignment stitching on the right side of the design section sewn in step 3 and with the top of the hoop aligned on the alignment stitching at the bottom of the design section sewn in step 2, and then embroider the design.

→ Before the design section is embroidered, alignment stitching is sewn on the left side and at the top. Make sure that this alignment stitching aligns with the alignment stitching sewn in step 3 and in step 2.



6. Continue hooping the fabric and embroidering until the entire embroidery design is sewn.

Basic Operation Flow - Design Center

Design Center is used to manually create embroidery patterns from images created in other applications. With Design Center, you can also apply stitch patterns created with Programmable Stitch Creator to regions of the embroidery pattern. The resulting embroidery pattern can then be imported into the Layout & Editing Design Page and combined with other patterns.

The embroidery pattern is created in four stages:

Original Image Stage

In the Original Image Stage, you can open an image (or clip art) from various sources, such as, an image created in Paint®, a scanned drawing, or purchased clip art.

The image file must be in the uncompressed format, and its file name extension must be .bmp, .tif, .jpg, .j2k, .pcx, .wmf, .png, .eps, .pcd, or .fpx.

Note that image files in other formats can be converted into the specified format if you have the proper conversion software.

In the Original Image Stage, the image is displayed with its original colors and you cannot modify it.

Line Image Stage

When moving from the Original Image Stage to the Line Image Stage, select a maximum of five colors from the image that will be converted into black outlines. Unselected colors will be converted into white. You can then correct the black-and-white image using pens and erasers of different thicknesses.

If you save a file in the Line Image Stage, its file name extension will be .pel.

Figure Handle Stage

When you move to the Figure Handle Stage, the application automatically detects the outline (black areas) and replaces it with a set of broken lines. The broken lines can be edited (you can move and delete points or insert new points).

If you save a file in the Figure Handle Stage, its file name extension will be .pem.

Sew Setting Stage

You can set the sew type, thread color, and other sewing attributes for the outlines and regions to complete the embroidery pattern.

If you save a file in the Sew Setting Stage, its file name extension will be .pem.

If you have to interrupt your work at the Line Image Stage, the Figure Handle Stage or the Sew Setting Stage, save the file in order to retrieve it later to resume working on it.

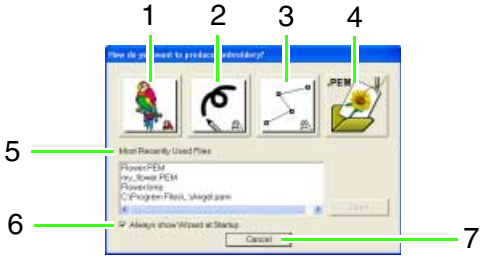
Original Image Stage

Importing an image using the wizard

This wizard provides a step-by-step guide for creating embroidery patterns.

1. Click **File**, then **Wizard**.

→ The **How do you want to produce embroidery?** dialog box appears.



Position the pointer over any button, and the name of the function appears.

The functions for each button are described below.

1 From Image

Click this button when creating embroidery pattern from an image.

Clicking this button displays the **From Image** dialog box, and then continues with a step-by-step guide for creating embroidery patterns.

For more details, refer to "When the From Image button is clicked" on this page.

2 New Line Image

Clicking this button opens a new Design Page in the Line Image Stage.

Click this button when you want to use the black pen and eraser tools to draw an image, then create an embroidery pattern from that image.

For more details, refer to "Drawing a New line image freehand" on page 197.

3 New Figure

Clicking this button opens a new Design Page in the Figure Handle Stage.

Click this button when you want to draw a figure handle image, or when you want to create patterns from outlines taken from a previously saved .pem file.

For more details, refer to "Drawing a New figure handle image freehand" on page 202.

4 Open PEM

Click this button when you want to edit a saved .pem file (saved in the Figure Handle Stage or the Sew Setting Stage).

Clicking this button displays the **Open** dialog box so that a .pem file can be selected.

5 Most Recently Used Files

A list of the most recently edited files are displayed.

From the list, click the name of the file that you want to edit, and then click **Open**.

6 Always show Wizard at Startup

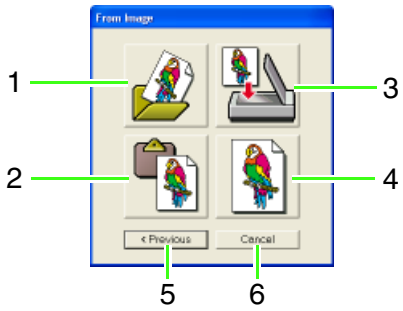
Select this check box to start up the wizard each time Design Center is started up.

7 Cancel

Clicking this button closes this dialog box.

When the From Image button is clicked

When you click the **From Image** button in the **How do you want to produce embroidery?** dialog box, the **From Image** dialog box appears.



Position the pointer over any button, and the name of the function appears.

The functions for each button are described below.

1 **Open Image File**
Click this button to open a previously saved image file and paste the image in the Design Page.

For details, refer to "Importing image data into Layout & Editing" on page 18.

2 **From Clipboard**
Clicking this button pastes the image on the Clipboard into the Design Page. This function can only be used when there is an image on the Clipboard.

3 **From TWAIN device**
Click this button to import an image from a TWAIN device (such as a scanner or digital camera) connected to your computer, then paste it in the Design Page.

For details, refer to "Importing image data from a TWAIN device" below.

4 **Use Current image**
Click this button to use an image opened in the Original Image Stage. This function can only be used when an image is opened in the Original Image Stage.

5 **Previous**
Clicking this button closes the current dialog box, and returns to the **How do you want to produce embroidery?** dialog box.

6 **Cancel**
Clicking this button closes this dialog box.

→ If any button other than **Previous** or **Cancel** is clicked, the image will be imported and pasted into the Design Page of the Original Image Stage, and the **Cut out to Line Image** dialog box appears, allowing you to choose colors for outlines.

For details on the next stages, refer to "Line Image Stage" on page 196, "Figure Handle Stage" on page 199, then "Sew Setting Stage" on page 209.

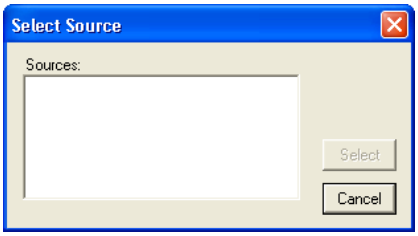
Importing image data from a TWAIN device

TWAIN is an application interface (API) standardization for software that controls scanners and other devices. Design Center supports TWAIN standardized devices, allowing you to control the device and import the image directly.

1. Check that the scanner or other TWAIN device is correctly connected to your computer.

2. Click **File**, then **Select TWAIN device**.

→ The **Select Source** dialog box appears.



3. From the **Sources** list, click the desired device to select it.

> **Note:**
> *If no TWAIN device is installed, there will be no names displayed in the **Sources** list. First, install the driver software for the TWAIN device that you want to use.*

4. Click **Select** to choose the selected device and to close the dialog box.

> **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

5. Click **File**, then **Input from TWAIN device**.

→ The driver interface for the device selected in the **Select Source** dialog box appears.

6. Specify the necessary settings for importing an image, and then import the image.

> **Note:**
> *For information on using the driver interface, refer to the help manual for that interface, or contact the manufacturer of the interface.*

→ When the image transfer between the scanner (or other device) and the driver is completed, the imported image will be pasted in a Design Page of the Original Image Stage.

> **Memo:**
> *If the image currently displayed in the Design Page has not yet been saved, you will be asked whether you want to save it.*

Line Image Stage

After opening the image, continue to the Line Image Stage, where the color(s) that will be used to create the line image (outline of the image) will be selected. In the Line Image Stage, you can edit the image using the pen and eraser tools. You may also want to use these tools to create outlines that are easier to draw by hand, for example, free-hand writing. Use the zooming tools available to display the image enlarged or reduced.

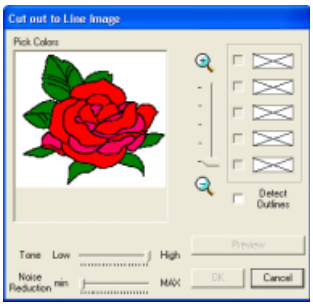
For details on the image appropriate to extract outlines, please refer to page 196.

Extracting the outlines of an image

Toolbar button:

1. Click , or click **Stage**, then **To Line Image**.

→ The **Cut out to Line Image** dialog box appears.



→ If you were in the Figure Handle Stage, you are returned to the Line Image Stage, unless you have modified the image in the Figure Handle Stage. In that case, a message will appear, asking you to confirm that you want to abandon the changes made in the Figure Handle Stage.

Memo:

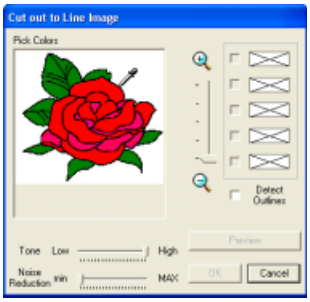
- *To display the image enlarged (or reduced), move the **ZOOM** slider up (or down). When the image is enlarged, you can scroll through it to display different parts.*
- *We recommend using a 16-color image, since it may be difficult to pick colors from a 256-color or truecolor image during the conversion to the Line Image Stage. When using a 256-color or truecolor image, use the **Tone** slider to adjust the image.*
- *The number of colors in the image data can be reduced or the image noise (distortions) can be reduced. By applying an even gradation to make the image smoother, you can select colors more easily, even from image data that was taken from a scanner or other device and does not have clear outlines.*

1) The image window displays the image resulting from the current settings.
2) Move the **Tone** slider to set the amount of color reduction (posterization). Set to **High** to show the original image. Set towards **Low** to increase the color reduction.
3) The more the **Noise Reduction** slider is moved to the right (**MAX**), the smaller the area where the noise is reduced.

Note:

If you started with the Figure Handle Stage by opening a Figure Handle Stage file, you cannot go to the Line Image Stage.

2. Click the outline color(s) that you want to convert into black outlines.



→ When the pointer is moved over the image, the shape of the pointer changes to .

→ The selected color appears in a box on the right side, and ✔ appears in the check box to show that the color is selected.

To extract the color boundaries, click **Detect Outlines** check box.

Memo:

- *When the extracting color boundaries using **Detect Outlines**, the colors are converted to line image as shown below.*

- *You can repeat step **2.** to select up to five colors. If more than five colors are selected, only the last five colors selected remain in the list.*
- *To deselect a color, clear the corresponding check box.*

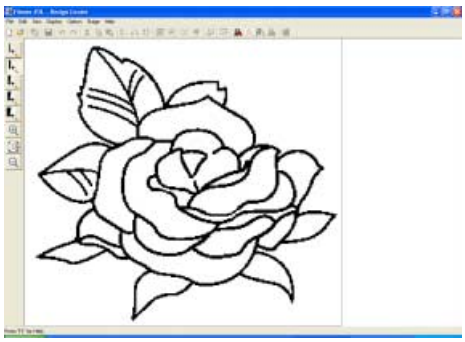
3. Click **Preview** to preview the line image in the Design Page.

Memo:

*If necessary, the settings can be changed. After changing the settings, click **Preview** to preview the outline with the new settings applied.*

4. Click **OK**.

→ All of the selected colors are converted to a black outline (line image), which is displayed in the Design Page of the Line Image Stage.



Memo:

- *To quit the operation and go back to the Original Image Stage, click **Cancel**.*
- *It is recommended to select just as many colors as necessary to create a clear outline of the image.*
- *If you do not like the result, select the menu command **Stage** – **To Original Image** to go back to the Original Image Stage, and then create the line image again.*

Drawing a New line image freehand

Toolbar button:

1. Click , or click **File**, then **New Line Image**.

→ If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears in the Line Image Stage.

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.

Memo:

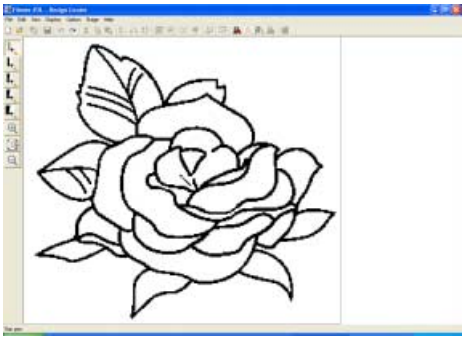
In the Line Image Stage, the file will be saved as a .pel file.

☞ *"Saving embroidery patterns" on page 234, and "Drawing a New figure handle image freehand" on page 202*

Drawing and erasing outlines

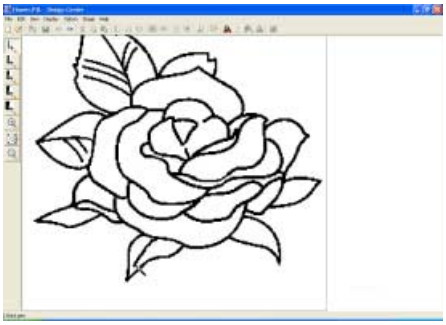
Drawing outlines

1. On the Tool Box, click the button for the pen with the desired thickness.



→ The shape of the pointer changes to .

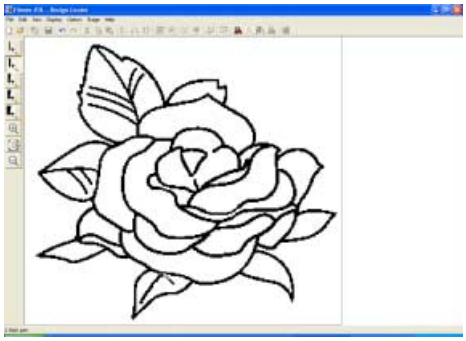
2. To add a dot, click once. To draw a line, drag the pointer.



> **Memo:**
> *To draw vertical or horizontal lines, hold down the Shift key while moving the pointer.*

Erasing outlines

1. On the Tool Box, click the button for the eraser with the desired thickness.



2. Move the pointer over the line that you want to erase, and then hold down the right mouse button.

→ The shape of the pointer changes to .

3. Drag the pointer to erase the line.

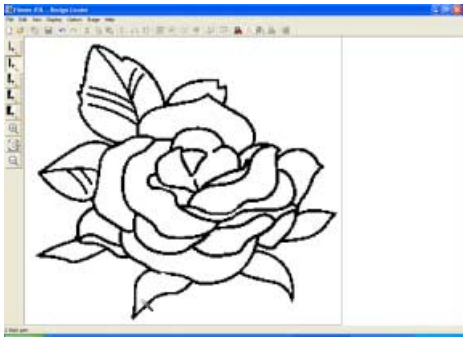


Figure Handle Stage

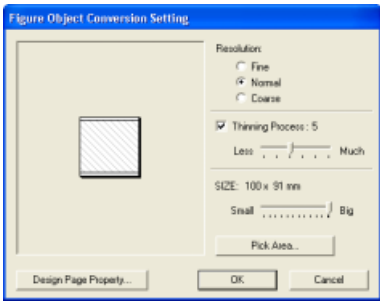
After creating the outline, which is simply a collection of dots (or pixels) in the Line Image Stage, continue to the Figure Handle Stage, where the dots are automatically connected to create lines that can be edited. In the Figure Handle Stage, you can use the Point Edit tool to move, delete and insert points, or you can use the Line tool to draw lines.

Changing settings for converting to outlines

Toolbar button:

1. Click , or click **Stage**, then **To Figure Handle**.

→ If you were in the Line Image Stage, the **Figure Object Conversion Setting** dialog box appears.

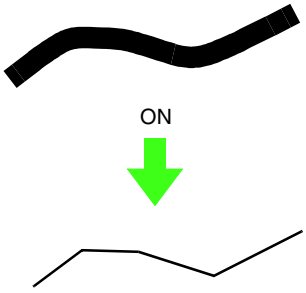


2. Select a setting under **Resolution**.

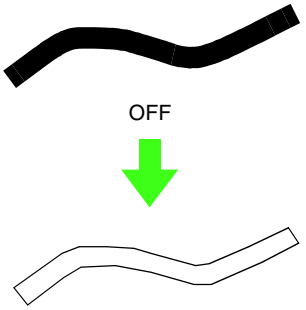
This setting determines how detailed the generated figure handle image will be. Basically, the line image is converted into pieces of broken lines. To create more details, more points are needed on the broken lines, which also increases the size of the file.
In general, **Normal** provides a sufficient resolution without making the file too large.
If selecting **Coarse** gives a satisfactory result for a particular image, select this setting in order to keep the file as small as possible.
Select **Fine** only if the image contains many small details, and the **Normal** setting does not give a satisfactory result.

3. To replace the black outlines with figure handle lines along the center of the outlines, select the **Thinning Process** check box, and then use the slider to select the degree of detail.

> **Memo:**
> *When the slider is set to **Much**, even very thick black lines will be replaced with a line along the center.*



To replace the black lines with figure handle lines following the border of the outlines, clear the **Thinning Process** check box.



4. Use the **SIZE** slider to set the size.

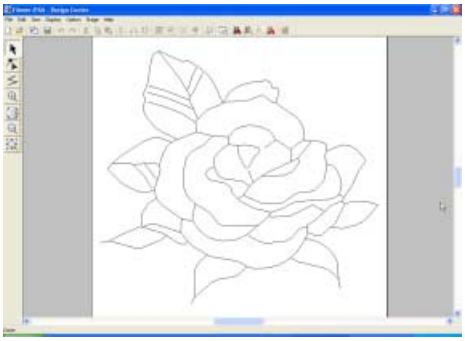
> **Note:**
> *You will not be able to enlarge the image beyond the limits of the Design Page area. If necessary, click **Design Page Property**, and then change the Design Page size in the dialog box that appeared.*

5. To select a specific part of the image, click **Pick Area**, drag the pointer ( ) across the image in the Design Page to select the desired area.

> **Memo:**
> *The **Figure Object Conversion Setting** dialog box appears again when the mouse button is released.*

6. Click **OK**.

→ The figure handle image is displayed in the Design Page of the Figure Handle Stage.



> **Memo:**
> *To close the dialog box without applying the changes to the settings, click **Cancel**.*

> **Note:**
> *If the outline data cannot be created from the image when moving from the Line Image Stage to the Figure Handle Stage, even after various outline conversion settings are specified, return to the Line Image Stage, and correct the outlines in the line image or apply corrections from the image.*

"Drawing a New line image freehand" on page 197, "Sew Setting Stage" on page 209, "Changing the grid settings" on page 236, and "Specifying the Design Page size" on page 201

> **Memo:**
> *We recommend using a 500 x 500 dot image, since there is a higher possibility of the message "Complex Image" appearing while processing the outlines of large or complex images.*

Changing the display of the background image

The image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Display**, then **Display Templete**, and then select the desired setting.

To display the line image, click **On**.

To display a faded copy of the line image, click **Faded**.

To hide the line image, click **Off**.

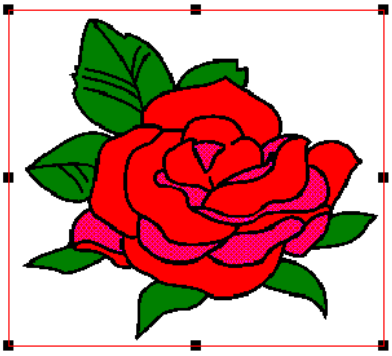
> **Memo:**
> - *This function is not available if the design was created by skipping the Line Image Stage.*
> - *Press the shortcut key (F6) to switch between displaying the image (**On**) to displaying it faded to hiding the image (**Off**).*

Changing the size and position of the background image

The size and position of the template image can be adjusted.

1. Click **Display**, then **Modify Template**.

→ A red line and handles appear around the template image.



> **Memo:**
> *The status bar shows the dimensions (width and height) of the template image.*

Moving a template image:

1. Move the pointer over the image.

→ The shape of the pointer changes to .

2. Drag the template image to the desired location.

Scaling a template image:

1. Move the pointer over one of the handles.

→ The shape of the pointer changes to , , , or , depending on the handle that the pointer is over.

> **Memo:**
> - *is for scaling the width.*
> - *is for scaling the height.*
> - *and are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
> - *If the Shift key is held down while a handle is dragged, the image is enlarged or reduced from the center of the template image.*

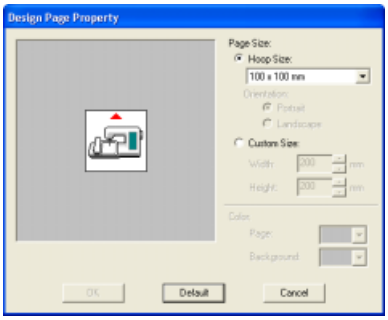
2. Drag the handle to adjust the template image to the desired size.

Specifying the Design Page size

In the Figure Handle Stage, you can select a Design Page size according to the size of hoop that you will be using with your sewing machine, or you can customize the size to fit even very large embroidery patterns.

1. Click **Option**, then **Design Page Property**.

→ The **Design Page Property** dialog box appears.



2. Select the Design Page size.

To adjust the Design Page size according to the hoop size, select **Hoop Size**, and then select the desired hoop size from the selector. To specify a custom Design Page size, select **Custom Size**, and then type or select the desired width and height for the Design Page. (The setting range is 100 to 1000 mm (3.9 to 39.4 inches).)

> **Memo:**
> - *The preview area shows the setting changes that you make.*
> - *When **Hoop Size** is selected, the sewing machine image shows the orientation of the Design Page (hoop) in relation to the machine.*

> **Note:**
> *When **Hoop Size** is selected, do not select a size larger than the maximum embroidering area for your machine.*

3. Click **OK**.

> **Memo:**
> - *To return to the default settings (**100 × 100 mm** (**4" × 4"**) of **Hoop Size**), click **Default**.*
> - *To close the dialog box without applying the changes to the settings, click **Cancel**.*

> **Note:**
> - *Custom Design Page sizes cannot be saved for version 5 and earlier.*
> - *The selected size will be applied to every new Design Page, until the settings are changed.*

> **Memo:**
> *The measurements for values displayed in the application can be in either millimeters or inches. For more details, refer to "Changing the measurement units" on page 236.*

Drawing a New figure handle image freehand

An empty Design Page can be created in order to draw a figure handle image or to create patterns from outlines taken from a previously saved .pem file.

1. Click **File**, then **New Figure Data**.

→ If the current Design Page has already been saved or has not been edited, a new Design Page immediately appears in the Figure Handle Stage.

Memo:

- *The size of the Design Page is the currently selected size.*
- *To retrieve data from a saved .pem file, use the menu command **File** – **Import Figure**.*

→ If the current Design Page has not been saved, you will be asked whether you want to save the changes.

Memo:

In the Figure Handle Stage, the file will be saved as a .pem file.

"Importing image data from a TWAIN device" on page 195, "Saving embroidery patterns" on page 234, and "Drawing a New line image freehand" on page 197

Editing outlines

Selecting outlines

1. Click on the Tool Box.

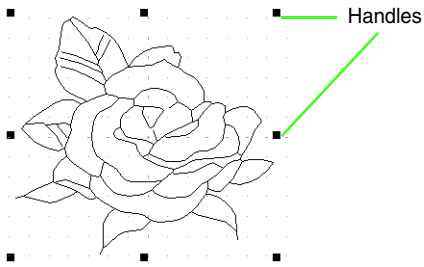
→ The shape of the pointer changes to .

2. Click the outline that you want to select.

→ When the pointer is moved over the outline, the shape of the pointer changes to .

Memo:

- *When the outline is selected, handles appear and the outline appears in red.*



- *The outline will not be selected if an empty part of it is selected.*
- *To deselect the outline, select a different outline, or click in a blank area of the Design Page.*

3. To select an additional outline, hold down the Ctrl key and click the other outline.

Memo:

You can also select outlines by dragging the pointer across the outline that you want to select. As you drag the pointer, a selection frame is drawn. All outlines that are completely contained in that selection frame are selected when the mouse button is released.

Moving outlines

1. Select the outline that you want to move.

→ When the pointer is moved over the outline, the shape of the pointer changes to .

2. Drag the outline to the desired location.

Memo:

- *To move the outline horizontally or vertically, hold down the Shift key while dragging it.*
- *Pressing the arrow keys moves the selected outline 0.5 mm (about 0.02 inch) in the direction of the arrow on the key. Holding down the arrow key for the desired direction continues moving the outline in that direction.*

Scaling outlines

Scaling manually:

1. Select the outline that you want to resize.

2. Move the pointer over one of the handles of a selected outline or group of outlines.

→ The shape of the pointer changes to ↔, ↕, ⤡ or ⤢, depending on the handle that the pointer is over.

Memo:

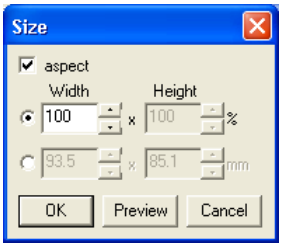
- ↔ *is for scaling the width.*
- ↕ *is for scaling the height.*
- ⤡ *and* ⤢ *are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
- *If the* Shift *key is held down while a handle is dragged, the outline is enlarged or reduced from the center of the outline.*

3. Drag the handle to adjust the selected outline(s) to the desired size.

Scaling numerically:

1. Select the outline that you want to resize.
2. Click **Edit**, then **Numerical Setting**, then **Size**.

→ The **Size** dialog box appears.



3. To change the width and height proportionally, select the **aspect** check box.
4. Select the whether the width and height will be set as a percentage (%) or a dimension (millimeters or inches).
5. Type or select the desired width and height.

Memo:

- *Select **100%** to leave the outline unchanged.*
- *If the **aspect** check box is selected, changing one dimension automatically changes the other so that the proportion of the width and height remains unchanged.*

6. Click **OK**.

Memo:

- *To preview the outline at the new size in the Design Page, click **Preview**.*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Note:

- *You cannot enter a size that will cause the outline to exceed the size of the Design Page.*
- *The minimum value is 1.0 mm (0.04 inch).*

"Changing the measurement units" on page 236

Flipping outlines horizontally or vertically

1. Select the outline that you want to flip horizontally (up/down) or vertically (left/right).
2. To flip the outline horizontally, click **Edit**, then **Mirror**, then **Horizontal**, or click on the Toolbar.

   To flip the outline vertically, click **Edit**, then **Mirror**, then **Vertical**, or click on the Toolbar.

Rotating outlines

Rotating manually:

1. Select the outline that you want to rotate.
2. Click **Edit**, then **Rotate**, or click on the Toolbar.

   → The handles around the selected outline are replaced by small squares at the four corners of the selected outline.

3. Move the pointer over one of the four rotation handles.

   → When the pointer is moved over a rotation handle, the shape of the pointer changes to ↻.

4. Drag the rotation handle clockwise or counterclockwise to rotate the outline in 1° increments.

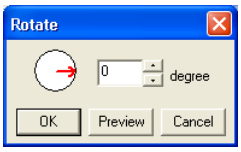
Memo:

To rotate the outline in 15° increments, hold down the Shift *key while dragging the rotation handle.*

Rotating numerically:

1. Select the outline that you want to rotate.
2. Click **Edit**, then **Numerical Setting**, then **Rotate**.

   → The **Rotate** dialog box appears.



3. Type or select the desired rotation angle.

Memo:

- *The angle can also be specified by moving the pointer over the red arrow inside of the circle, then dragging the red arrow to the desired angle. When the pointer is moved over the red arrow, its shape changes to* ↻ *.*
- *Select **0 degree** to leave the outline unchanged.*

4. Click **OK**.

Memo:

- *To preview the outline at the new angle in the Design Page, click **Preview**.*
- *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Note:

The range of values that can be entered is between 0 and 359 degrees, in 1-degree increments.

Deleting outlines

1. Select the outline to be deleted.
2. Press the Delete key, or click **Edit**, then **Delete**.

Cutting out outlines

1. Select one or more outlines.
2. Click , or click **Edit**, then **Cut**.

   → The selected outlines are removed from the work area.

Memo:

*Since the removed outlines are saved on the Clipboard, you can paste them back using the menu command **Edit – Paste**.*

Copying outlines

1. Select one or more outlines.
2. Click , or click **Edit**, then **Copy**.

   → The selected outlines are copied onto the Clipboard and are ready to be pasted.

Pasting a cut or copied outline

1. Click , or click **Edit**, then **Paste**.

   → The outlines saved on the Clipboard (using the **Cut** or **Copy** command) are pasted into the work area.

Undoing an operation

1. Click , or click **Edit**, then **Undo**.

   → The previous operation is canceled, and the pattern reverts to its condition before the operation was performed. (You can up to 20 Undos in Design Center.)

Reverting an undone operation

1. Click , or click **Edit**, then **Redo**.

   → The previously canceled operation is canceled, and the pattern reverts to its condition before the operation was canceled. (You can up to 20 Redos in Design Center.)

Reshaping outlines

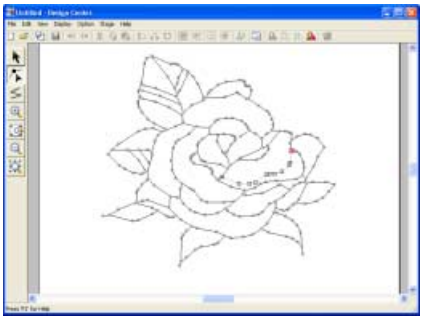
Moving points

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the outline that you want to edit.

   → The outline appears in pink, and the points in the selected outline appear as small empty squares. The points at the ends of lines appear as larger squares.



3. Click the point that you want to move.

   → The selected point appears as a small black square.

> **Memo:**
> *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*

> **Note:**
> *If you click the line instead of a square, a new point is inserted.*

4. Drag the point to the new location.

   → All selected points move in the same direction.

> **Memo:**
> - *To move the point horizontally or vertically, hold down the Shift key while dragging it.*
> - *Pressing the arrow keys moves the selected point 0.1 mm (about 0.004 inch) in the direction of the arrow on the key.*

Inserting points

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the outline that you want to edit.

   → The outline appears in pink, and the points in the selected outline appear as small empty squares. The points where lines overlap appear as larger squares.

3. Click the outline at the position where you want to insert a new point.

   → A new point, appearing as a small black square, is added. The new point can be edited.

Deleting points

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the outline containing the point that you want to edit.

   → The points in the outline appear as small empty squares.

3. Click the point that you want to delete.

   → The selected point appears as a small black square.

> **Memo:**
> *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*

4. Press the Delete key, or click **Edit** on the menu bar, then **Delete** to remove the point from the outline.

> **Memo:**
> *A point can also be deleted by right-clicking it, then clicking **Delete** on the menu that appeared.*

> **Note:**
> *The points where lines overlap, which appear as red squares, cannot be deleted.*

Splitting a point into two

Click on the Tool Box.

→ The shape of the pointer changes to .

1. Click the outline containing the point that you want to split.

   → The points in the outline appear as small empty squares.

2. Click the point that you want to split.

   → The selected point appears as a small black square.

> **Note:**
> - *Only one point can be selected. If two or more points have been selected, the points cannot be split.*
> - *A point at the end of a line (point connected to only one line) cannot be split.*

3. A point can also be split by right-clicking it, then clicking **Split** on the menu that appeared, or by clicking **Edit** on the menu bar, then **Split**.

   → The point is split into two, and the line connected to one point appears in black.

Connecting two points

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the outline containing one of the two points that you want to connect.

   → The points in the outline appear as small empty squares.

3. Click a point on the selected outline.

   → The selected point appears as a small black square.

> **Note:**
> *Adjacent points on the same line cannot be connected.*

4. While holding down the Alt key, drag the selected point to the other point that you want to connect to it.

   → The shape of the pointer changes to , then appears as a red square when the two points are overlapping.

5. Release the mouse button.

   → The two points are connected.

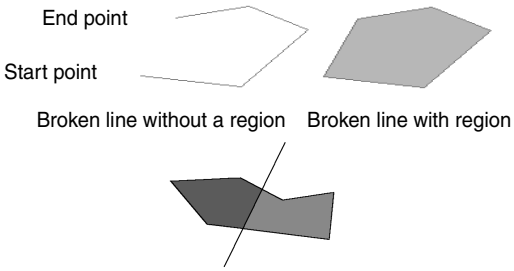
Drawing a broken line

The line drawing mode allows you to add broken lines to your pattern. A broken line is made of one or more adjacent straight lines, in other words, the end point of one straight line is the start point of the next one.

If the broken line that you draw did not create enclosed regions, it remains a simple outline, and you can only set sewing attributes for the line itself in the Sew Setting Stage.

If the broken line created enclosed regions, you can assign sew types and colors to both the outline and the regions in the Sew Setting Stage.

If you draw a line through an existing region, creating two separate regions, you will be able to set sewing attributes for both regions separately, as well as for the separating line.



1. Click on the Tool Box.

   → When the pointer is moved over the work area, the shape of the pointer changes to .

2. To draw a line, click in the Design Page to specify the start point.

3. Move the pointer, and then click in the Design Page to specify the next point.

   → The two points are connected with a straight line.

Memo:

- *To remove the last point that was entered, click the right mouse button.*
  If necessary, use the grid to help draw the lines. You can set the grid so that each of its vertical and horizontal lines are visible. For details on the grid, refer to "Changing the grid settings" on page 236.
- *To draw vertical or horizontal lines, hold down the* Shift *key while moving the pointer.*

4. Repeat step **3.** until you have specified all points except the end point.

5. Double-click in the Design Page to specify the end point.

Viewing outlines in the Reference Window

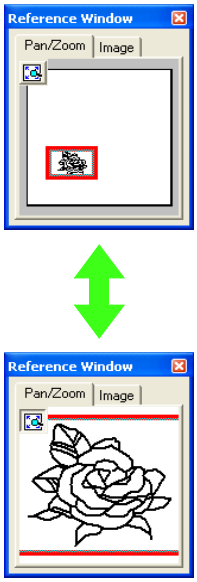
All outlines in the Design Page are displayed in the Reference Window, giving you an overall view of the outline while you work on a detailed area. The display area frame (red rectangle) indicates the part of the outline displayed in the Design Page.
In addition, the image being used to create the embroidery pattern or the embroidery pattern being created and a different image can be displayed in the Reference Window in the Figure Handle Stage and the Sew Setting Stage.
To switch between displaying and hiding the Reference window, click **Display**, then **Reference Window**, or click , or press the shortcut key (F11).

Zooming

The outline displayed in the Reference Window can be reduced to fit completely within the Reference Window or enlarged to display only the outline.

1. Click the **Pan/Zoom** tab, click .

→ The outline is displayed so that it fills the Reference Window.



Moving the display area frame

The part of the outline displayed in the Design Page can be selected from the Reference Window.

1. Move the pointer over the display area frame.

→ The shape of the pointer changes to .

2. Drag the display area frame so that it surrounds the desired part of the outline.

→ The selected part of the outline is displayed in the Design Page.

Redrawing the display area frame

Instead of moving the display area frame, the frame can be redrawn to display the desired part of the outline in the Design Page.

1. Click the area to be displayed, or drag the pointer over the desired part of the outline in the Reference Window.

→ The display area frame is redrawn, and the selected part of the outline is displayed in the Design Page.

Scaling the display area frame

1. Move the pointer over a corner of the display area frame.

→ The shape of the pointer changes to or , depending on the corner that the pointer is over.

Memo:

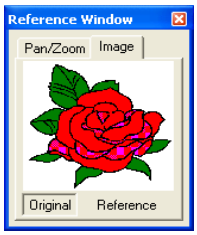
and are for scaling the height and width.

2. Drag the corner to adjust the display area frame to the desired size.

Displaying the image being used to create the embroidery pattern

The image opened from the Original Image Stage can be displayed in the Reference Window.

1. Click the **Image** tab.



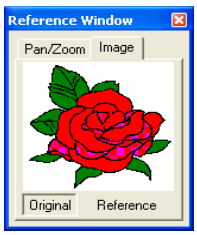
Memo:

*If the Image tab is clicked when the Reference Window is first displayed, **Original** is selected. If **Original** is clicked while **Reference** is selected, the image is displayed again.*

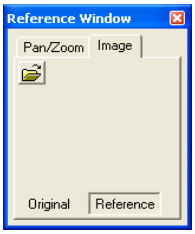
Displaying a different reference image

The embroidery pattern being created and a different image can be displayed in the Reference Window.

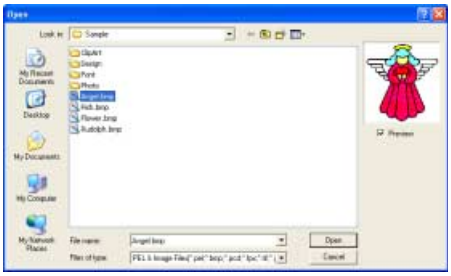
1. Click the **Image** tab.



2. Click **Reference**, then click .



3. Select the reference image, and then click **Open**.



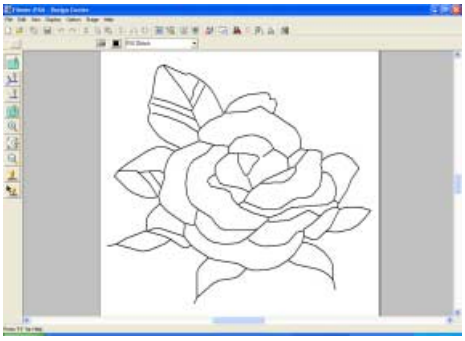
Sew Setting Stage

After editing the outline in the Figure Handle Stage, continue to the Sew Setting Stage, where the sewing attributes can be set. Use the zooming tools available to display the pattern enlarged or reduced.

Toolbar button:

1. Click , or click **Stage**, then **To Sew Setting**.

   → The pattern is displayed in the Design Page of the Sew Setting Stage.



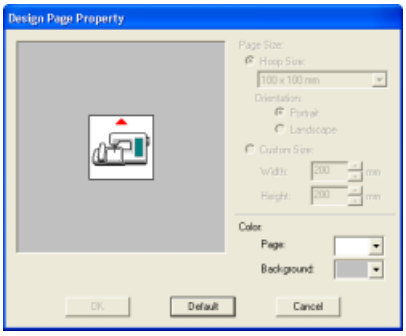
"Drawing a New line image freehand" on page 197" and "Figure Handle Stage" on page 199

Specifying the fabric color

In the Sew Setting Stage, the color of the Design Page can be set to the color of the fabric, and its background can be set to a different color for contrast.

1. Click **Option**, then **Design Page Property**.

   → The **Design Page Property** dialog box appears.



2. From the **Page** selector, select the desired color for the Design Page.

3. From the **Background** selector, select the desired color for the background.

> **Memo:**
> *The preview area allows you to check the selected colors.*

4. Click **OK**.

> **Memo:**
> - *To return to the default settings, click **Default**.*
> - *To close the dialog box without applying the changes to the settings, click **Cancel**.*

Applying sewing attributes to lines and regions

Region sewing

Applying sewing attributes to regions

1. Click on the Tool Box.

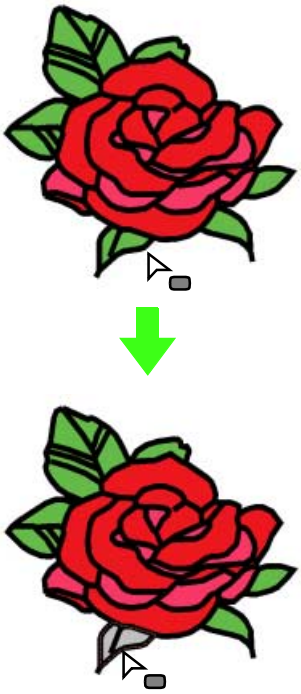
   → The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

2. If necessary, change the color and sew type.

> **Memo:**
> - *You can change the color and sew type either before or after applying sewing attributes to the region. For more details on changing these settings, refer to "Color" on page 215 and "Sew type" on page 215.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 216.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click the enclosed region where you want to apply the sewing attributes.

→ "Marching lines" appear around the selected region, and the color and sew type selected on the Sewing Attributes bar are applied to the region.



Note:

If the attributes cannot be applied to a region, go back to the Figure Handle Stage and make sure that region is closed. Edit any broken lines with the Point Edit tool. For details on editing the figure handle image, refer to "Reshaping outlines" on page 205.

Memo:

- *Although a region may seem closed, if the sewing attributes cannot be specified for the region, the region may not actually be closed. To find the opening in the region, use the line drawing mode in the Figure Handle Stage to divide the region into smaller regions, and then check which region sewing attributes cannot be applied to in the Sew Setting Stage.*
- *Point edit mode is useful for closing regions.*

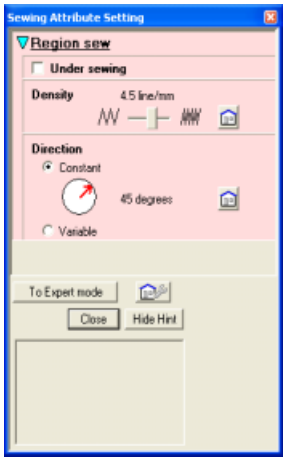
Checking the sewing attributes of a region

1. Click on the Tool Box.

→ The shape of the pointer changes to .

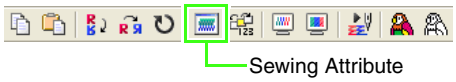
2. Right-click a closed region.

→ The **Sewing Attribute Setting** dialog box for the selected region appears.



Memo:

- *An alternate method is to select the menu command **Sew – Setting Attribute**, or click the Toolbar button indicated below.*



- *The Sewing Attributes bar shows the color and sew type for the selected region. You can change the color and sew type at this time. For more details on changing the color and sew type, refer to "Color" on page 215 and "Sew type" on page 215.*

3. If necessary, change the settings in the **Sewing Attribute Setting** dialog box.

Memo:

To return to the default setting, click *at the right of the setting.*

☞ *"Specifying sewing attributes" on page 216*

4. To apply the new attributes to the region, click each region where you want to apply the new attributes.

5. Click **Close** to close the dialog box.

Line sewing

Applying sewing attributes to the entire outline

1. Click on the Tool Box.

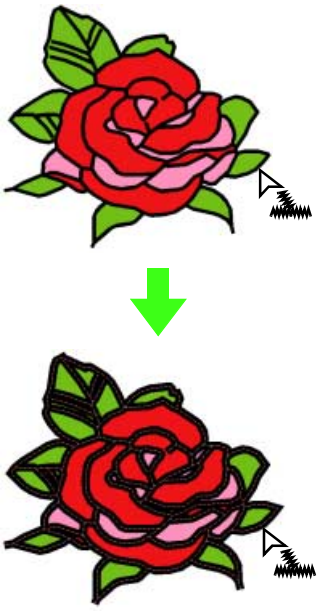
→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

2. If necessary, change the color and sew type.

> **Memo:**
> - *You can change the color and sew type either before or after applying sewing attributes to the outline. For more details on changing these settings, refer to "Color" on page 215 and "Sew type" on page 215.*
> - *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 216.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click the outline where you want to apply the sewing attributes.

→ "Marching lines" appear along the selected outline, and the color and sew type selected on the Sewing Attributes bar are applied to the outline.

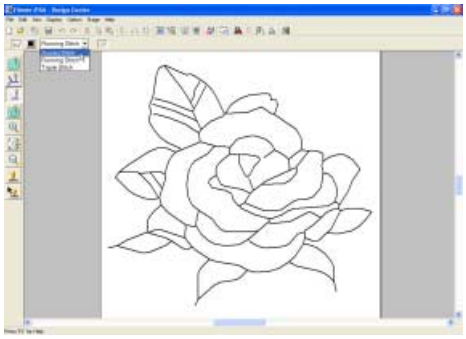


Applying sewing attributes to a portion of the outline

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the Sewing Attributes bar appears similar to the one shown below.

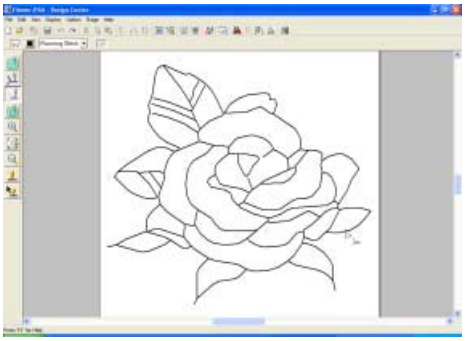
2. If necessary, change the color and sew type.



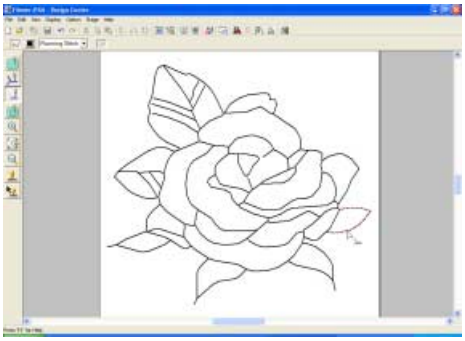
Memo:

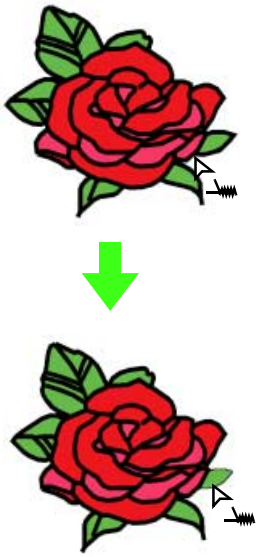
- *You can change the sew type either before or after applying sewing attributes to the portion of the outline. For more details on changing this setting, refer to "Sew type" on page 215.*
- *You can also use the settings in the **Sewing Attribute Setting** dialog box to define other attributes of the sew type. (For more details, refer to "Specifying sewing attributes" on page 216.) If you do not change these settings at this time, the current settings will be applied, however you can modify them later.*

3. Click the portion of the outline where you want to apply the sewing attributes.



→ "Marching lines" appear along the selected portion of the outline, and the sew type selected on the Sewing Attributes bar is applied to the portion of the outline.





Checking the sewing attributes of an outline

1. Click on the Tool Box.

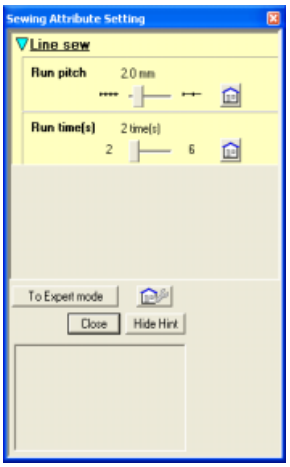
→ The shape of the pointer changes to .

Or click on the Tool Box.

→ The shape of the pointer changes to .

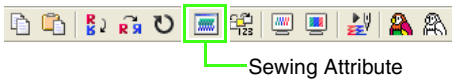
2. Right-click a portion of the outline.

→ The **Sewing Attribute Setting** dialog box for the selected outline or portion of outline appears.



Memo:

- *The **Sewing Attribute Setting** dialog box can also be displayed by selecting the menu command **Sew** – **Setting Attribute** or clicking the Toolbar button indicated below.*



- *The Sewing Attributes bar shows the color and sew type for the selected outline. At this time, you can change the color and sew type for the entire outline, or the sew type for the portion of the outline. For more details on changing the color and sew type, refer to "Color" on page 215 and "Sew type" on page 215.*

3. If necessary, change the settings in the **Sewing Attribute Setting** dialog box.

Memo:

To return to the default setting, click *at the right of the setting.*

"Specifying sewing attributes" on page 216

4. To apply the new attributes to the outline or portion of outline, click the outline where you want to apply the new attributes.

5. Click **Close** to close the dialog box.

Using the Sewing Attributes bar

The Sewing Attributes bar, available in the Sew Setting Stage, allows you to set the color and sew type of region and outlines.

The sewing attributes that are available depend on the tool selected in the Tool Box.

Example 1: When on the Tool Box is selected

Example 2: When or on the Tool Box is selected

When the pointer is positioned over a button or selector in the Sewing Attributes bar, a label indicating the name of that element appears.

	Region sew: Switches on/off sewing for the region.	page 214
	Line sew: Switches on/off sewing for the line.	page 214
	Region color, **Line color**: Click this button to set the thread color for lines or regions.	page 215
Fill Stitch Running Stitch	**Region sew type**, **Line sew type**: Use these selectors to set the sew type for lines or regions.	page 215

Region sew

Clicking this button switches on/off sewing for a region.

> **Memo:**
> - *The **Region sew** button is available only when on the Tool Box is selected.*
> - *When region sewing is switched off, the region is not sewn (and you cannot set a color or sew type).*

1. Click .

This button has two settings:

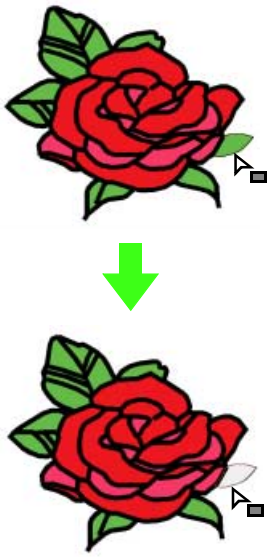
On: The **Region color** button and the **Region sew type** selector are displayed.

Off: The **Region color** button and the **Region sew type** selector are not displayed.

2. Click a region to apply the region sewing attributes.

→ If the **Region sew** button has been switched on, the color displayed in the **Region color** button and the sew type displayed in the **Region sew type** selector are applied to the region.

→ If the **Region sew** button has been switched off, the color and sew type for the region disappear.



"Color" on page 215 and "Sew type" on page 215

Line sew

Clicking this button switches on/off sewing for a line.

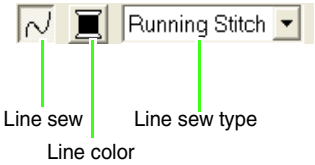
> **Memo:**
> - *The **Line sew** button is available only when or on the Tool Box is selected.*
> - *When line sewing is switched off, the line is not sewn (and you cannot set its color or sew type).*

1. Click .

This button has two settings:

On: The **Line color** button and the **Line sew type** selector are displayed.

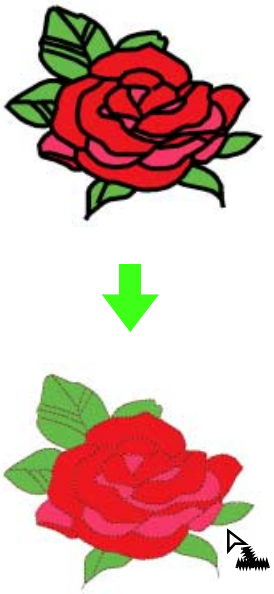
Off: The **Line color** button and the **Line sew type** selector are not displayed.



2. Click a line to apply the line sewing attributes.

→ If the **Line sew** button has been switched on, the color displayed on the **Line color** button and the sew type displayed in the **Line sew type** selector are applied to the line.

→ If the **Line sew** button has been switched off, the line is replaced with a dotted line and will not be sewn.



Memo:

To change the color of a portion of the outline, click .

"Color" on page 215 and "Sew type" on page 215

Color

Click this button to set the thread color for lines or regions.

Memo:

*The **Color** button appears in the Sewing Attributes bar when the **Region sew** button ( ) or **Line sew** button ( ) has been turned on.*

1. Click the **Color** button.

→ A **Line Thread Color** dialog box similar to the ones shown below appears.

Memo:

- *To switch between displaying the thread color number and brand and the thread color name in the list of thread colors, select the **View Details** check box.*
- *To display the colors arranged according to their tones (from warm colors to cold colors), click **Color** in the heading for the list of thread colors. Click **Color** again to reverse the order (from cold colors to warm colors). To return the list to its original display, click **Index** in the heading.*
- *The thread colors can be arranged according to the information under **Index**, **Color Code** or **Brand Description**.*

2. From the **Thread Chart** selector, select a thread color chart or a user thread chart.

For details on specifying a user thread chart or for information on how machines handle thread colors, refer to "Editing User Thread Color Lists" on page 162.

3. From the list of thread colors, click the desired color.

→ The new color is displayed on the **Region color** button or **Line color** button.

Memo:

- *The name of the selected color appears at the bottom of the dialog box.*
- *For details on the four buttons under the list, refer to "Special colors" on page 150.*

4. Click **Close** to set the color and to close the dialog box.

5. Click the region or outline where you want to apply the color setting.

"Region sew" on page 214, "Line sew" on page 214 and "Special colors" on page 150

Sew type

Line sew type: Running Stitch

Region sew type: Fill Stitch

Use these selectors to set the sew type for lines or regions.

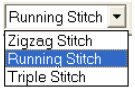
Memo:

*The sew type selector appears in the Sewing Attributes bar when the **Region sew** button ( ) or **Line sew** button ( ) has been turned on.*

1. Click in a sew type selector.

→ The available settings appear.

Line sew type



Region sew type

2. Click the desired sew type.

→ The new setting appears in the selector.

3. Click the region or outline where you want to apply the sew type setting.

"Region sew" on page 214 and "Line sew" on page 214

Specifying sewing attributes

Various sewing attributes for lines and regions can be set in the **Sewing Attribute Setting** dialog box.

Toolbar button:

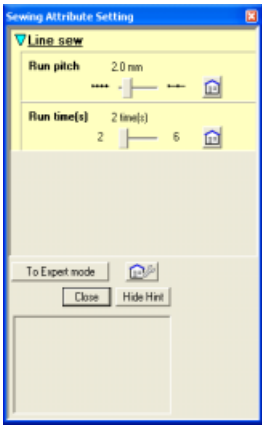
1. Click in the Toolbar

→ The **Sewing Attribute Setting** dialog box appears.

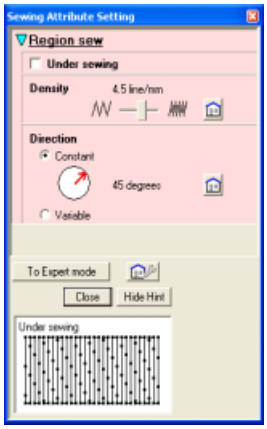
> **Memo:**
> *The region sew attributes appear in the **Sewing Attribute Setting** dialog box when on the Tool Box is selected. The line sew attributes appear in the **Sewing Attribute Setting** dialog box when or on the Tool Box is selected.*

Beginner mode:

For line sewing

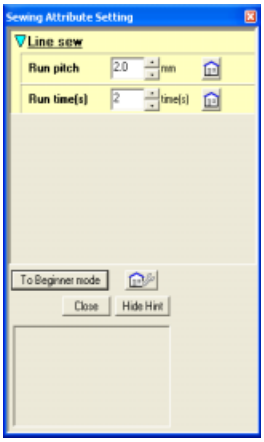


For region sewing

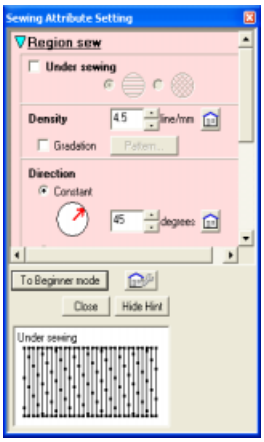


Expert mode:

For line sewing



For region sewing



> **Memo:**
> - *An alternate method is to select the menu command **Sew** – **Setting Attribute**, or right-click a region or line.*
> - *The sewing attributes displayed in the dialog box depend on the selected sew type.*

2. To display only basic sewing attributes and simpler settings, click **To Beginner mode**. To display all of the sewing attributes and settings available for the selected sew type, click **To Expert mode**.

> **Memo:**
> - *Settings that cannot be selected in **Beginner mode** are retained from the previous setting in **Expert mode**.*
> - *To hide the preview box, click **Hide Hint**. To display the preview box, click **Show Hint**. When the **Hide Hint** button is displayed, the preview box is displayed, allowing you to view a stitching sample when the pointer is moved over the setting. The preview box shows the setting changes that you make.*

3. If necessary, change the sewing attributes displayed under **Line Sew** or **Region Sew**.

Memo:

- *In some cases, you may need to scroll through the settings, or resize the dialog box by dragging one of its corners in order to view all of the sewing attributes.*
- *The method for entering settings varies according to the attribute. When entering numerical values in **Expert mode**, click the arrow buttons to select the value or enter the value directly. In **Beginner mode**, use the slider to change the settings. If appears, click the button to return to the default setting.*

For details on the different sewing attributes and settings, refer to "Line sewing attributes" on page 218 and "Region sewing attributes" on page 219. In addition, frequently used sewing attributes can be saved. For details, refer to "Saving the settings in a list" on page 226.

Note:

All settings made in the dialog box are retained and will be applied regardless of the mode, until they are changed.

4. When the line sewing attributes are displayed, click an outline to apply the line sewing attributes to the outline.
When the region sewing attributes are displayed, click a region to apply the region sewing attributes to the region.

5. Click **Close** to close the dialog box.

Line sewing attributes

The available attributes differ depending on the selected sew type. In Beginner mode, not all of the following attributes appear.

Zigzag stitch

Under sewing	Sets underlay stitching on or off. Use underlay stitching in order to prevent shrinking during stitching. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn. Default: Off
Zigzag width	Sets the width of the zigzag. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 2.0 mm (0.08 inch)
Density	Sets the number of lines per millimeter (inch). Range: 1.0 – 7.0 lines per mm (25 – 178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Half Stitch	Sets half stitching on or off. If one side of the zigzag stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Sharp Corners	Sets the shape of sharp corners. Default:

Running stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 2.0 mm (0.08 inch)
Run times	Sets the number of times that the border will be sewn. Range: 2, 4, 6 Default: 2

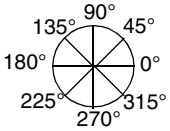
Triple stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 2.0 mm (0.08 inch)

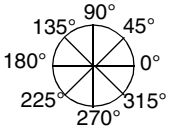
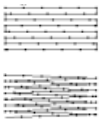
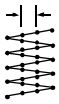
Region sewing attributes

The available attributes differ depending on the selected sew type. In Beginner mode, not all of the following attributes appear.

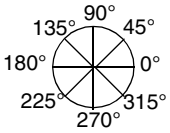
Satin stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn. Default: Off [Type] Specifies the type of underlay stitching sewn. Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern with 45° and -45° angle to the specified sewing direction. Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0 – 7.0 lines per mm (25 – 178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern. Default: Off For details on this attribute, refer to “Creating a gradation” on page 225.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the region being sewn. [Angle] Specifies the sewing angle. Available only when the type sewing direction is set to **Constant**. Range: 0–359 degrees Default: 45 degrees 
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the satin stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern’s sewing direction to prevent pattern shrinkage during sewing. Range: 0.0 – 2.0 mm (0.00 – 0.08 inch) Default: 0.0 mm (0.00 inch)

Fill stitch

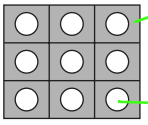
Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn. Default: Off [Type] Specifies the type of underlay stitching sewn. Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern at a 45° angle to the specified sewing direction. Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0 – 7.0 lines per mm (25 – 178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to“Creating a gradation” on page 225.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the region being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0 – 359 degrees Default: 45 degrees 
Stitch Type	Specifies the shape of stitching on the edges. Available settings: Default: 
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:
Step Pitch	Sets the pitch of the stitching. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch: 
Frequency	Sets the spacial frequency steps. Range: 0–99% Default: 30% 30% 0%
Pull Compensation	Lengthens the sewing region in the stitch pattern’s sewing direction to prevent pattern shrinkage during sewing. Range: 0.0 – 2.0 mm (0.00 – 0.08 inch) Default: 0.0 mm (0.00 inch)

Programmable fill stitch

Under sewing	Sets underlay stitching on or off. Try to use underlay stitching for wide areas, in order to prevent shrinking during stitching. On: Underlay stitching will be sewn. Off: Underlay stitching will not be sewn. Default: Off [Type] Specifies the type of underlay stitching sewn. Single: Sews perpendicular to the specified sewing direction. Double: Sews a pattern at a 45° angle to the specified sewing direction. Single: Double:
Density	Sets the number of lines per millimeter. Range: 1.0 – 7.0 lines per mm (25 – 178 lines per inch) Default: 4.5 lines per mm (114 lines per inch)
Gradation	Sets the density gradation setting on or off. Available when the type of sewing direction is set to **Constant**. Click **Pattern** to set the gradation pattern and its density. Default: Off For details on this attribute, refer to“Creating a gradation” on page 225.
Direction	[Type] Specifies the type of sewing direction. **Constant**: Sews at a fixed angle. The angle is specified by the angle setting. **Variable**: Varies the sewing direction according to the region being sewn. [Angle] Specifies the sewing angle. Available only when the sewing direction type is set to **Constant**. Range: 0 – 359 degrees Default: 45 degrees 
Half Stitch	Sets half stitching on or off. Available when the type of sewing direction is set to **Variable**. If one side of the fill stitching is dense, a half stitch could be sewn automatically to provide a more even density. Default: Off On: Off:
Running Stitch Path	Sets the running path of the stitching. Available when the type of sewing direction is set to **Constant**. Available settings: • Inside of region (shortest route) • Along outline (along the inner side) • Onto outline (on the outline) The inside of region setting is available only when the **Gradation** check box is cleared. Default: Inside of region Inside of region: Along outline: Onto outline:
Pull Compensation	Lengthens the sewing region in the stitch pattern’s sewing direction to prevent pattern shrinkage during sewing. Range: 0.0 – 2.0 mm (0.00 – 0.08 inch) Default: 0.0 mm (0.00 inch)

Programmable fill			Select a pattern for programmable fill stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pas file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
	Width (horizontal length)		Sets the programmable fill pattern width. Range: 5.0 – 10.0 mm (0.20 – 0.39 inch) Default: 7.5 mm (0.30 inch)
	Height (vertical length)		Sets the programmable fill pattern height. Range: 5.0 – 10.0 mm (0.20 – 0.39 inch) Default: 7.5 mm (0.30 inch)
	Direction		Allows you to rotate the angle of the programmable fill patterns. Range: 0–359 degrees Default: 0 degrees 90° 135° 45° 180° 0° 225° 315° 270°
	Offset	Direction	Sets the direction of the offset as **row**/**column**. **row** **column**
		Value	When the pattern's arrangement is offset, sets the amount of offset. Range: 0–99% Default: 0%
	Base Sewing Specifies the base stitching. (For details, refer to the illustration below.)	**Stitch Type**	Specifies the shape of stitching on the edges. Available only when the **Base Sewing** check box is selected. Available settings: , Default:
		Step Pitch	Sets the pitch of the stitching for the base of a programmable fill stitch. Available only when the **Base Sewing** check box is selected. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 4.0 mm (0.16 inch) Step pitch:
		Frequency	Sets the spacial frequency steps of the stitching for the base of a programmable fill stitch. Available only when the **Base Sewing** check box is selected. Range: 0 – 99% Default: 30% 30% 0%

Pattern



The stitching for the base (area other than the pattern indicated by the diagonal lines) of the programmable fill stitch can be set.

The pattern is sewn with the specified stitching.

Motif stitch

Motif	Selects whether to use pattern 1 or pattern 2 for the motif stitch. If you choose to use both patterns, the data is created to sew alternating rows of the two. **Pattern1 only**: Uses only pattern 1 (Default) **Pattern2 only**: Uses only pattern 2 **Pattern1 and 2**: Uses pattern 1 and pattern 2		
	Pattern1 **Pattern2**		Select a pattern for the motif stitch. Click , and then, in the **Browse** dialog box that appeared, select the folder containing the .pmf file that you want to use. Double-click the desired pattern, or select it, and then click **OK**.
		Width (horizontal length)	Sets the motif pattern width (the direction along the line). Range: 2.0 – 100.0 mm (0.08 – 3.94 inches) Default: 5.0 mm (0.20 inch)
		Height (vertical length)	Sets the motif pattern height (the direction perpendicular to the line). Range: 2.0 – 100.0 mm (0.08 – 3.94 inches) Default: 5.0 mm (0.20 inch)
		H-Arrange (horizontal arrangement)	Sets the horizontal arrangement of the motif pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
		V-Arrange (vertical arrangement)	Sets the vertical arrangement of the motif pattern. For patterns like , the patterns will be arranged along the line as shown at the right. Normal: Mirror: Alternate:
		H-Spacing (horizontal spacing)	Sets the horizontal spacing (the direction along the line) of motif patterns. Minimum: Depending on the pattern A negative value can be specified. Maximum: 100.0 mm (3.94 inches) Default: 0 mm H-Spacing:
		V-Spacing (vertical spacing)	Sets the vertical spacing (the direction perpendicular to the line) of motif patterns. Minimum: Depending on the pattern A negative value can be specified. Minimum: 100.0 mm (3.94 inches) Default: 0 mm V-Spacing:
	Direction		Allows you to rotate the angle of the motif stitch. Range: 0 – 359 degrees Default: 0 degrees 90° 45° 135° 180° 0° 225° 315° 270°
	Row Offset		Sets the amount of offset for each row. Range: 0.0 – 10.0 mm (0.00 – 0.39 inch) Default: 0.0 mm (0.00 inch)
	Run Pitch		Sets the pitch of the sewing. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 10.0 mm (0.39 inch)

Cross stitch

Size	Sets the horizontal and vertical size of the pattern. In Expert mode, the set value is converted automatically and displayed in the box for the other measurement units. Range: 1.5 – 5.0 mm (0.06 – 0.20 inch) or 5 – 17 counts Default: 2.5 mm (0.10 inch) or 10 counts
Times	Sets the number of times that the pattern will be sewn. Sews twice per time. Range: **Single**, **Double**, **Triple** Default: **Single**

Concentric circle stitch, radial stitch and spiral stitch

For details on moving the center point of the concentric circle stitch and the radial stitch, refer to “Applying effects to concentric circle and radial stitches” on page 227.

Density	Sets the number of lines per millimeter. Range: 0.2 – 7.0 lines per mm (5 – 178 lines per inch) Default: 2.0 lines per mm (51 lines per inch)
Run pitch	Sets the pitch of the line sewing. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 2.0 mm (0.08 inch)

Random Walking Stitch

Run pitch	Sets the pitch of the line sewing. Range: 1.0 – 10.0 mm (0.04 – 0.39 inch) Default: 2.0 mm (0.08 inch)
Space	Sets the spacing between adjacent stitches. Range: 2.0 – 50.0 (0.08 – 1.97 inches) Default: 10.0 mm (0.39 inch)

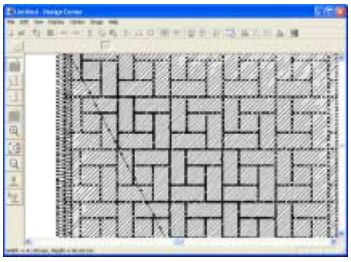
Notes on programmable fill stitches

When setting the sew type and pattern directions of a programmable fill stitch, lines will not be sewn if the sew type and pattern direction settings cause a stitch to be sewn in the same direction as a line in the stitch pattern.

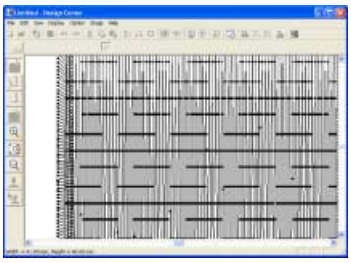
Use the Preview function to view exactly how the stitch pattern will be sewn, and then set the stitch direction and pattern direction according to the selected sew type or to the effect that you want to produce. To get an even better view, make test samples of different settings.

Examples of programmable fill stitching:

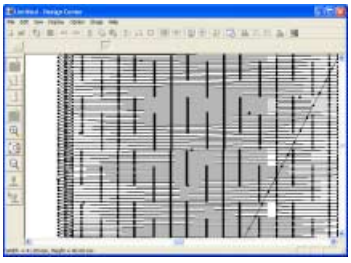
Example 1
Stitch direction: 45° (default)



Example 2
Stitch direction: 90°



Example 3
Stitch direction: 0°

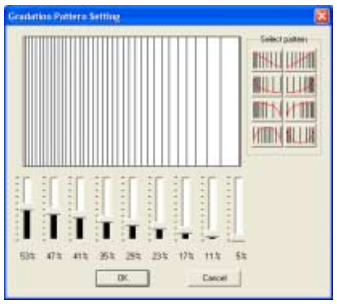


☞ *"Displaying a preview of the embroidery" on page 231 and "Creating Custom Stitch Patterns (Programmable Stitch Creator)" on page 256*

Creating a gradation

With a satin stitch, fill stitch or programmable fill stitch, the density of the color can be adjusted at various locations to create a custom gradation pattern.

1. In Expert mode of the **Sewing Attribute Setting** dialog box, select the **Gradation** check box.
2. Click **Pattern**.
   → The **Gradation Pattern Setting** dialog box appears.



3. To select a preset gradation pattern, click the desired pattern under **Select pattern**.
4. Move the sliders to adjust the density of the gradation pattern.

> **Memo:**
> *The preview area shows the setting changes that you make.*

5. Click **OK**.

> **Memo:**
> *To close the dialog box without applying the changes to the gradation pattern, click **Cancel**.*

Saving frequently used sewing attributes

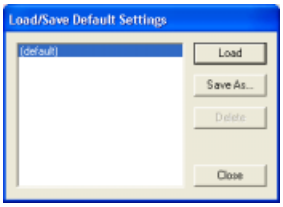
Frequently used sewing attributes can be saved together, and recalled when specifying sewing attributes.

> **Memo:**
> *Settings in both **Beginner mode** and **Expert mode** can be saved.*

Saving the settings in a list

1. If necessary, change the settings in the **Sewing Attribute Setting** dialog box, and then click .

   → The **Load/Save Default Settings** dialog box appears.

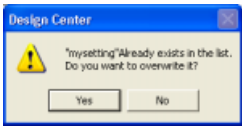


2. Click **Save as**.

   → The **Save As** dialog box appears.

3. Type in a name for the group of settings, and then click **OK** to register the group in a list.

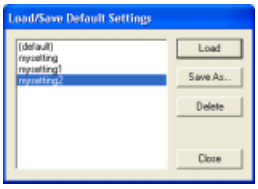
> **Memo:**
> *If the name for the settings entered in the **Save As** dialog box is already registered, the following message appears.*



- *To overwrite the previously registered settings, click **OK**.*
- *If you do not want to overwrite the existing settings, click **Cancel**, and then type in a different name for the settings.*

Deleting a group of settings from the list

1. In the **Load/Save Default Settings** dialog box, select the group of settings to be deleted.

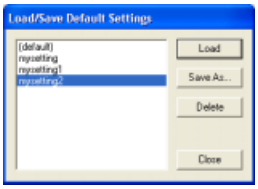


2. Click **Delete** to delete the selected group of settings from the list.

> **Memo:**
> *(default) cannot be deleted.*

Recalling a group of settings from the list

1. In the **Load/Save Default Settings** dialog box, select the group of settings to be recalled.



> **Memo:**
> *Only one group of settings can be selected.*

2. Click **Load**.

   → The **Load/Save Default Settings** dialog box closes, and the settings in the **Sewing Attribute Setting** dialog box change to the saved settings.

> **Memo:**
> *To change the saved settings and save the changes, change the settings in the **Sewing Attribute Setting** dialog box, click* *, then **Save as**, and then click **OK** without changing the group name for the settings.*

> **Memo:**
> *The edited user thread chart can also be used on a different computer. Simply copy **sastu.txt** from the **Settings** folder in the **PE-DESIGN Ver7** folder (application folder) on the original computer to the **Settings** folder at the same path on the destination computer.*

Applying effects to concentric circle and radial stitches

In order to increase the decorative effect, you can move the center point of regions set to the concentric circle stitch or radial stitch.

1. Click on the Tool Box.

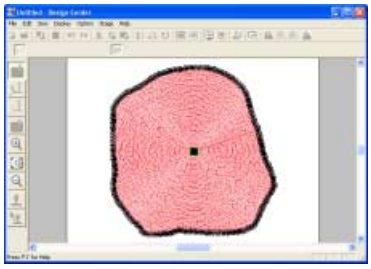
   → The shape of the pointer changes to .

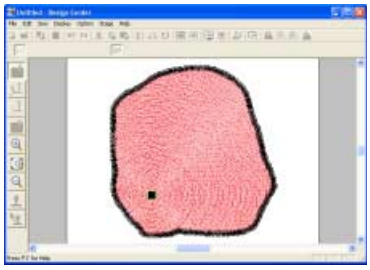
2. Select the desired color and sew type (**Concentric Circle Stitch** or **Radial Stitch**).

3. Click the region.

   → The center point (■) appears.

4. Drag the center point to the desired location.





> **Memo:**
>
> *To move the center point later, click* *, and then click the region with the concentric circle stitch or radial stitch applied. The center point appears and can be moved.*

Preventing overlapping stitching of regions (hole sewing)

By specifying hole sewing, the stitching in overlapping regions will not be sewn twice. Hole sewing can be set only when one region completely encloses another.

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the region that completely encloses another region.

   → A **Set hole sewing** dialog box similar to the one shown below appears.

> **Memo:**
>
> *To cancel hole sewing, click the white inner region. The inner region will be sewn twice when it appears in the same color as the outer region.*
>
>
>

3. Click **OK** to set hole sewing.

> **Memo:**
>
> *To quit applying hole sewing, click **Cancel**.*

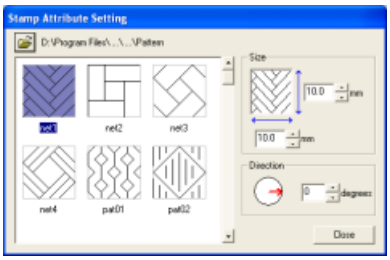
Applying and editing stamps

Stamps created with Programmable Stitch Creator can be applied to regions in the Sew Setting Stage of Design Center. Some stamp patterns are provided with this application; however, by using Programmable Stitch Creator, you can edit the patterns that are provided or you can create your own.

Applying a stamp

1. Click on the Tool Box.

→ The shape of the pointer changes to , and the **Stamp Attribute Setting** dialog box appears.



> **Memo:**
> *The path to the currently selected folder appears to the right of in the dialog box.*

2. In the dialog box, select a stamp pattern.

> **Memo:**
> - *Engraving and embossing stamp settings appear as red- and blue-filled areas.*
> - *To select a different folder, click .*
>
>
>
>
> *In the **Browse for Folder** dialog box that appeared, select the desired folder, and then click **OK** (or double-click the folder) to close the **Browse for Folder** dialog box and display the stamp patterns from the selected folder in the preview window.*

3. To change the width and height of the stamp, type or select the desired size (1.0 to 100.0 mm (0.04 to 3.94 inches.)) under **Size** in the **Stamp Attribute Setting** dialog box.

4. To change the orientation of the stamp, move the pointer over the red arrow inside of the circle under **Direction**, and then drag the red arrow to the desired angle.

> **Memo:**
> - *The dialog box remains displayed so that the size and orientation of the stamp can be adjusted at any time.*
> - *To close the dialog box, click **Close**.*
> - *To open the dialog box again after closing it, click .*

5. Click the region where you want to apply the stamp to select it.

→ "Marching lines" appear around the selected region, and the shape of the pointer changes to whenever it is moved over the selected region.

6. Click the desired locations within the region where you want to apply the stamp.

→ The stamps appear as dotted lines in the region.

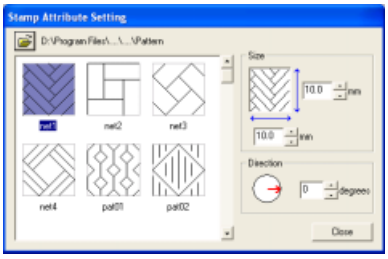
Memo:

- *The whole stamp appears, even if it is larger than the region that it has been applied to, however, only the parts that are enclosed within the region will be sewn.*
- *Stamps can only be applied to regions that have the satin stitch, fill stitch and programmable fill stitch applied.*
- *To apply several stamps within the same region, continue clicking the region as often as needed.*
- *If the pointer cannot fit within the selected region, the stamp cannot be applied.*
- *The **Stamp Attribute Setting** dialog box appears only after a stamp tool is selected.*
- *Stamps are only sewn within the region that they have been applied to.*
- *The size of stamps may change when they are imported into Layout & Editing if the size of the design has been changed with the **Magnification** setting in the **Import size** dialog box.*

Editing a stamp

1. Click on the Tool Box.

→ The shape of the pointer changes to , the **Stamp Attribute Setting** dialog box appears, and stamps that have been applied are indicated by pink dotted lines.



Memo:

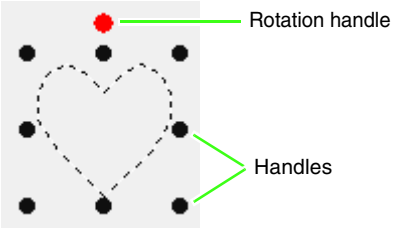
If a region was already selected, "marching lines" appear around the region, and its stamps are indicated by dotted lines.

2. Click the region with the stamp that you want to edit.

→ "Marching lines" appear around the selected region.

3. Click the stamp that you want to edit.

→ Round handles appear around the stamp, and a rotation handle appears at the top of the stamp.



Note:

Only one stamp can be selected at a time. If you select another stamp, the previously selected stamp becomes deselected.

4. To change the stamp pattern, select a different pattern in the **Stamp Attribute Setting** dialog box, and then click **Apply**.

To change the stamp size and orientation, specify the desired settings in the **Stamp Attribute Setting** dialog, or adjust it by dragging the handles or rotation handle.

To move a stamp, drag it to another location within the region or partially positioned on the region.

To delete the stamp, select the menu command **Edit** – **Delete**, or press the **Delete** key.

Memo:

- *Stamps appear only after a stamp tool is selected.*
- *Stamps are only sewn within the region that they have been applied to.*
- *To close the dialog box, click **Close**.*

☞ *"Reshaping outlines" on page 205*

Checking and editing the sewing order

The sewing order of pattern colors as well as the sewing order of pattern objects of the same color can be checked and modified as necessary. (This function is available only in the Sew Setting Stage.)

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order**.

→ The **Color** tab of a **Sewing Order** dialog box similar to the one shown below appears.

Memo:

- *The frames containing regions are separated from the frames containing outlines with a thick vertical line. Frames from one side of the line cannot be moved to the other side.*
- *The patterns will be sewn in the order shown, from left to right. All regions are always sewn before the outlines.*
- *To enlarge the pattern for better viewing, click .*

2. To change the sewing order of a color, select the frame for the color that you want to move, and then drag the frame to the desired position.

→ A red line appears, indicating the position where the frame is being moved.

Memo:

- *To select additional frames, hold down the Shift or Ctrl key and select each frame.*
- *In the Design Page, "marching lines" appear around the selected region or along the selected outline.*

3. To view the sewing order of multiple patterns of the same color, select the frame that you want to view, and then click the **Part** tab.

→ The individual patterns with the same color appear in different frames.

4. To change the sewing order of a pattern, select the frame for the pattern that you want to move, and then drag the frame to the desired position.

→ A red line appears, indicating the position where the frame is being moved.

Memo:

- *To select additional frames, hold down the Shift or Ctrl key and select each frame.*
- *In the Design Page, "marching lines" appear around the selected region or along the selected outline.*

5. Click **OK** to apply the changes and to close the dialog box.

Memo:

*To close the dialog box without applying the changes to the sewing order, click **Cancel**.*

"Displaying a preview of the embroidery" on page 231

Checking the stitching

The actual stitching as it will be performed by the sewing machine can be viewed using the stitch simulator. (This function is available only in the Sew Setting Stage.)

Toolbar button:

1. Click , or click **Display**, then **Stitch Simulator**.

The **Stitch Simulator** dialog box appears, and the embroidery pattern is cleared from the Design Page.

To begin the stitching simulation, click .

Memo:

- *During the stitching simulation, this button changes to a pause button ( ).*
- *A marker ( ) indicates the position in the simulation.*
- *To get a better view of the stitching, zoom in on the design before opening the **Stitch Simulator** dialog box.*

To reverse the simulation to the beginning of the previous color, click .

To advance the simulation to the beginning of the next color, click .

To reverse the stitching by a specified number of stitches, type or select the desired number of stitches, and then click .

To advance the stitching by a specified number of stitches, type or select the desired number of stitches, and then click .

To stop the simulation and return to the beginning, click .

Memo:

The slider shows the current location in the simulation. In addition, adjust the slider to change the position in the simulation.

Drag the slider indicated by to adjust the simulation stitching speed.

Memo:

- *The first number beside indicates the number of the current stitch, and the second number indicates the total number of stitches.*
- *The first number beside indicates the number of the color being drawn, and the second number indicates the total number of colors used.*

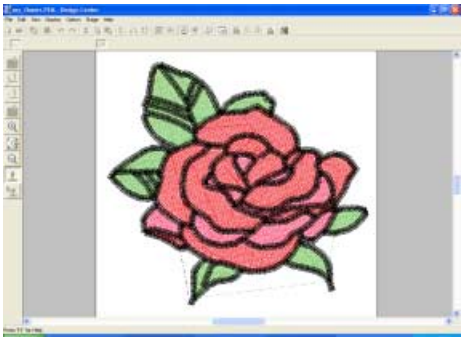
2. Click in the upper-right corner of the dialog box to close the dialog box.

Displaying a preview of the embroidery

Once the embroidery pattern is complete or while you work on the design, you can preview the pattern's stitches. You can also view a realistic preview of the pattern in order to see how it will appear once it is sewn. (These functions are available only in the Sew Setting Stage.)

1. To display a preview of the embroidery pattern, click **Display** on the menu bar, and then click **Preview**.
An alternate method is to click the Toolbar button indicated below.

→ A preview of the embroidery pattern appears.



Memo:

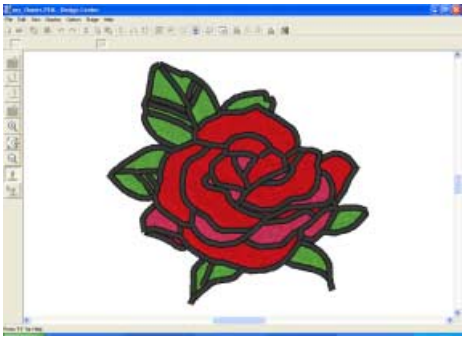
To zoom in (or out), click (or) on the Tool Box, and then click the desired area of the embroidery pattern.

2. To leave the preview display, repeat step **1.**, or press the Esc key.

Note:
The embroidery pattern cannot be edited while the preview is displayed.

3. To display a realistic preview of the embroidery pattern, click **Display** on the menu bar, and then click **Realistic Preview**.
An alternate method is to click the Toolbar button indicated below.

→ A realistic preview of the embroidery pattern appears.



Memo:

To zoom in (or out), click (or) on the Tool Box, and then click the desired area of the embroidery pattern.

4. To leave the realistic preview display, repeat step **3.**, or press the Esc key.

Note:
- *The embroidery pattern cannot be edited while the realistic preview is displayed.*
- *The Realistic Preview function cannot display a clean preview of the pattern if the monitor is set to 256 colors or less. The monitor should be set to at least 16-bit High Color (65536 colors).*

Changing realistic preview settings

You can change the realistic preview settings to better view the embroidery pattern. (This function is available only in the Sew Setting Stage.)

1. Click **Display**, then **Realistic Preview Attribute Setting**.

→ A **Realistic Preview Attribute** dialog box similar to the ones shown below appears.

2. Use the **Thread Width** slider to set how wide the thread will appear.

3. Use the **Contrast** slider to set the contrast.

4. Use the **Brightness** slider to set how bright the display is.

5. Click **Apply** to display a realistic preview of the patterns with the new settings (when the realistic preview is displayed).

Or, click **OK** to save the settings for the next time that the Realistic Preview function is select (when the realistic preview is not displayed).

Memo:

*To close the dialog box without applying the changes to the settings, click **Close** or **Cancel**.*

"Displaying a preview of the embroidery" on page 231

Viewing embroidery patterns in the Reference Window

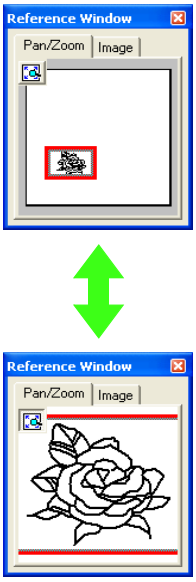
All outlines and patterns in the Design Page are displayed in the Reference Window, giving you an overall view of the pattern while you work on a detailed area. The display area frame (red rectangle) indicates the part of the pattern displayed in the Design Page.
In addition, the image being used to create the embroidery pattern or the embroidery pattern being created and a different image can be displayed in the Reference Window in the Figure Handle Stage and the Sew Setting Stage.
To switch between displaying and hiding the Reference window, click **Display**, then **Reference Window**, or click , or press the shortcut key (F11).

Zooming

The pattern displayed in the Reference Window can be reduced to fit completely within the Reference Window or enlarged to display only the pattern.

1. Click the **Pan/Zoom** tab, click .

   → The pattern is displayed so that it fills the Reference Window.



Moving the display area frame

The part of the pattern displayed in the Design Page can be selected from the Reference Window.

1. Move the pointer over the display area frame.

   → The shape of the pointer changes to .

2. Drag the display area frame so that it surrounds the desired part of the pattern.

   → The selected part of the pattern is displayed in the Design Page.

Redrawing the display area frame

Instead of moving the display area frame, the frame can be redrawn to display the desired part of the pattern in the Design Page.

1. Click the area to be displayed, or drag the pointer over the desired part of the pattern in the Reference Window.

   → The display area frame is redrawn, and the selected part of the pattern is displayed in the Design Page.

Scaling the display area frame

1. Move the pointer over a corner of the display area frame.

   → The shape of the pointer changes to , or , depending on the corner that the pointer is over.

   Memo:

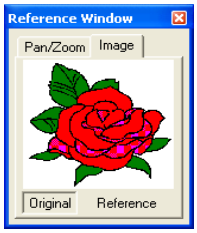
   and are for scaling the height and width.

2. Drag the corner to adjust the display area frame to the desired size.

Displaying the image being used to create the embroidery pattern

The image opened from the Original Image Stage can be displayed in the Reference Window.

1. Click the **Image** tab.

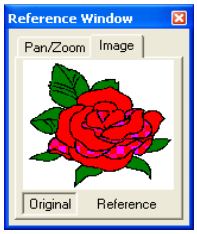


> **Memo:**
>
> *If the Image tab is clicked when the Reference Window is first displayed, **Original** is selected. If **Original** is clicked while **Reference** is selected, the image is displayed again.*

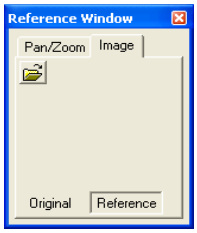
Displaying a different reference image

The embroidery pattern being created and a different image can be displayed in the Reference Window.

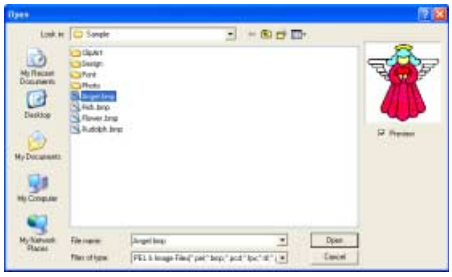
1. Click the **Image** tab.



2. Click **Reference**, then Click .



3. Select the reference image, and then click **Open**.



Saving embroidery patterns

Overwriting

Once the image or pattern has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button:

1. Click , or click **File**, then **Save**.

→ If the image or pattern has already been saved at least once, the file is saved immediately.

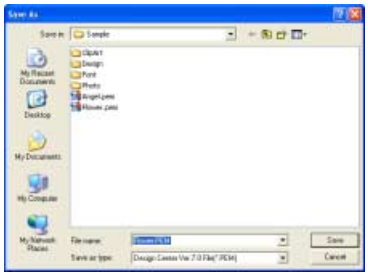
→ If no file name has been specified or if the file cannot be found, the **Save As** dialog box appears.

Saving with a new name

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or pattern. Files can be saved as bitmap files (.bmp) in the Original Image Stage, .pel files in the Line Image Stage, and .pem files in the Figure Handle Stage and the Sew Setting Stage.

1. Click **File**, then **Save As**.

→ A **Save As** dialog box similar to the one shown below appears.



2. Select the drive and the folder, and then type in the file name.

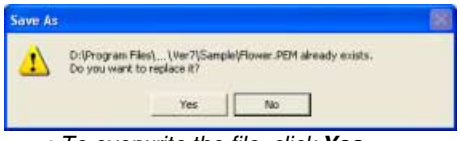
> **Memo:**
> - *The correct extension is automatically selected.*
> - *Image data from the Original Image Stage can only be saved as a bitmap file (.bmp). In the Line Image Stage, image data is saved as a .pel file. In the Figure Handle Stage and the Sew Setting Stage, pattern data is saved as a .pem file.*

> **Note:**
> *If you select a file type of a previous software version, saved .pem files can be opened with that version of the software; however, some information may be lost.*

> **Memo:**
> *When opening a .pem file in Design Center version 7 with a file saved at the Sew Setting Stage in Design Center version 1.x, go back to the Figure Handle Stage, and then go to the Sew Setting Stage to obtain the sewing data at a higher quality.*

3. Click **Save** to save the data.

> **Memo:**
> - *To quit the operation, click **Cancel**.*
> - *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*



> - *To overwrite the file, click **Yes**.*
> - *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

Importing the embroidery pattern into Layout & Editing

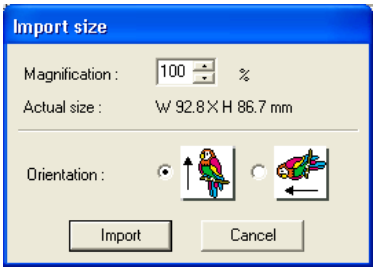
Layout & Editing can be opened from Design Center, and the embroidery pattern completed in the Sew Setting Stage of Design Center can be imported into a Design Page in the Layout & Editing window.

> **Note:**
> *If the sewing attributes of an outline or region are not set, the embroidery pattern cannot be imported.*

Toolbar button:

1. Click , or click **Stage** on the menu bar, and then click **To Layout & Editing**.

→ The **Import size** dialog box appears.



2. In the **Magnification** box, type or select the magnification factor.

> **Note:**
> - *The embroidery pattern cannot be magnified to a size larger than the Design Page.*
> - *The magnification factor cannot be set below 25%.*

3. Under **Orientation**, select the desired orientation.

4. Click **Import** to import the embroidery pattern.

> **Memo:**
> *To quit the operation and close the dialog box, click **Cancel**.*

→ The embroidery pattern is displayed in the Design Page of the Layout & Editing window.

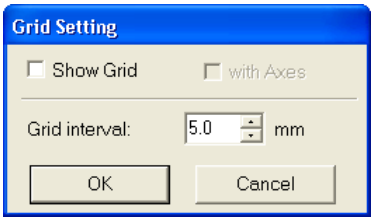
Changing Software Settings

Changing the grid settings

A grid of dotted lines or solid lines can be displayed or hidden, and the spacing for the grid can be adjusted. (This function is available only in the Figure Handle Stage.)

1. Click **Display**, then **Grid Setup**.

   → The **Grid Setting** dialog box appears.



2. To display the grid, select the **Show Grid** check box.
   To hide the grid, clear the **Show Grid** check box.

3. To set the grid spacing, type or select a value in the **Grid interval** box. (The setting range is 1.0 to 25.4 mm (0.04 to 1.0 inch).)

4. To display the grid as solid lines, select the **with Axes** check box.
   To display the grid as dotted lines, clear the **with Axes** check box.

   Note:
   *When the **Show Grid** check box is selected and the **with Axes** check box is cleared, only the intersecting points of the grid will be displayed.*

5. Click **OK** to apply the changes and to close the dialog box.

   Memo:
   *To close the dialog box without applying the changes to the grid, click **Cancel**.*

Changing the measurement units

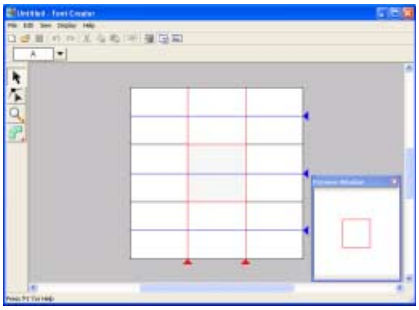
The measurements for values displayed in the application can be in either millimeters or inches.

1. Click **Option**, then **Select System Unit**, and then select the desired measurement units (**mm** or **inch**).

Starting up Font Creator

1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Font Creator** to open the **Font Creator** window.

   → The Font Creator window appears.



Memo:

To fill the entire screen with the Font Creator window, click the maximize button on the right end of the title bar.

Opening a File

Creating a new font

You can begin with a blank work area to design a new font.

Toolbar button:

1. Click , or click **File**, then **New**.

   → If the current work area has already been saved or has not been edited, a new work area appears immediately.

   → If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:

- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

"Opening a font file" on this page, "Overwriting" on page 253 and "Saving with a new name" on page 253

Opening a font file

A previously created or saved font file can be opened to be edited.

Toolbar button:

1. Click , or click **File**, then **Open**.

→ A **File Open** dialog box similar to the one shown below appears.

2. Select the drive and the folder.

Memo:

*To quit the operation and close the dialog box, click **Cancel**.*

3. To open a file, select it, and then click **Open**, or double-click the file's icon.

→ If the current work area has already been saved or has not been edited, the contents of the selected file immediately appear in the work area.

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:

- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

☞ *"Creating a new font" on page 237, "Overwriting" on page 253 and "Saving with a new name" on page 253*

Opening an image in the background

First, we will prepare a background image to create the custom font character.
You can open an existing image file in the work area to be used as a background image. There are many different types of files that can be imported:

Windows bitmap (.bmp)

Exif (.tif, .jpg)

ZSoftPCX (.pcx)

Windows Meta File (.wmf)

Portable Network Graphics (.png)

Encapsulated PostScript (.eps)

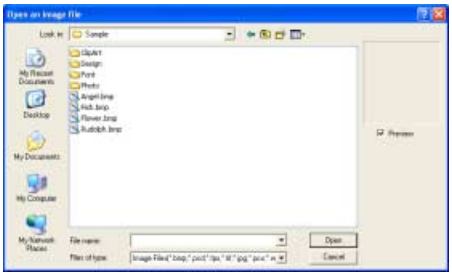
Kodak PhotoCD (.pcd)

FlashPix (.fpx)

JPEG2000 (.j2k)

1. Click **File**, then **Template Open**.

→ An **Open an image file** dialog box similar to the one shown below appears.



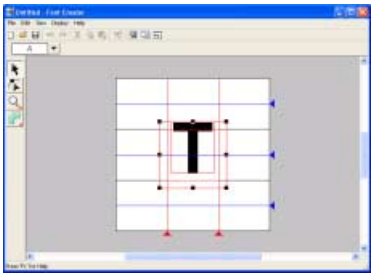
2. Select the drive, the folder and the desired file.

Memo:

*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Open** to open the file.

→ The image fills the work area.



Memo:

- *Double-clicking the file name also opens the file and closes the dialog box.*
- *To quit the operation, click **Cancel**.*

Note:

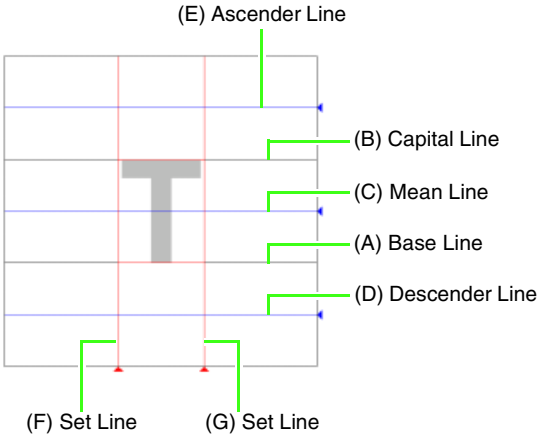
- *With .pcd and .fpx files containing many pages, only the first page can be opened. Tiff files with LZW compression cannot be opened.*
- *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Memo:

- *The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed. For details, refer to "Changing the display of the background image" on page 254.*
- *The **Base Line, Capital Line** and **Set Lines**, which appear as red lines in the sample bitmap, have been added as guidelines so the background image can be positioned more easily.*

The Design Page guidelines

The standard guidelines for creating fonts are shown in the Design Pages. The contents of each of the guidelines are as shown below.



(A) **Base Line**

This line is the reference for positioning the font character.
Normally, from this line to the **Capital Line** will be the font height. This line cannot be moved.

(B) **Capital Line**

The font's standard height will be from the **Base Line** to this line. This line cannot be moved.

(C) **Mean Line**

When in lower case, the standard height of the font will be from the **Base Line** to this line. It can be moved by dragging the triangle icon on the right edge.

(D) **Descender Line**

This line is the standard for characters with parts that hang down (descenders) such as "g" and "y". It can be moved by dragging the triangle icon on the right edge.

(E) **Ascender Line**

This line is the standard for characters with parts that extended above (ascenders) such as the accent mark. It can be moved by dragging the triangle icon on the right edge.

(F/G) **Set Line**

This line will be the font width. The font width can be adjusted by dragging the triangle icon on the bottom edge.

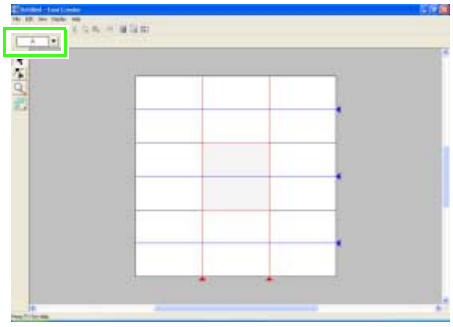
Memo:

- *The heights and widths specified for the **Base Line**, **Capital Line** and **Set Lines** are the reference mask for creating the font character.*
- *The heights of the **Ascender Line**, **Mean Line** and **Descender Line** are the same for all characters. Therefore, if any of these heights are changed, the setting is maintained, even when a different character is selected to be edited.*
- *The widths of the **Set Lines** can be set separately for each character.*

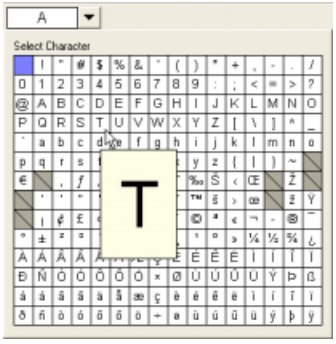
Selecting the Character To Be Created

The character to be created can be selected.

1. Click the **Select Character** button in the Select Character bar.



In the **Select Character** dialog box that appeared, select the character to be created.



Memo:

- *Characters where pattern has already been created appear with a blue background.*
- *To return to the Design Page without selecting a character, click outside of the **Select Character** dialog box.*
- *If "space" in the upper-left corner of the **Select Character** dialog box is selected, "**SPACE**" appears in the **Select Character** bar.*

Note:

If any part of the character pattern extends off the Design Page when a different character is selected, a message appears. Before selecting a different character, edit the character pattern so that no part extends off the Design Page.

Creating a Font Character Pattern

Using the Manual Punch tools, create the font character pattern.

A background image can be displayed so that the font character pattern can be created more easily.

Color and stitching settings are done with Layout & Editing.

"Opening an image in the background" on page 238

1. Click on the Tool Box.

→ Five buttons appear:

is for creating straight block-type punching patterns. (Shortcut key: Z)

is for creating curved block-type punching patterns. (Shortcut key: X)

is for semi-automatically creating block-type punching patterns. (Shortcut key: C)

is for creating running-type punching patterns (the broken line is sewn). (Shortcut key: V)

is for creating feed-type punching patterns (the broken line is not sewn). (Shortcut key: B)

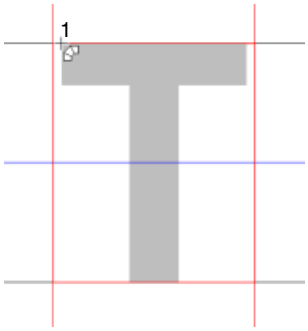
The font character pattern can be created using the tools listed above.

In the next example, we will create the pattern for "T" with straight block-type and running-type punching pattern.

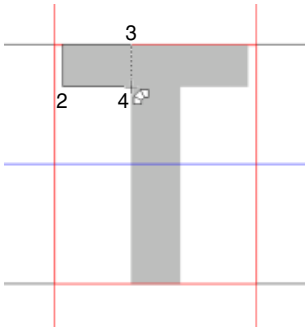
2. Click to start creating a straight block-type pattern.

→ The shape of the pointer changes to .

3. Click in the Design Page to specify point 1 (start point).



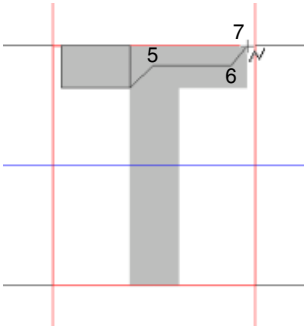
4. Refer to the illustration below, and click in the Design Page to specify points 2 through 4.



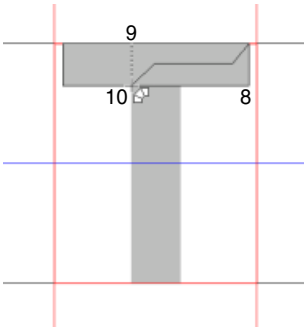
Memo:

To remove the last point that was entered, click the right mouse button.

5. After clicking point 4 (the last point of the block-type pattern), click (running-type pattern button), and then in the Design Page to specify point 5 through 7.

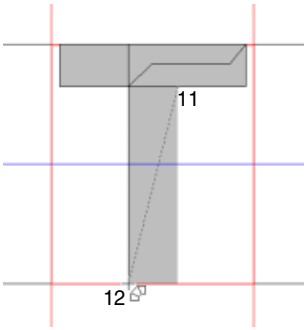


6. Click (straight block-type pattern), and then click in the Design Page to specify points 8 through 10 as shown in the illustration below.

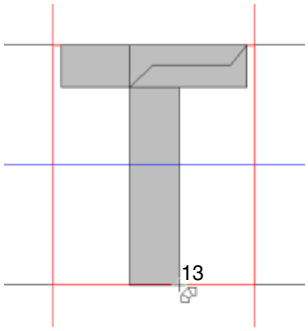


7. Click .

8. Click , and then click in the Design Page to specify points 11 through 12.



9. To complete the pattern, double-click point 13 (the last point of the entire pattern).



Memo:

- *When entering points, change the punch type by pressing the appropriate shortcut key.*
- *A template image is needed in order to use the semi-automatic block-type punch tool. If there is no image, this tool will create a punching pattern like the straight block-type punch tool.*
- *Once the pattern is drawn, you can still transform straight block-type patterns into curved block-type patterns and vice versa. For details, refer to “Editing points” on page 249.*

Editing Font Character Patterns

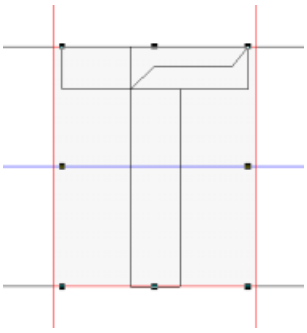
Selecting patterns

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the pattern that you want to select.

   → Handles appear around the pattern to show that it is selected.



> **Memo:**
> *To deselect the pattern, select a different one or click a blank area of the work area.*

3. To select an additional pattern, hold down the Ctrl key and click the other pattern.

> **Memo:**
> - *You can also select patterns by dragging the pointer across the pattern that you want to select. As you drag the pointer, a selection frame is drawn. All patterns that are contained in that selection frame are selected when the mouse button is released.*
> - *If you selected patterns that you did not want, click a blank area of the work area to deselect all patterns, and start again.*

Selecting all patterns

1. Make sure that on the Tool Box is selected.

2. Click **Edit**, then **Select All**.

Moving patterns

1. Move the pointer over a selected pattern or group of selected patterns.

   → The shape of the pointer changes to .

2. Drag the pattern to the desired location.

> **Memo:**
> - *To move the pattern horizontally or vertically, hold down the Shift key while dragging it.*
> - *Pressing the arrow keys moves the selected pattern one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*
> - *Holding down the arrow key for the desired direction continues moving the outline in that direction.*

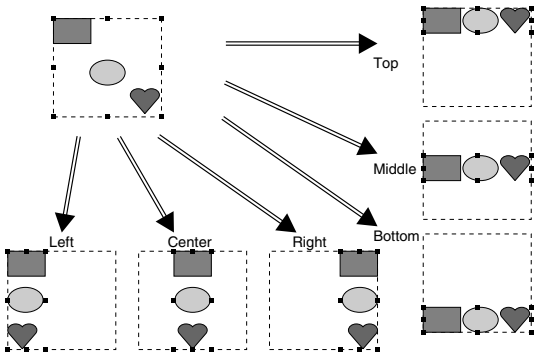
Aligning patterns

The selected patterns can easily be aligned as specified.

1. Select the patterns which you want to align.

2. Click **Edit**, then **Align**, then **Left**, **Center**, **Right**, **Top**, **Middle**, or **Bottom**, depending on how you want to align the patterns.

   → The selected patterns are aligned as shown below.



Scaling patterns

1. Move the pointer over one of the handles of a selected pattern or group of patterns.

   → The shape of the pointer changes to ↔ , ↕ , ⤡ or ⤢ , depending on the handle that the pointer is over.

   Memo:

   - ↔ *is for scaling the width.*
   - ↕ *is for scaling the height.*
   - ⤡ *and* ⤢ *are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
   - *If the* Shift *key is held down while a handle is dragged, the pattern is enlarged or reduced from the center of the pattern.*

2. Drag the handle to adjust the selected pattern(s) to the desired size.

Deleting patterns

1. Select the pattern to be deleted.
2. Press the Delete key, or click **Edit**, then **Delete**.

Cutting out patterns

Selected pattern(s) can be removed from the screen while saving a copy in the Clipboard.

Toolbar button:

1. Select one or more patterns.
2. Click , or click **Edit**, then **Cut**.

   → The selected patterns are removed from the work area.

Memo:

*Since the removed patterns are saved on the Clipboard, you can paste them back using the menu command **Edit** – **Paste**.*

"Copying patterns" on this page, "Pasting a cut or copied pattern" on this page and "Deleting patterns" on this page

Copying patterns

Selected pattern(s) can be saved on the Clipboard without being removed from the work area.

Toolbar button:

1. Select one or more patterns.
2. Click , or click **Edit**, then **Copy**.

   → The selected patterns are copied onto the Clipboard and are ready to be pasted.

"Cutting out patterns" on this page, "Duplicating patterns" on this page and "Pasting a cut or copied pattern" on this page

Duplicating patterns

A copy of the selected pattern(s) can be added to the work area.

1. Select one or more patterns.
2. Click **Edit**, then **Duplicate**.

   → A copy of the pattern(s) are added to the work area.

"Copying patterns" on this page and "Pasting a cut or copied pattern" on this page

Pasting a cut or copied pattern

The patterns on the Clipboard can be pasted into the work area.

Toolbar button:

1. Click , or click **Edit**, then **Paste**.

   → The patterns saved on the Clipboard (using the **Cut** or **Copy** command) are pasted into the work area.

   "Cutting out patterns" on page 245, "Copying patterns" on page 245 and "Duplicating patterns" on page 245

Flipping patterns horizontally

You can flip the selected pattern(s) horizontally (left/right).

1. Select one or more patterns.
2. Click **Edit**, then **Mirror**, then **Horizontal**.

   → The selected pattern(s) are replaced by their horizontal mirror image (top and bottom inverted).

   Memo:

   *To restore the image to its original orientation, select the menu command **Edit – Mirror – Horizontal** again.*

   "Flipping patterns vertically" on this page and "Rotating patterns" on this page

Flipping patterns vertically

You can flip the selected pattern(s) vertically (up/down).

1. Select one or more patterns.
2. Click **Edit**, then **Mirror**, then **Vertical**.

   → The selected pattern(s) are replaced by their vertical mirror image (left and right inverted).

   Memo:

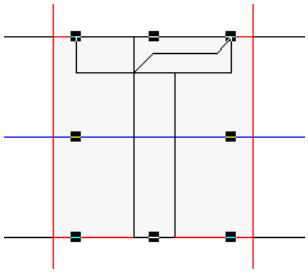
   *To restore the image to its original orientation, select the menu command **Edit – Mirror – Vertical** again.*

   "Flipping patterns horizontally" on this page and "Rotating patterns" on this page

Rotating patterns

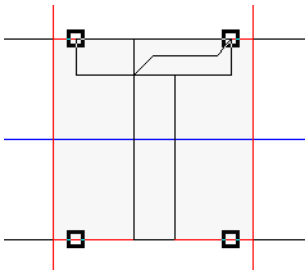
You can manually rotate the selected pattern(s) by an arbitrary angle.

1. Select one or more patterns.



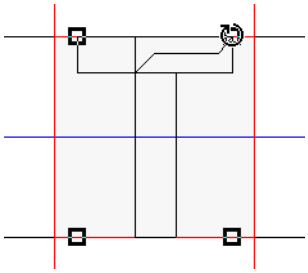
2. Click **Edit**, then **Rotate**.

   → The handles around the selected pattern are replaced by empty squares at the four corners of the selected pattern.

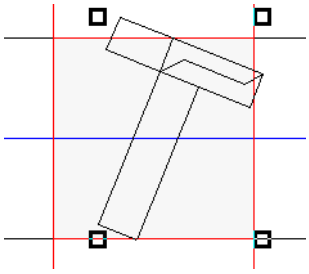


3. Move the pointer over one of the four rotation handles.

   → When the pointer is moved over a rotation handle, the shape of the pointer changes to .



4. Drag the rotation handle clockwise or counterclockwise to rotate the pattern to the desired angle.



Memo:

- *Simply dragging the pointer rotates the pattern in 1° increments.*
- *To rotate the pattern in 15° increments, hold down the* Shift *key while dragging the rotation handle.*

Editing the Points of a Font Character Pattern

The points that you move or insert are positioned at the intersection of the horizontal and vertical lines of the grid. Regardless of where you drag a point to or insert a point on the line, it will automatically be positioned at the nearest intersection.

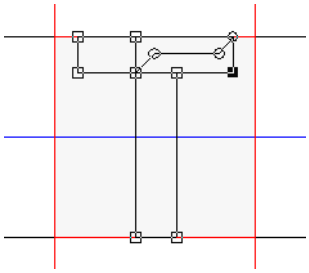
Moving points

1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.



Memo:

You can only select one pattern at a time.

3. Click the point that you want to move.

→ The selected point appears as a small black square.

Memo:

- *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*
- *To select the previous (or next) point in the line, hold down the Ctrl key and press the → (or ←) key.*

Note:

If you click the line of the pattern instead of a point, a new point is inserted.

4. Drag the point to the new location.

→ All of the selected points move in the same direction.

Memo:

- *To move the point horizontally or vertically, hold down the Shift key while dragging it.*
- *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the point moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*
- *Holding down the arrow key for the desired direction continues moving the outline in that direction.*

Inserting points

1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Click the pattern that you want to edit.

→ The points in the pattern appear as small empty squares.

Memo:

You can only select one pattern at a time.

3. Click the line to add a new point.

→ A new point appears selected (as a small black square).

Memo:

If a point is inserted in a straight block-type punching pattern, curved block-type punching pattern or semi-automatically created block-type punching pattern, a point is also automatically inserted in the connecting line along the sewing direction. In addition, in this case, a point cannot be inserted in the line parallel to the sewing direction.

Deleting points

1. Click on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to .

2. Click the pattern that you want to edit.

> **Memo:**
> *You can only select one pattern at a time.*

→ The points in the pattern appear as small empty squares.

3. Click the point that you want to delete.

→ The selected point appears as a small black square.

> **Memo:**
> *To select additional points, hold down the* Ctrl *key and click each point, or drag the pointer over the points that you want to select.*

4. Click **Edit**, then **Delete**, or press the Delete key to remove the point.

> **Memo:**
> - *If a line is composed of two points and you delete one of them, the entire line is deleted.*
> - *If a point inserted into a straight block-type punching pattern, curved block-type punching pattern or semi-automatically created block-type punching pattern is deleted, the point and line automatically inserted along the sewing direction are also deleted.*

Editing points

The lines connected to a point can be changed to either straight lines or curves. In addition, the lines at a point can be smoothed out or straightened.

1. Click on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to .

2. Click the pattern that you want to edit.

> **Memo:**
> *You can only select one pattern at a time.*

→ The points in the pattern appear as small empty squares.

3. Click the point that you want to transform.

→ The selected point appears as a small black square.

> **Memo:**
> *To select additional points, hold down the* Ctrl *key and click each point, or drag the pointer over the points that you want to select.*

4. Click **Edit**, then **Point**.

→ A submenu appears.

5. Click the desired command.

- Click **To Straight** to transform the lines at the selected point to straight lines.
- Click **To Curve** to transform the lines at the selected point to curves.
- Click **To Smooth** to smooth out the lines at the selected point on a curve.
- Click **To Symmetry** to symmetrically transform the lines at the selected point on a curve.
- Click **To Cusp** to straighten the selected curve.

Checking the Created Font Patterns

The sewing order and preview of the font character patterns and the list of created characters can be checked.

Checking and editing the sewing order

The sewing order for the font character pattern can be viewed and modified.

Toolbar button:

1. Click , or click **Sew**, then **Sewing Order**.

   → A **Sewing Order** dialog box similar to the one shown below appears.

> **Memo:**
> *The dialog box can be made longer so that all parts of the pattern can be viewed.*

To enlarge each pattern to fill its frame, click .

Selecting pattern

1. Select a pattern in the **Sewing Order** dialog box.

   → The selected pattern has a pink line around it, and marching lines appear around the corresponding pattern in the Design Page.

> **Memo:**
> *To select multiple patterns, hold down the Shift or Ctrl key while clicking the frames for the desired patterns. In addition, multiple frames can be selected by dragging the pointer over them.*

Editing the sewing order

The sewing order can be changed by selecting the frame containing the pattern that you want to move, then dragging the frame to the new location. A vertical red line appears, indicating the position where the frame is being moved.

An alternative method for moving the frames is by clicking the buttons at the bottom of the dialog box.

To move the selected pattern to the beginning of the sewing order, click .

To move the selected pattern ahead one position in the sewing order, click .

To move the selected pattern back one position in the sewing order, click .

To move the selected pattern to the end of the sewing order, click .

To change the sewing order, click **OK**.

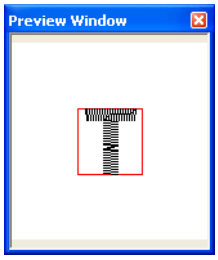
Previewing the embroidery pattern

A realistic preview of the Font pattern can be viewed in the Preview window.

Toolbar button:

1. Click , or click **Display**, then **Preview Window**.

→ The Preview window appears.



Changing the size of the Preview window

1. Move the pointer over a corner of the Preview window.

   → The shape of the pointer changes to ↖↘ or ↗↙, depending on the corner that the pointer is over.

2. Drag the corner to adjust the Preview window to the desired size.

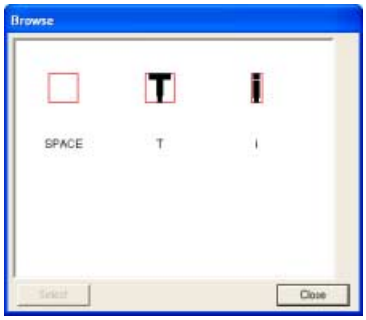
Checking the list of created characters

A list of characters included in the font file currently being edited can be viewed.

Toolbar button: Aa..

1. Click Aa.., or click **Display**, then **Browse Window**.

   → The **Browse** window appears.

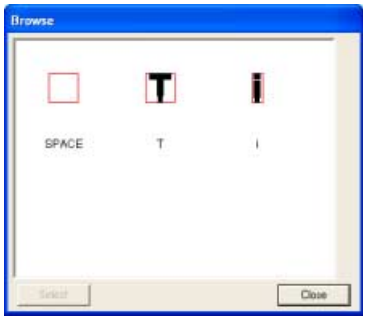


Selecting characters

A different character can be displayed in the Design Page by selecting a character in the **Browse** window.

1. Click Aa.., or click **Display**, then **Browse Window**.

   → The **Browse** window appears.



2. Click a character, and then click **Select**.

   → The **Browse** window is closed, and the selected character appears in the Design Page.

> **Memo:**
> *The character displayed in the Design Page can also be changed by double-clicking a character in the **Browse** window.*

Changing the size of the Browse window

1. Move the pointer over a corner of the **Browse** window.

   → The shape of the pointer changes to ↖↘ or ↗↙, depending on the corner that the pointer is over.

2. Drag the corner to adjust the **Browse** window to the desired size.

Zooming

You can zoom in to work on details of the font character pattern or you can zoom out to work on any part of the pattern that cannot be viewed in the work area.

Zooming in

1. Click on the Tool Box.

   → Four buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the area that you want to view enlarged.

> **Memo:**
>
> *To zoom in on a specific area, move the pointer near the desired area, and then drag the pointer diagonally over the desired area.*

Zooming out

1. Click on the Tool Box.

   → Four buttons appear: .

2. Click .

   → The shape of the pointer changes to .

3. Click the area that you want to view reduced.

Displaying selected patterns to fill the window

1. Select the patterns that you want to zoom on.

2. Click on the Tool Box.

   → Four buttons appear: .

3. Click .

   → The Design Page is zoomed to display only the selected patterns.

Zooming Design Page to window

1. Click on the Tool Box.

   → Four buttons appear: .

2. Click .

   → The entire Design Page is displayed to fit within the window.

Saving Font Character Patterns

Overwriting

The font character pattern being edited is overwritten when saving any changes that have been made.

Toolbar button:

1. Click , or click **File**, then **Save**.

→ If the pattern has already been saved at least once, the file is saved immediately.

→ If no file name has been specified or if the file cannot be found, the **Save As** dialog box appears.

> **Note:**
> *If any part of the character pattern extends off the Design Page, a message appears. Edit the character pattern so that no part extends off the Design Page, and then save it again.*

"Saving with a new name" on this page

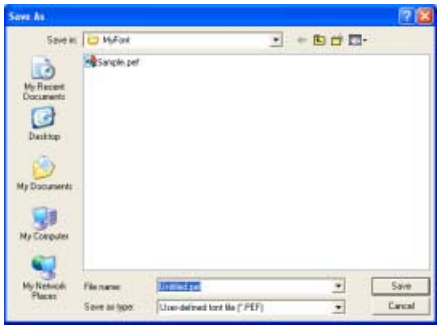
Saving with a new name

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same font character pattern.

The font character patterns are saved as .pef files.

1. Click **File**, then **Save As**.

→ A **Save As** dialog box similar to the one shown below appears.

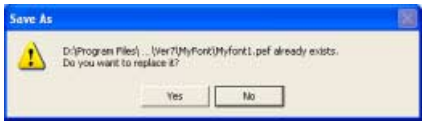


2. Select the drive and the folder, and then type in the file name.

> **Note:**
> - *Save the font created in the location below. The font will not be usable in the Layout & Editing if it's stored in a different folder.*
> *(Drive where PE-DESIGN was installed) \Program Files\Brother\PE-DESIGN Ver7\My font*
> - *If Layout & Editing has already started up when a new character is saved in Font Creator, that character will not appear in the Font selector list in Layout & Editing. In this case, exit Layout & Editing, and then start it up again.*

> **Memo:**
> *The correct extension is automatically selected.*

3. Click **Save** to save the font character patterns.

> **Memo:**
> - *To quit the operation, click **Cancel**.*
> - *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*
>
> 
>
>
> - *To overwrite the file, click **Yes**.*
> - *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

"Overwriting" on this page

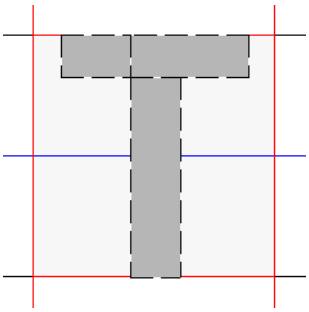
> **Note:**
> *If any part of the character pattern extends off the Design Page, a message appears. Edit the character pattern so that no part extends off the Design Page, and then save it again.*

Changing the Settings

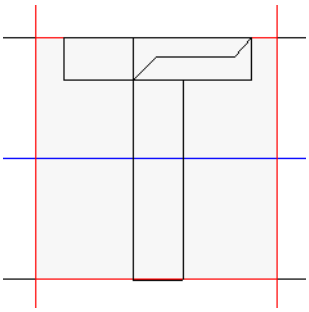
Changing the drawing mode

There are two drawing modes in Font Creator.

- Fill mode
  Blocks appear filled in. In this mode, the overlapping positions of patterns can be viewed better.



- Outline mode (Fill mode Off)
  Blocks do not appear filled in. In this mode, points can be edited more easily.



Perform the operation described below to switch between these modes.

Toolbar button:

1. Click , or click **Display**, then **Fill Mode**.

   → The mode switches between the fill mode and the outline mode.

> **Memo:**
>
> *To return to the previous mode, click , or click **Display**, then **Fill Mode**.*

Changing the display of the background image

Changing the density of the background image

The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Display**, then **Display Template**, and then select the desired setting.

   To display the template image, click **On (100%)**.

   To display a faded copy of the image, click the desired density (**75%**, **50%** or **25%**).

   To hide the template image, click **Off**.

> **Memo:**
>
> - *This function is not available if no template image has been imported into the work area.*
> - *Press the shortcut key (F6) to switch between displaying the image (**On (100%)**) to displaying it faded at each density (**75%**, **50%** and **25%**) to hiding the image (**Off**).*

"Opening an image in the background" on page 238

Scaling the background image

1. Click **Display**, then **Modify Template**.

   → The background image is selected.

2. Move the pointer over one of the handles of a selected background image.

   → The shape of the pointer changes to ↔ , ↕ , ⤡ or ⤢ , depending on the handle that the pointer is over.

> **Memo:**
>
> - *↔ is for scaling the width.*
> - *↕ is for scaling the height.*
> - *⤡ and ⤢ are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
> - *If the Shift key is held down while a handle is dragged, the pattern is enlarged or reduced from the center of the pattern.*

3. Drag the handle to adjust the selected background image to the desired size.

> **Memo:**
> *This function is not available if no template image has been imported into the work area.*

Moving the background image

1. Click **Display**, then **Modify Template**.

   → The background image is selected.

2. Move the pointer over a selected background image.

   → The shape of the pointer changes to .

3. Drag the background image to the desired location.

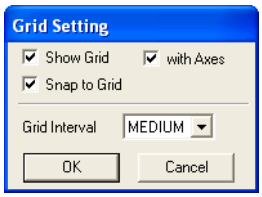
> **Memo:**
> *This function is not available if no template image has been imported into the work area.*

Changing the grid settings

The line spacing in the grid displayed in the work area can be adjusted.

1. Click **Display**, then **Grid Setup**.

   → The **Grid Setting** dialog box appears.



2. To display the grid, select the **Show Grid** check box.
   To hide the grid, clear the **Show Grid** check box.

3. To input the font in a uniform thickness or match vertical and horizontal positions, select the **Snap to Grid** check box.

> **Memo:**
> *The pointer will move by the amount set in **Grid interval**.*
> *The snap feature works whether or not the grid is displayed.*

4. In the **Grid Interval** box, select the grid spacing.

   To select a grid interval of 1/15 of a work area's edge, click **Wide**.

   To select a grid interval of 1/30 of a work area's edge, click **Medium**.

   To select a grid interval of 1/90 of a work area's edge, click **Narrow**.

5. To display the grid as solid lines, select the **with Axes** check box.

> **Note:**
> *When the **Show grid** check box is selected and the **with Axes** check box is cleared, only the intersecting points of the grid will be displayed.*

6. Click **OK** to apply the changes and to close the dialog box.

> **Memo:**
> *To close the dialog box without applying the changes to the grid, click **Cancel**.*

Opening a Pattern File

A previously saved programmable stitch file can be opened to be edited.

Toolbar button:

1. Click , or click **File**, then **Open**.

→ An **Open** dialog box similar to the one shown below appears.

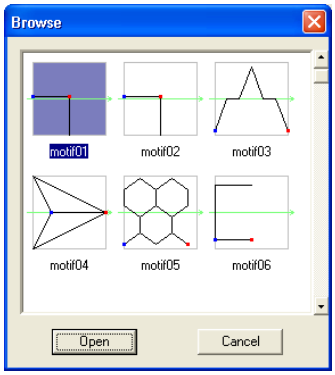
2. Select the drive and the folder.

> **Memo:**
> - *If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*
> - *To quit the operation and close the dialog box, click **Cancel**.*

> **Note:**
> *To open a fill/stamp stitch pattern, be sure to select a folder that contains .pas files. To open a motif stitch pattern, be sure to select a folder that contains .pmf files.*

3. To view the contents of the .pas and .pmf files in the currently selected folder, click **Browse**.

→ A **Browse** dialog box similar to the one shown below appears.



> **Memo:**
> - *To return to the **Open** dialog box, click **Cancel**.*
> - *A green arrow through the middle of the stitch pattern indicates motif stitch patterns (.pmf). Otherwise, the data is a fill/stamp stitch pattern (.pas).*
> - *Stamps are identified by the red- (engraving effect sewn with the fill stitch) and blue-filled areas (embossing effect sewn with satin stitching).*

4. To open a file, select it, and then click **Open**, or double-click the file's icon.

→ If the current work area has already been saved or has not been edited, the contents of the selected file immediately appear in the work area.

> **Memo:**
> *The mode will automatically change to match that of the selected pattern (**Fill/Stamp** for .pas files or **Motif** for .pmf files).*

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:

- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

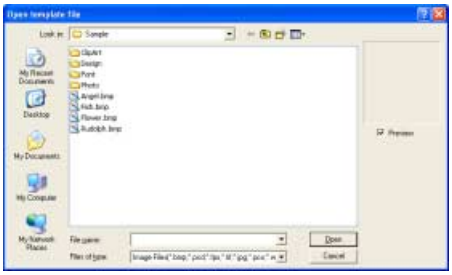
"Creating a New Pattern" on page 258, "Overwriting" on page 272 and "Saving with a new name" on page 272

Opening an image in the background

You can open a background image that can be used as a guide to draw a new fill/stamp and motif stitch pattern. The file name extension must be one of the following: Windows bitmap (.bmp), Exif (.tif, .jpg), ZsoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).

1. Click **File**, then **Template Open**.

→ An **Open template file** dialog box similar to the one shown below appears.



2. Select the drive, the folder and the desired file.

Memo:

*If the **Preview** check box is selected, the contents of the selected file will appear in the **Preview** box.*

3. Click **Open** to open the file.

→ The image fills the work area.

Memo:

- *Double-clicking the file name also opens the file and closes the dialog box.*
- *To quit the operation, click **Cancel**.*
- *To display, hide, or display a faded copy of the image that remains in the work area, click **Display**, then **Template**, and then click the desired display setting.*
  - *To display the template image, click **On (100%)**.*
  - *To display a faded copy of the image, click the desired density (**75%**, **50%** or **25%**).*
  - *To hide the template image, click **Off**.*

Note:

- *With .pcd and .fpx files containing many pages, only the first page can be opened. Tiff files with LZW compression cannot be opened.*
- *Only one image can be added to the work area. If you try to display a different image, it will replace the previous one.*

Creating a New Pattern

You can begin with a blank work area in order to design a new stitch pattern.

Toolbar button:

1. Click , or click **File**, then **New**.

→ If the current work area has already been saved or has not been edited, a new work area appears immediately.

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:

- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

"Opening a Pattern File" on page 256, "Overwriting" on page 272 and "Saving with a new name" on page 272

Selecting the Type of Stitch Pattern To Be Created

You can use Programmable Stitch Creator to create patterns for programmable fill stitches, stamps, motif fill stitches, motif line stitches. The method and work area are slightly different for each. Use the commands on the **Mode** menu to select the type of pattern that you want to create.

1. To enter Fill/Stamp mode, click **Mode**, then **Fill/Stamp**.
To enter Motif mode, click **Mode**, then **Motif**.

→ If the current work area has already been saved or has not been edited, a blank work area immediately appears in the selected mode.

→ If the current work area has not been saved, you will be asked whether you want to save the changes.

Memo:

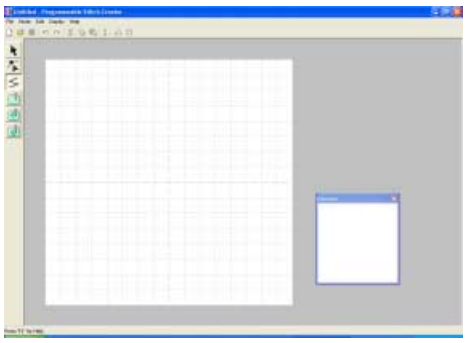
- *To save the work area, click **Yes**.*
- *To abandon the work area, click **No**.*
- *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

Fill/Stamp mode

In Fill/Stamp mode, you can make a stitch pattern out of a single line or sets of lines, and you can then choose to fill the areas enclosed by the lines to create an embossing/engraving effect. Both types of stitch patterns can be set as a programmable fill stitch in addition to being applied as individual stamps to regions of patterns in Design Center as well as Layout & Editing.

The Line tool in the Tool Box allows you to draw the lines of a fill stitch pattern or a stamp, and the Region (engrave), the Region (emboss) and the Region (reset) tools allow you to fill and edit the enclosed areas of the stitch or stamp that you draw.

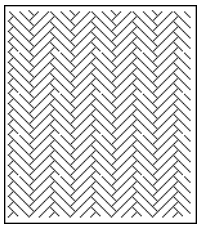
The sewing method for a programmable fill stitch is different from the regular fill stitch, where the thread is constantly sewn in a set direction. Instead, the pattern will be sewn in such a way that the needle drops directly over the created pattern.



Memo:

*To display the Preview Window, click **Display** on the menu bar, and then click **Preview**.*

Example of a pattern



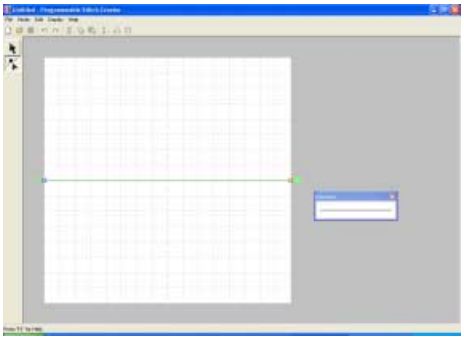
Motif mode

In Motif mode, you can create custom stitch patterns by changing the shape of a single line. These stitch patterns can be applied in line sewing and region sewing in Layout & Editing, and region sewing in Design Center.

A green arrow appears at the rignt center edge of the work area, showing the direction that the pattern (stitch) will be sewn.

A single pink line appears along with the green arrow. This line indicates the base for the motif stitch, which can be altered by inserting points with the Edit Point tool, and then moving them to form custom designs.

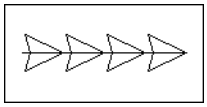
The blue square at the left edge of the work area indicates the start point of that line and the red square at the right edge indicates the end point of the stitch.
The start and end points cannot be deleted, and they must be aligned vertically. Therefore, if you move one point up or down, the other point will automatically move in the same direction.



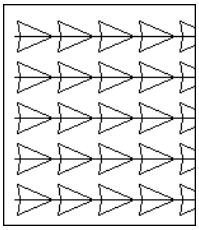
Memo:

*To display Preview Window, click **Display** on the menu bar, and then click **Preview**.*

Example of a pattern
Line sewing



Region sewing



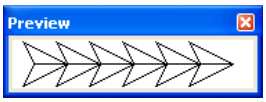
Viewing the Stitch Pattern While Creating It

You can display the Preview window to view a repeating image of the stitch pattern as you create it.

1. If the Preview window isn't displayed, click **Display**, then **Preview**.

The Preview window for the selected **Mode** setting appears, as shown in the examples below, and a check mark appears to the left of the menu command **Display Preview**.

Fill/Stamp mode



Motif mode

The image in the Preview window is updated as you enter the changes in the work area.

2. To close the Preview window, click its close button, or click the menu command **Display Preview** to remove the check mark.

Memo:

- *The Preview window can be resized.*
- *The setting for displaying the Preview window is retained, until it is changed.*

Creating a Stitch Pattern for Region Sewing (Fill/Stamp Mode)

The Line tool allows you to draw broken lines to create your fill/stamp stitch pattern. A broken line is made of one or more connected straight lines with the end point of one straight line being the start point of the next line.

The horizontal and vertical lines that you draw on the work area always follow the grid. The points that you create by clicking the mouse button are inserted at the intersection of the horizontal and vertical lines of the grid, enabling you to draw diagonal lines as well. Regardless of where you click, a point will automatically be inserted at the nearest intersection.

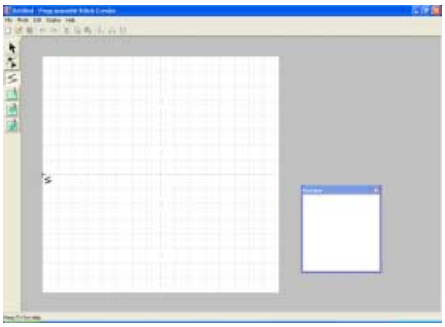
Depending on the stitch pattern that you want to draw, you may need to select a grid of a different size. In addition, by selecting **None**, the point will no longer be inserted at the nearest intersection, allowing you to create curved patterns. For details on the grids and adjusting them, refer to “Changing the grid settings” on page 273.

1. Click on the Tool Box.

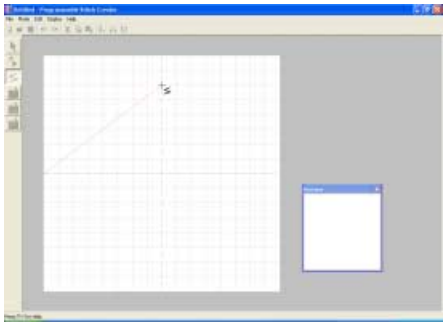
→ When the pointer is moved over the work the shape of the pointer changes to .

> **Note:**
> *This tool can only be used in Fill/Stamp mode.*

2. Click in the work area to specify the start point.

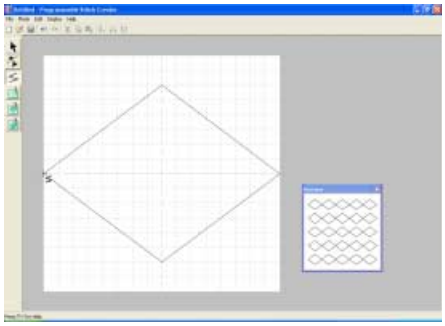


3. Click in the work area to specify the next point.



> **Memo:**
> *To remove the last point that was entered, click the right mouse button.*

4. Continue clicking to specify every point, and then double-click the last point.



5. Repeat the entire procedure until the fill/stamp stitch pattern is completed.

Editing a Stitch Pattern for Region Sewing (Fill/Stamp Mode)

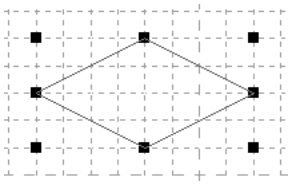
Selecting patterns

1. Click on the Tool Box.

   → The shape of the pointer changes to .

2. Click the pattern that you want to select.

   → Handles appear around the pattern to show that it is selected.



Note:
A pattern will not be selected if you do not click one of its lines.

Memo:
To deselect the pattern, select a different one, click a blank area of the work area, or click a button in the Tool Box other than .

3. To select an additional pattern, hold down the Ctrl key and click the other pattern.

Memo:
- *You can also select patterns by dragging the pointer across the pattern that you want to select. As you drag the pointer, a selection frame is drawn. All patterns that are contained in that selection frame are selected when the mouse button is released.*
- *If you selected patterns that you did not want, click a blank area of the work area to deselect all patterns, and start again.*

Selecting all patterns

1. Make sure that on the Tool Box is selected.

2. Click **Edit**, then **Select All**.

Moving patterns

1. Move the pointer over a selected pattern or group of selected patterns.

   → The shape of the pointer changes to .

2. Drag the pattern to the desired location.

Memo:
- *To move the pattern horizontally or vertically, hold down the Shift key while dragging it.*
- *Pressing the arrow keys moves the selected pattern one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*

Scaling patterns

1. Move the pointer over one of the handles of a selected pattern or group of patterns.

   → The shape of the pointer changes to , , or , depending on the handle that the pointer is over.

Memo:

- *is for scaling the width.*
- *is for scaling the height.*
- *and are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
- *If the Shift key is held down while a handle is dragged, the image is enlarged or reduced from the center of the image.*

2. Drag the handle to adjust the selected pattern(s) to the desired size.

Deleting patterns

1. Select the pattern to be deleted.
2. Press the Delete key, or click **Edit**, then **Delete**.

Cutting out patterns

Selected pattern(s) can be removed from the screen while saving a copy in the Clipboard.

Toolbar button:

1. Select one or more patterns.
2. Click , or click **Edit**, then **Cut**.

   → The selected patterns are removed from the work area.

Memo:

*Since the removed patterns are saved on the Clipboard, you can paste them back using the menu command **Edit** – **Paste**.*

"Copying patterns" on this page, "Pasting a cut or copied pattern" on this page and "Deleting patterns" on this page

Copying patterns

Selected pattern(s) can be saved on the Clipboard without being removed from the work area.

Toolbar button:

1. Select one or more patterns.
2. Click , or click **Edit**, then **Copy**.

   → The selected patterns are copied onto the Clipboard and are ready to be pasted.

"Cutting out patterns" on this page, "Duplicating patterns" on this page and "Pasting a cut or copied pattern" on this page

Duplicating patterns

A copy of the selected pattern(s) can be added to the work area.

1. Select one or more patterns.
2. Click **Edit**, then **Duplicate**.

   → A copy of the pattern(s) are added to the work area.

"Copying patterns" on this page and "Pasting a cut or copied pattern" on this page

Pasting a cut or copied pattern

The patterns on the Clipboard can be pasted into the work area.

Toolbar button:

1. Click , or click **Edit**, then **Paste**.

   → The patterns saved on the Clipboard (using the **Cut** or **Copy** command) are pasted into the work area.

"Cutting out patterns" on this page, "Copying patterns" on this page and "Deleting patterns" on this page

Flipping patterns vertically

You can flip the selected pattern(s) vertically (up/down).

Toolbar button:

1. Select one or more patterns.

2. Click , or click **Edit**, then **Mirror**, then **Horizontal**.

   → The selected pattern(s) are replaced by their horizontal mirror image (top and bottom inverted).

> **Memo:**
> *To restore the image to its original orientation, select the menu command **Edit – Mirror – Horizontal** again.*

"Flipping patterns horizontally" on this page and "Rotating patterns" on this page

Flipping patterns horizontally

You can flip the selected pattern(s) horizontally (left/right).

Toolbar button:

1. Select one or more patterns.

2. Click , or click **Edit**, then **Mirror**, then **Vertical**.

   → The selected pattern(s) are replaced by their vertical mirror image (left and right inverted).

> **Memo:**
> *To restore the image to its original orientation, select the menu command **Edit – Mirror – Vertical** again.*

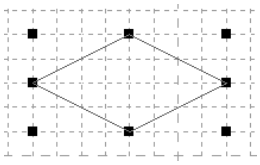
"Flipping patterns vertically" on this page and "Rotating patterns" on this page

Rotating patterns

You can manually rotate the selected pattern(s) by an arbitrary angle.

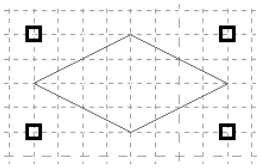
Toolbar button:

1. Select one or more patterns.



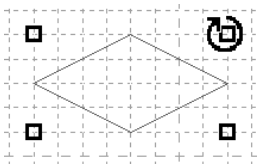
2. Click , or click **Edit**, then **Rotate**.

   → The handles around the selected pattern are replaced by empty squares at the four corners of the selected pattern.

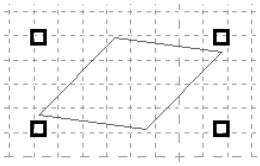


3. Move the pointer over one of the four rotation handles.

   → When the pointer is moved over a rotation handle, the shape of the pointer changes to .



4. Drag the rotation handle clockwise or counterclockwise to rotate the pattern to the desired angle.



Memo:

- *Simply dragging the pointer rotates the pattern in 1° increments.*
- *To rotate the pattern in 15° increments, hold down the* Shift *key while dragging the rotation handle.*

Reshaping a Stitch Pattern for Region Sewing (Editing Points)

The points that you move or insert are positioned at the intersection of the horizontal and vertical lines of the grid. Regardless of where you drag a point to or insert a point on the line, it will automatically be positioned at the nearest intersection.

Depending on the stitch that you want to create, you may need to select a grid of a different size. For details on the grids and adjusting them, refer to “Changing the grid settings” on page 273.

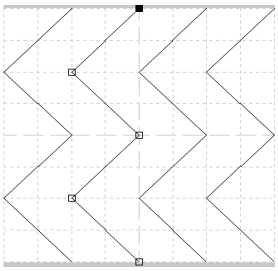
Moving points

1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Click the broken line that you want to edit.

→ The points in the broken line appear as small empty squares.



Memo:

You can only select one broken line at a time.

3. Click the point that you want to move.

→ The selected point appears as a small black square.

Memo:

- *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*
- *To select the previous (or next) point in the line, hold down the Ctrl key and press the → (or ←) key.*

Note:

If you click the line of the pattern instead of a point, a new point is inserted.

4. Drag the point to the new location.

→ All of the selected points move in the same direction.

Memo:

- *To move the point horizontally or vertically, hold down the Shift key while dragging it.*
- *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the point moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*

Inserting points

1. Click on the Tool Box.

→ The shape of the pointer changes to .

2. Click the broken line that you want to edit.

→ The points in the broken line appear as small empty squares.

Memo:

You can only select one broken line at a time.

3. Click the line to add a new point.

→ A new point appears selected (as a small black square).

Deleting points

1. Click on the Tool Box.

→ When the pointer is moved over the work area, the shape of the pointer changes to .

2. Click the broken line that you want to edit.

> **Memo:**
> *You can only select one broken line at a time.*

→ The points in the broken line appear as small empty squares.

3. Click the point that you want to delete.

→ The selected point appears as a small black square.

> **Memo:**
> *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*

4. Click **Edit**, then **Delete**, or press the Delete key to remove the point.

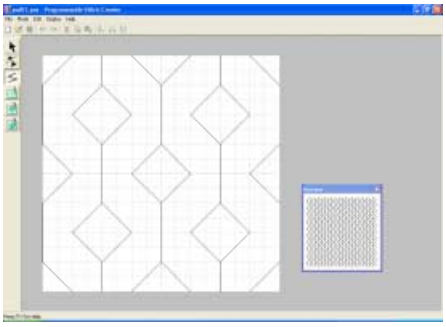
> **Memo:**
> *If a line is composed of two points and you delete one of them, the entire line is deleted.*

Specifying Region Sewing

Region sewing is composed of line stitches that, when they form enclosed areas or regions, the regions can be filled with different types of stitching in order to create a pattern with an embossing/engraving effect. .pas files with region settings applied can be applied to regions of patterns with the Stamp tool, and they can be used as a fill pattern for a programmable fill stitch in both Design Center and Layout & Editing. In Layout & Editing, the regions of patterns where stamps can be applied are those created with the Circle or Arc, Rectangle, Outline, Text or Manual Punch tools.

1. Open an existing fill/stamp pattern file (.pas file) or draw a new stitch pattern with the Line tool in the Fill/Stamp mode.

> **Note:**
> *In order to apply the region settings (embossing/engraving effects), make sure that the lines of the stitch pattern form an enclosed area.*
> *The edge of the work area does enclose regions. In order to use the edge of the work area as a limit for regions, lines must be drawn over it first.*

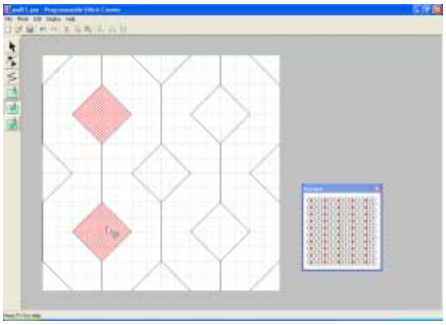


2. To create an engraving effect, click (**Region (engrave)**).

→ The shape of the pointer changes to .

3. Click each region where you want to apply the engraving setting.

→ The regions appear in red, which is the color for the tool.



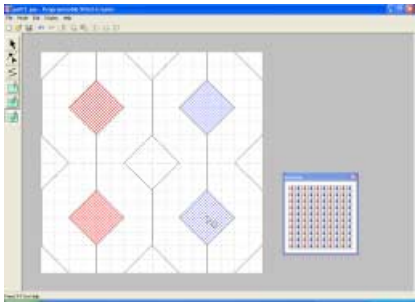
> **Memo:**
> *This type of region will be sewn with the fill stitch set to a pitch of 2.0 mm (0.16 in) and a frequency of 30%, and the needle drop point will be set on the outline.*

4. To create an embossing effect, click (**Region (emboss)**).

→ The shape of the pointer changes to .

5. Click each region where you want to apply the embossing setting.

→ The regions appear in blue, which is the color for the tool, and will be sewn with stitching that appears like satin stitching.



6. To remove the stamp effect applied to a region, click (**Region (reset)**).

→ The shape of the pointer changes to .

7. Click each region where you want to remove the engraving or embossing setting.

→ The region appears in white, which is the color for the tool, and will be sewn in the direction set for the base stitch.

> **Note:**
> - *If you edit stitch lines after a region has been filled, make sure that the lines still form a region, otherwise the embossing/ engraving effects are canceled.*
> - *.pas files with region settings applied cannot be used with versions of the software earlier than version 6, but .pas files created with an earlier version can be used as a base to create stamp files.*

Creating a Motif Stitch Pattern (Motif Mode)

In Motif mode, stitch patterns are created by inserting points on the base line of the motif stitch, then moving them in order to change the shape of the stitch and give it the look of a single-stroke drawing.

The points you move or insert are positioned at the intersection of the horizontal and vertical lines of the grid. Regardless of where you drag a point to or insert a point on the line, it will automatically be positioned at the nearest intersection.

Depending on the stitch you want to create, you may need to select a grid of a different size. For details on the grids and adjusting them, refer to “Changing the grid settings” on page 273.

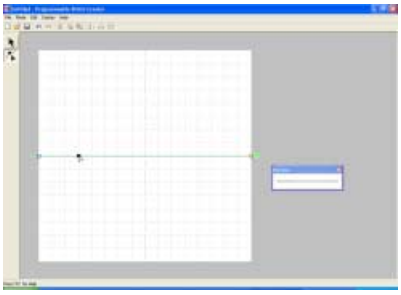
1. Click on the Tool Box.

→ The shape of the pointer changes to .

> **Memo:**
> *The Point Edit tool is selected automatically when Motif mode is entered.*

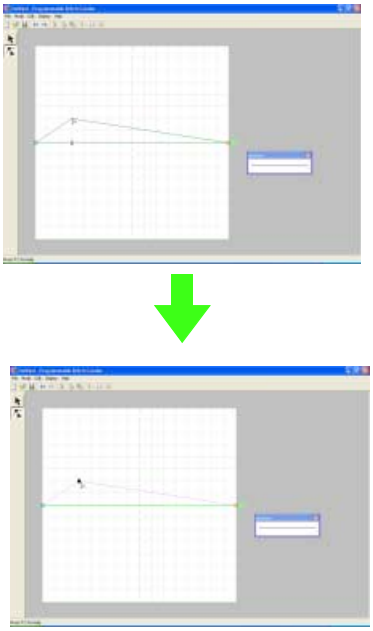
2. Click the base line between the start point (blue square) and end point (red square).

→ A new point appears selected (as a small black square). The new point can be edited.



3. Drag the point that you want to move to a new position.

→ The stitch line moves with the newly created point.



> **Memo:**
> - *To move the point horizontally or vertically, hold down the Shift key while dragging it.*
> - *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*
> - *To delete a selected point, press the Delete key.*

4. Repeat steps **2.** and **3.** until the motif stitch pattern is completed.

> **Memo:**
> - *If you move the start point (blue square) or the end point (red square), the other point will automatically move in the same direction.*
> - *The start and end points cannot be moved closer together than a certain fixed distance.*

Editing a Motif Stitch Pattern (Motif Mode)

After creating a stitch pattern, or after opening an existing motif file, you may want to change its shape or position. To do so, you can proceed in the same way as described above, but in addition, you can select and move or delete several points at the same time.

Moving and deleting several points at a time

1. Click on the Tool Box.

→ The shape of the pointer changes to .

> **Memo:**
> *The Point Edit tool is selected automatically when Motif mode is entered.*

2. Click the base line between the start point (blue square) and end point (red square).

→ The selected point appears as a small black square.

> **Memo:**
> - *To select additional points, hold down the Ctrl key and click each point, or drag the pointer over the points that you want to select.*
> - *To select the previous (or next) point in the line, hold down the Ctrl key and press the → (or ←) key.*

> **Note:**
> *If you click the line of the pattern instead of a point, a new point is inserted.*

3. To move the point(s), drag them to the desired location.

→ All of the selected points move in the same direction.

4. To delete the selected points, press the Delete key.

→ All of the selected points are deleted.

> **Note:**
> *The start point (blue square) and end point (red square) can not be deleted.*

Scaling patterns

1. Click on the Tool Box.

→ The motif stitch is selected.

2. Move the pointer over one of the handles of the pattern.

→ The shape of the pointer changes to ↔, ↕, ↖↘ or ↗↙, depending on the handle that the pointer is over.

> **Memo:**
> - *↔ is for scaling the width.*
> - *↕ is for scaling the height.*
> - *↖↘ and ↗↙ are for scaling both dimensions at the same time. (The height-to-width proportion is maintained.)*
> - *If the Shift key is held down while a handle is dragged, the image is enlarged or reduced from the center of the image.*

3. Drag the handle to adjust the selected pattern(s) to the desired size.

Flipping a pattern horizontally or vertically

You can flip selected patterns horizontally (up/down) or vertically (left/right).

1. Click on the Tool Box.

→ The motif stitch is selected, and and are available in the Toolbar.

2. To replace the stitch pattern by its horizontal mirror image (top and bottom inverted), select **Edit**, then **Mirror**, then **Horizontal**, or click in the Toolbar.

To replace the stitch pattern by its vertical mirror image (left and right inverted), select **Edit**, then **Mirror**, then **Vertical**, or click in the Toolbar.

Memo:

*To restore the image to its original orientation, select the same menu command again, or select the menu command **Edit** – **Undo**.*

Saving Stitch Patterns

Overwriting

Once the stitch pattern has been saved, changes can easily be saved so that the latest version can be retrieved later.

Toolbar button:

1. Click , or click **File**, then **Save**.

→ If the pattern has already been saved at least once, the file is saved immediately.

→ If no file name has been specified or if the file cannot be found, the **Save As** dialog box appears.

"Saving with a new name" on this page

Saving with a new name

The current file can be saved with a different file name in order to keep the original unchanged or to keep various versions of the same image or pattern. The files are saved as.pas files in Fill/Stamp mode, and as .pmf files in Motif mode.

1. Click **File**, then **Save As**.

→ A **Save As** dialog box similar to the one shown below appears.

2. Select the drive and the folder, and then type in the file name.

> **Memo:**
> *The correct extension is automatically selected.*

3. Click **Save** to save the pattern.

> **Memo:**
> - *To quit the operation, click **Cancel**.*
> - *If a file already exists with the name specified in the **Save As** dialog box, the following message appears.*

> - *To overwrite the file, click **Yes**.*
> - *If you do not want to overwrite the existing file, click **No**. You can then enter a different file name.*

"Overwriting" on this page

> **Note:**
> *Stamp files cannot be used with versions of the software earlier than version 6, but .pas files created with an earlier version can be used as a base to create stamp files.*

Changing the Settings

Changing the display of the background image

The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed.

1. Click **Display**, then **Template**, and then select the desired setting.

To display the template image, click **On (100%)**.

To display a faded copy of the image, click the desired density (**75%**, **50%** or **25%**).

To hide the template image, click **Off**.

Memo:

- *This function is not available if no template image has been imported into the work area.*
- *Press the shortcut key (F6) to switch between displaying the image (**On (100%)**) to displaying it faded at each density (**75%**, **50%** and **25%**) to hiding the image (**Off**).*

"Opening an image in the background" on page 257

Changing the grid settings

The line spacing in the grid displayed in the work area can be adjusted.

1. Click **Display**, then **Grid**.

→ A submenu showing the current grid setting appears.

2. Click the grid setting that you need for the stitch pattern that you are creating or editing.

To select a grid interval of 1/8 of a work area's edge, click **Wide**.

To select a grid interval of 1/16 of a work area's edge, click **Medium**.

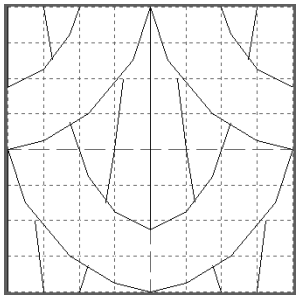
To select a grid interval of 1/32 of a work area's edge, click **Narrow**.

To hide the grid, click **None**.

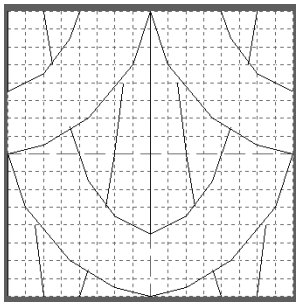
Memo:

- *You can also change the grid setting while you are working on a stitch pattern.*
- *The setting for the grid setting is retained, until it is changed.*

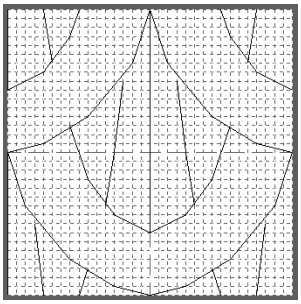
Example 1: **Wide** grid



Example 2: **Medium** grid



Example 3: **Narrow** grid



The horizontal and vertical lines that you draw in the work area always follow the grid. The points you create by clicking in the work area are inserted at the intersection of the horizontal and vertical lines of the grid, enabling you to draw diagonal lines as well. Regardless of where you click, a point will automatically be inserted at the nearest intersection. Select a different grid size according to the type of stitch that you want to draw. Select a narrower grid for drawing finer details or to give a curved or circular appearance to your stitch lines, and select a wider grid if you want to draw a simpler stitch pattern. Select **None** to turn off the snap to grid feature, allowing you to create curved patterns.

Starting Up Design Database

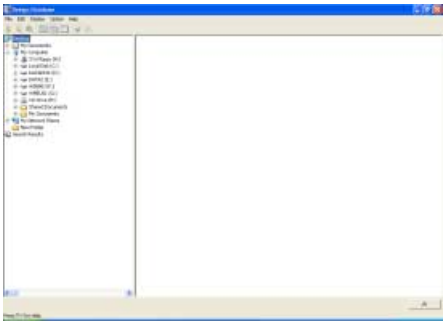
1. Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Design Database** to open the Design Database window.

   → The Design Database window appears.

   Memo:
   To fill the entire screen with the Design Database window, click the maximize button on the right end of the title bar.

2. Click a folder in the folder pane.

   → All embroidery files in the folder are displayed in the contents pane on the right.



Memo:
The displayed files have the following extensions.
.pes, .phc, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, .xxx

Organizing Embroidery Designs

You can move your embroidery designs to different folders in order to organize them. In addition, you can choose to display the embroidery designs by thumbnails or by the pattern details.

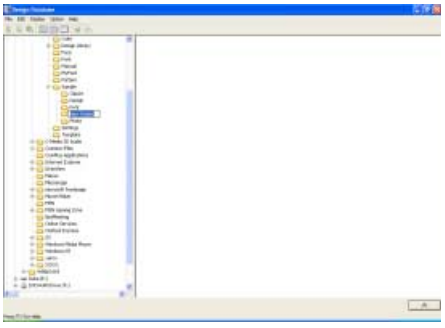
Creating new folders

New folders can be created in order to better organize the embroidery patterns.

1. In the folder pane, on the left, select the folder where you want to create a new folder.

2. Click **File**, then **Create New Folder**.

   → A **New Folder** appears as a sub-folder of the one that was selected.



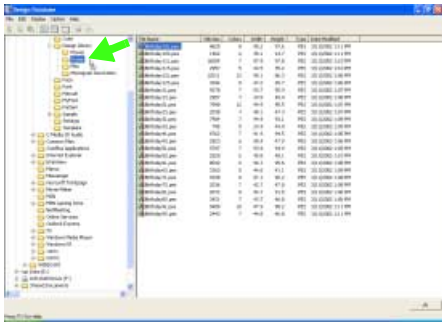
3. Type in the name of the new folder, and then press the Enter key.

   → The name of the folder changes to the one that was typed in.

Moving/copying files to a different folder

From Design Database, embroidery design can easily be moved from one folder to another.

1. In the folder pane, locate the folder where you want to move the embroidery design.
2. In the folder pane, click the folder that contains the embroidery design that you want to move.
3. Drag the embroidery design in the contents pane to the folder you previously located in the folder pane.



→ If the two folders are on the same drive, the selected embroidery design is **moved** to the other folder.

→ If the two folders are on separate drives, the selected embroidery design is **copied** into the other folder.

Memo:

- *To copy the file from one folder to another on the same drive, hold down the* Ctrl *key while dragging the embroidery design.*
- *To move the file from one folder to another on different drives, hold down the* Shift *key while dragging the embroidery design.*
- *The file can also be removed from the current folder (or copied) by selecting the menu command **Edit** – **Cut** (or **Edit** – **Copy**). Then, the file can be added to the new folder by selecting it in the folder pane, then selecting the menu command **Edit** – **Paste**.*

Changing file names

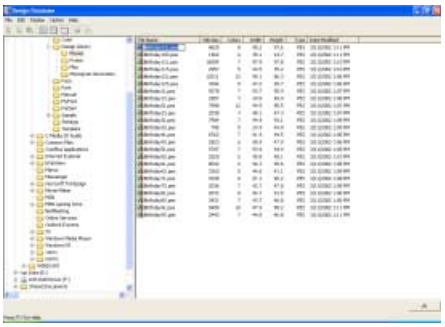
In the Design Database, the names of embroidery designs can easily be changed.

Note:

*The names of embroidery designs can be changed from Design Database only when the sewing information (menu command **Display** – **Details**) is displayed. (Refer to "Changing how files are displayed" on page 276 .)*

1. In the folder pane, select the folder containing the embroidery design that you want to rename.
2. Select the embroidery design that you want to rename. Then click again.

   → The name will be highlighted inside a box.



3. Type in the new name of the embroidery design, and then press the Enter key.

Memo:

When renaming a file, the file extension cannot be changed.

Deleting files

From Design Database, embroidery designs can easily be deleted.

1. In the folder pane, select the folder containing the embroidery design that you want to delete.
2. In the contents pane, select the name of the embroidery design that you want to delete.
3. Press the Delete key.

   → The file is moved to the Recycle Bin.

Memo:

- *You can also delete embroidery design by using the menu command **File – Delete**.*
- *To immediately remove the file without first moving it to the Recycle Bin, hold down the Shift key before pressing the Delete key.*
- *You can also right click on the file you want to delete and select **Delete** from the pop up menu.*

Changing how files are displayed

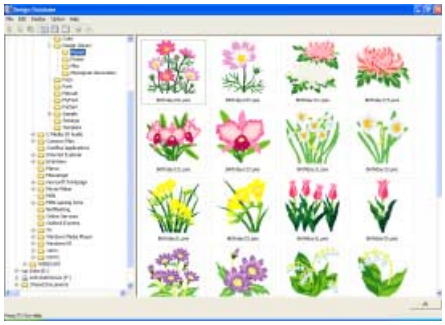
The embroidery designs in the contents pane can be displayed as large thumbnails or small thumbnails, or they can be listed by their sewing information.

1. Click **Display**, and then click the display setting from the menu that appeared.

To display the embroidery designs as large images, click **Large Thumbnails**.

Memo:

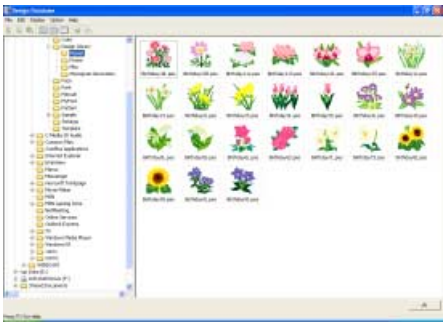
You can also display the embroidery designs as large thumbnails by clicking in the Toolbar.



To display the embroidery designs as small images, click **Small Thumbnails**.

Memo:

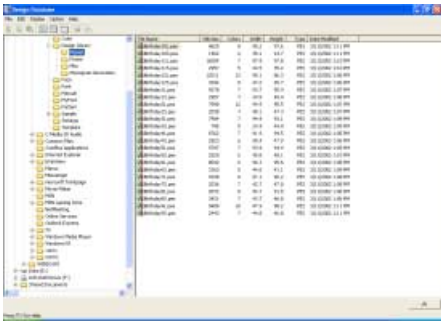
You can also display the embroidery designs as small thumbnails by clicking in the Toolbar.



To display the sewing information for the embroidery designs, click **Details**.

Memo:

You can also display the sewing information for the embroidery designs by clicking in the Toolbar.



Opening Embroidery Designs

Opening files with Layout & Editing

You can easily open any selected .pes file with Layout & Editing.

1. In the folder pane, select the folder containing the embroidery design that you want to open in Layout & Editing.
2. In the contents pane, select the .pes file that you want to open.

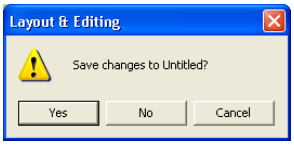
> **Note:**
> *Be sure to select a folder that contains .pes files.*

3. Click **File**, then **Open in Layout & Editing**.

> **Memo:**
> *Double-clicking the file or dragging and dropping the file into the Layout & Editing window also opens the embroidery pattern in a new Design Page of the Layout & Editing window.*

→ If the current Layout & Editing work area has already been saved or has not been edited, the selected embroidery pattern immediately appears in a new Design Page of the Layout & Editing window.

→ If the current Layout & Editing work area has not been saved, you will be asked whether you want to save the changes.



> **Memo:**
> - *To save the work area, click **Yes**.*
> - *To abandon the work area, click **No**.*
> - *To return to the work area, for example, to modify it or save it with another file name, click **Cancel**.*

"Overwriting" on page 177 and "Saving with a new name" on page 177

Importing files into Layout & Editing

You can easily import any selected embroidery design into Layout & Editing. Files in the following formats can be imported.
.pes, .phc, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, or .xxx

1. In the folder pane, select the folder containing the embroidery design that you want to import into Layout & Editing.
2. In the contents pane, select the embroidery design that you want to import.
3. Click **File**, then **Import Into Layout & Editing**.

→ The selected embroidery design appears in the Layout & Editing window.

> **Memo:**
> *One or more displayed embroidery designs can also be imported into the Design Page by holding down the Ctrl key while dragging the design or designs into the Layout & Editing window.*

Checking Embroidery Designs

Previewing files

A preview of the embroidery design can be displayed.

Toolbar button:

1. In the folder pane, select the folder containing the embroidery design that you want to preview.
2. In the contents pane, select the embroidery design that you want to preview.
3. Click , or click **Display**, then **Preview**.

   → A **Preview** dialog box similar to the one shown below appears.

> **Memo:**
> *To close the dialog box, click **Close**.*

Checking file information

Sewing information such as the file name, size, stitch count, color count and modification date can be checked in the **File Property** dialog box. With .pes file, additional information about the embroidery design can be viewed.

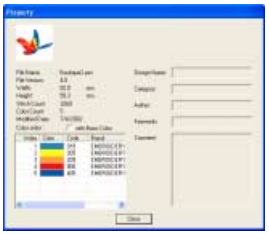
Toolbar button:

1. In the contents pane, select the embroidery design corresponding to the information that you want to view.
2. Click , or click **Display**, then **File Property**.

   → The **Property** dialog box appears.

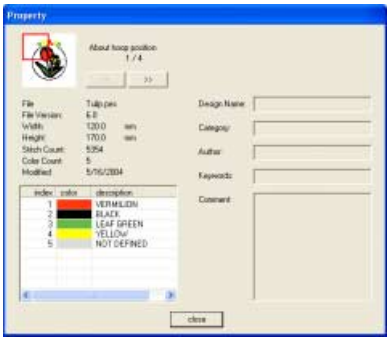
Non-PES files and PES files from version 3.0 or earlier

PES files (version 4.0 or later)



> **Memo:**
> - *This dialog box can be resized. The size of the dialog box is retained until it is changed again.*
> - *To close the dialog box, click **Close**.*
> - *The thread colors are displayed as basic colors. Thread colors in .pes files are displayed according to the thread colors set when the file was read by Layout & Editing.*
> - *To switch to display with basic colors, select the **with Basic Color** check box.*

→ If the Design Page was set to **Custom Size**, a **Property** dialog box similar to the one shown below appears.



Memo:

- *The red box in the dialog box shows the position of the displayed pattern section.*
- *To display information for other hoop positions, click « or » .*
- *The hoop positions are displayed in order from left to right, top to bottom. Pattern sections that do not contain any stitching will not be displayed.*
- *To close the dialog box, click **Close**.*

Note:

« cannot be clicked when the design corresponding to the first hoop is already displayed. In addition, » cannot be clicked when the design corresponding to the last hoop is already displayed.

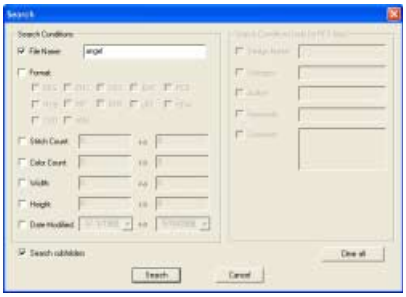
Searching for an Embroidery Design

The Search function allows you to quickly search for the desired embroidery design (.pes, .phc, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, or .xxx) within the selected folder according to the various search conditions that you can specify.

1. In the folder pane, select the folder that you want to search.

2. Click **File**, then **Search**.

→ The **Search** dialog box appears.



3. Specify the search conditions.

To search for a file with a specific file name, select the **File Name** check box, and then type the file name in the box beside **File Name**.

> **Memo:**
>
> *Wildcard characters ("?" to represent a single character and "∗" to represent multiple characters) can also be used.*

To search for a file with a specific format, select the **Format** check box, and then select the check box beside the desired format.

To search for a file with a number of stitches within a specified range, select the **Stitches** check box, and then type the range in the boxes beside **Stitches**.

To search for a file with a number of colors within a specified range, select the **Colors** check box, and then type the range in the boxes beside **Colors**.

To search for a file with a width within a specified range, select the **Width** check box, and then type the range in the boxes beside **Width**.

To search for a file with a height within a specified range, select the **Height** check box, and then type the range in the boxes beside **Height**.

To search for a file with a modification date within a specified range, select the **Date Modified** check box, and then type or select the range in the boxes beside **Date Modified**.

To search for a .pes file with a design name that contains specific characters, select the **Design Name** check box, and then type the desired characters in the box beside **Design Name**.

To search for a .pes file with a category that contains specific characters, select the **Category** check box, and then type the desired characters in the box beside **Category**.

To search for a .pes file with an author name that contains specific characters, select the **Author** check box, and then type the desired characters in the box beside **Author**.

To search for a .pes file with a keyword that contains specific characters, select the **Keywords** check box, and then type the desired characters in the box beside **Keywords**.

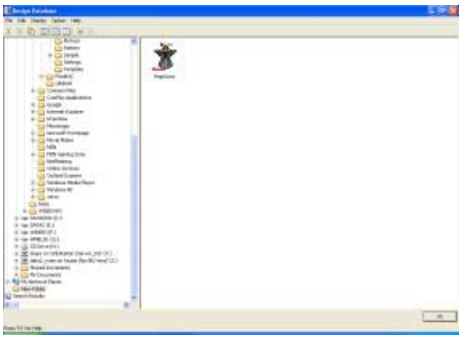
To search for a .pes file with a comment that contains specific characters, select the **Comment** check box, and then type the desired characters in the box beside **Comment**.

> **Memo:**
>
> - *To also search through the subfolders (folders within the selected folder), select the **Search Subfolders** check box.*
> - *All characters entered in the box beside **File Name** will be considered as a single set of characters. However, you can search for files matching multiple words in the boxes below **Search Conditions (only for PES files)** by separating the words with a space.*
> - *With search conditions that contain a range, values must be entered for the start and end of the range.*

To clear the search conditions, click **Clear all**.

4. Click **Search**.

→ A list of files matching the specified search conditions appears.



Memo:

*To quit the search, click **Search Cancel** in the message box that appeared during the search.*

Converting Embroidery Design Files to Different Formats

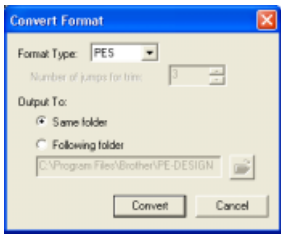
Embroidery design files can easily be converted to a file of one of the other formats (.pes, .dst, .exp, .pcs, .hus, .vip, .shv, .jef, .sew, .csd, or .xxx).

1. In the folder pane, select the folder containing the embroidery design that you want to convert.

2. In the contents pane, select the embroidery design file that you want to convert.

3. Click **File**, then **Convert Format**.

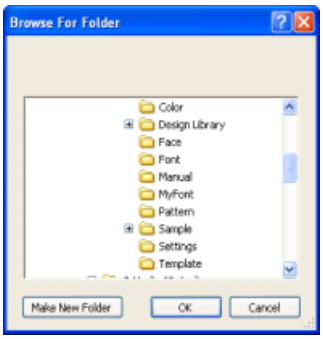
→ The **Convert Format** dialog box appears.



4. From the **Format** selector, select the format that you want to convert the file to.

> **Memo:**
>
> *With the DST format, jump codes are used to indicate when the thread must be cut in order to change the thread color. Since the number of codes differ depending on the sewing machine being used, type or select the appropriate value in the **Number of jumps for trim** box. (This setting can only be specified if the .dst format is selected.)*

5. Under **Output To:**, select whether the new file is added to the same folder as the original file (**Same folder**) or to a specified folder (**Following folder**).

> **Memo:**
>
> - *If multiple files with different formats are selected to be converted while **Same folder** is selected, any file with the same format as the new one will not be converted. However, if the files are being added to a different folder than the original one, any file with the same format as the new one will be copied to the different folder, instead of being converted.*
> - *To change the folder where the new file will be added, click* *.*
>
> 
>
>
> *In the **Browse For Folder** dialog box that appeared, click the folder, and then click **OK** (or double-click the folder) to select it and to close the **Browse For Folder** dialog box.*
>
> - *To create a new folder, click **New Folder**, and then type in the name of the new folder.*

6. Click **Convert**.

→ The file is converted, and the new file is added to the specified folder.

Memo:

- *If the file is converted to a .pes file, the thread colors are converted as if the file was imported into Layout & Editing.*
- *If the path to a folder that does not exist was typed in, a message appears, asking if you want to create the folder.*
- *If a file with the same name already exists, a message appears, asking if you want to overwrite the original file.*
- *The name of the file after the conversion is the same as the name before the conversion, except the extension is changed to the one corresponding to the selected file format.*

Note:

Files cannot be converted to the .phc format.

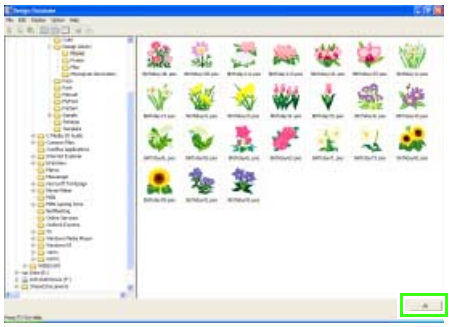
Writing Embroidery Design Files to an Original Card

Selected files can be written to original cards. The embroidery patterns written to original cards can then be transferred to an embroidery machine and sewn.

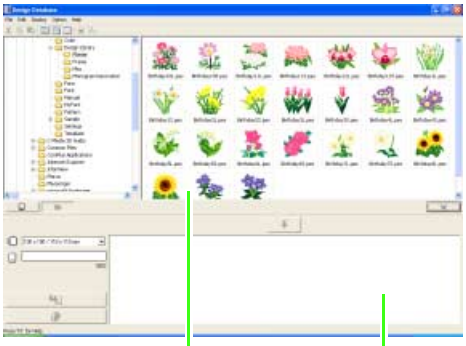
1. Insert an original card into the USB card writer module.
Files other than .phc files can be written.

> **Note:**
> - *The original card is inserted correctly when you hear it snap into place.*
> - *The embroidery machine must be turned off before original cards are inserted or removed. However, it is not necessary to turn off the computer when original cards are inserted or removed from the USB card writer module.*

2. Click .



→ The **Card writing box** appears.



> **Memo:**
> - *To hide the card writing box, click*

3. From the **Hoop size** selector, select the appropriate size of embroidery hoop.

> **Memo:**
> *Do not select a hoop size larger than the embroidery hoop that can be used with your embroidery machine. Otherwise, the created original card will not work correctly with the embroidery machine.*

4. Click , and then select the folder where the desired design file (.pes) is saved.

→ All embroidery files in the selected folder are displayed in the contents pane.

5. In the contents pane, select the embroidery file that you want to write to the original card.

6. Click , or right-click it, and then click **Add to Writing List**.

→ The selected file is added to the writing list.

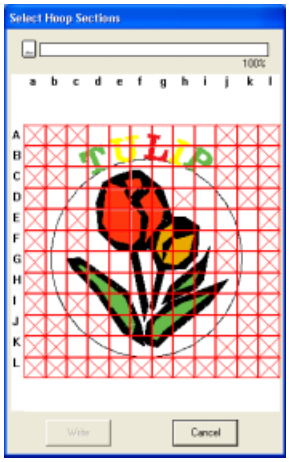
> **Memo:**
> *A file can also be added to the writing list by selecting it in the contents pane, then dragging it to the writing list.*

Note:

If a .pes file is saved with objects extending off the Design Page or with the number of stitches or number of colors for the objects exceeding the Design Page limitations, the designs cannot be saved on an original card. Only the embroidery designs displayed in the writing list will be written to the original card.

Memo:

- *To remove an embroidery design file from the writing list, click , or right-click it, and then click **Remove from Writing List**.*
- *Patterns created on a custom-sized Design Page are written to cards split into their various hoop sections.*
  *If the total size of the pattern exceeds the capacity of the original card or if your hoop size is 90 × 90 cm (3.54" × 3.54") and the Design Page is split into over 80 sections, the available space appears in yellow on the progress bar. When is clicked, the **Select Hoop Sections** dialog box appears, allowing you to select the pattern sections to be written in the available space on the card.*



The progress bar at the top of the dialog box shows the available space on the card as you select pattern sections to be written to the card. The space used by the selected pattern sections appears in blue. If, however, you select a pattern section that exceeds the size limit, the space used appears in yellow, and if you select several pattern sections which exceed the size limit, the space used appears in red.
*Click **Select** to add the selected pattern sections to the writing list. To deselect a pattern section, simply click it again. (The **Select** button is available only when a section is selected and the space on the card is sufficient to receive the selected patterns.)*

7. Continue until all embroidery designs that you want to write to an original card are selected.

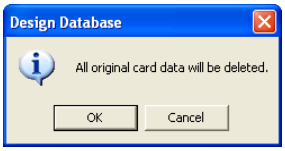
Memo:

- *During this process, the card capacity indicator allows you to plan which designs you would like to save on an original card. The space used by designs in the writing list appears in blue.*

- *To rewrite the embroidery files written on the original card, click [ ] to select those files, and move files to the writing list in the same manner.*

8. After the embroidery designs to be written to the original card appear in the writing list, click [ ] to write the designs to the card.

→ The following message appears.



9. Click **OK**.

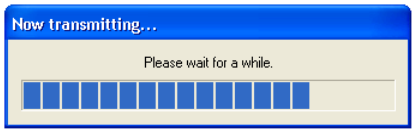
→ The embroidery design in the writing list are written to the original card.

Note:

Do not remove the card or unplug the USB cable while patterns are being written to the card (while the LED indicator is flashing).

10. To check the embroidery design file being written to the original card, click [ ].

→ If a card writer module is connected and if an original card is inserted into the card writer module, the following message appears and the embroidery designs are read from the card.

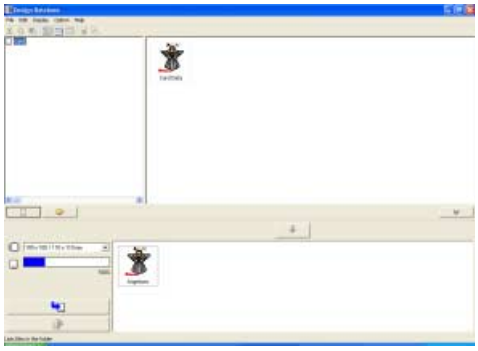


Note:

- *If no original card is inserted, the following message appears.*

- *Insert an original card, and then click **Retry**.*
- *To quit the operation, click **Cancel**.*

→ [ ] Card appears in the folder pane, and all embroidery designs written to the original card appear in the contents pane.



Memo:

- *Embroidery designs written to the original card appear as "**Card Data**" in the contents pane.*
- *To display the contents of the folder in the contents pane, click [ ]. Switch the display by clicking [ ] and [ ].*

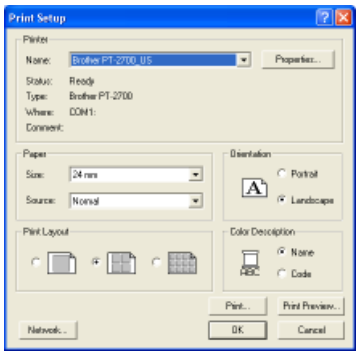
Outputting a Catalog of Embroidery Designs

Printing

Images of all embroidery designs in the selected folder can be printed as a catalog.

1. In the folder pane, select the folder containing the embroidery designs that you want to catalog.
2. Click **File**, then **Print Setup**.

   → A **Print Setup** dialog box similar to the one shown below appears.



3. Under **Print Layout**, select whether each design is printed on a separate page, 4 designs are printed on a page or 12 designs are printed on a page.
4. Under **Color Description**, select whether the thread colors appear as the name of the color or as the brand and thread number.

   Memo:

   If the brand name and thread number are long, some of the text may not be displayed.

5. Click **Print**.

   → Images of the selected designs are printed.

Memo:

- *If one or more embroidery designs were selected in the contents pane, only the selected designs are printed.*
- *The catalog can be printed immediately by clicking the menu command **File** – **Print**. The embroidery designs are printed according to the settings already selected in the **Print Setup** dialog box.*

Outputting as an HTML file

Instead of being printed, the catalog of embroidery designs can be outputted as an HTML file.

1. In the folder pane, select the folder containing the embroidery designs that you want to catalog.
2. Click **File**, then **Create HTML**.

   → A **Save As** dialog box similar to the one shown below appears.

3. Select the drive and the folder, and then type in the name of the HTML file.
4. To add a title at the top of the file and in the title bar, type the title in the **Page Title** box.
5. Under **Page Layout**, select how the designs appear on the page.
6. Click **Save**.

   → The HTML file and a folder containing images of the embroidery designs are outputted to the selected folder.

Outputting as a CSV file

A .csv file containing the sewing information (file name, dimensions, number of stitches, number of colors, file path, file properties (.pes files only) and the names of thread colors and thread numbers) for selected embroidery designs can be outputted.

1. In the folder pane, select the folder containing the embroidery designs that you want to catalog.

2. Click **File**, then **Create CSV**.

   → A **Save As** dialog box similar to the one shown below appears.

3. Select the drive and the folder, and then type in the name of the .csv file.

4. Click **Save**.

   → A CSV file containing the sewing information for the embroidery designs is outputted to the selected folder.

Automatically Converting a Photo to an Embroidery Pattern (Photo Stitch Function)

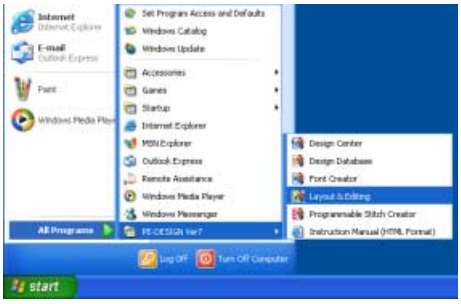
We will be going through basic operations on how to use a photo to create a beautiful embroidery pattern using the Stitch Wizard.
In this section, you will also learn how to make manual adjustments to the within the Stitch Wizard to achieve a beautiful embroidery pattern.

Step 1	Importing photo data into Layout & Editing
Step 2	Automatically converting the image to an embroidery pattern
Step 3	Setting up the Color Option
Step 4	Displaying a preview of the embroidery
Step 5	Saving the embroidery design
Step 6	Transferring the design to an original card

Step 1 Importing photo data into Layout & Editing

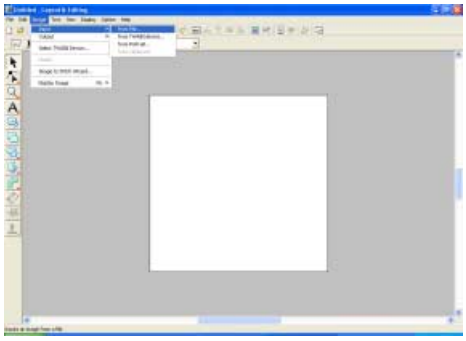
First, we need to import the image that will be converted into an embroidery pattern.
For this example, we will use the photo of the girl (girl-face.bmp) provided with this application.

1 Start up Layout & Editing.

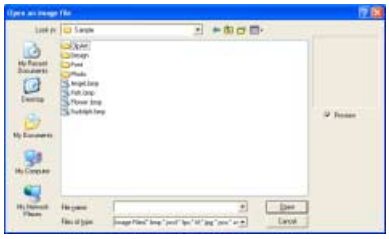


Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

2 Import the image.

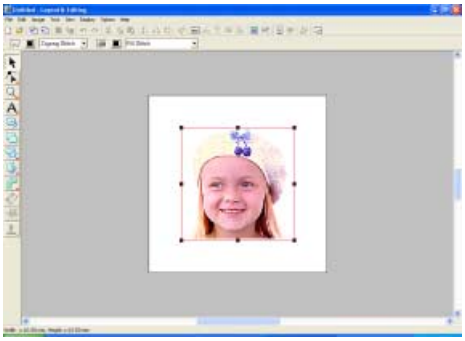


Click **Image**, then **Input**, then **from File**.

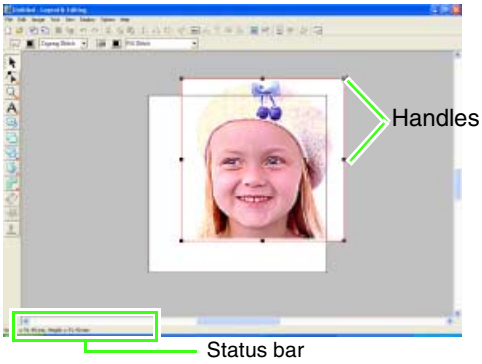


Double-click the **Photo** folder to open it.

Select the sample file **girl-face.bmp**, and then click **Open,** or double-click the files icon.

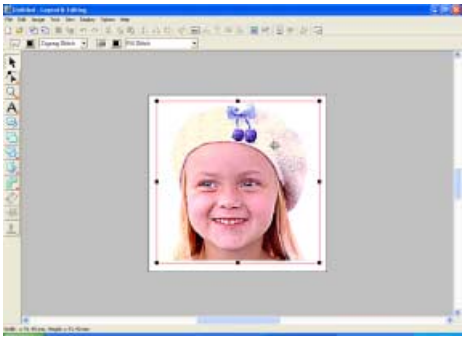


3 **Adjust the image size and position.**



Drag the handle to adjust the selected image to the desired size.

> **Memo:**
>
> *If the handles have disappeared, right-click the image, and then click **Modify Image** in the menu that appeared.*

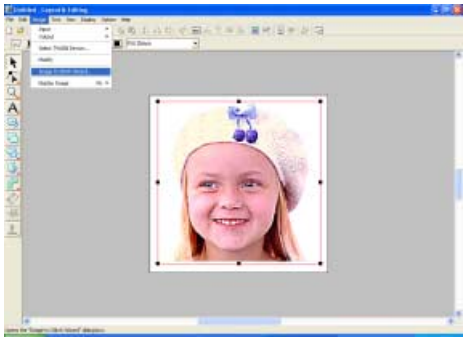


Move the pointer over the selected image, and then drag the image to the desired position.

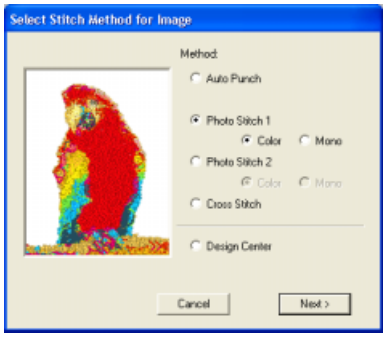
Step 2 Automatically converting the image to an embroidery pattern

Next, the image will automatically be converted to an embroidery pattern.

1 **Select the conversion method.**

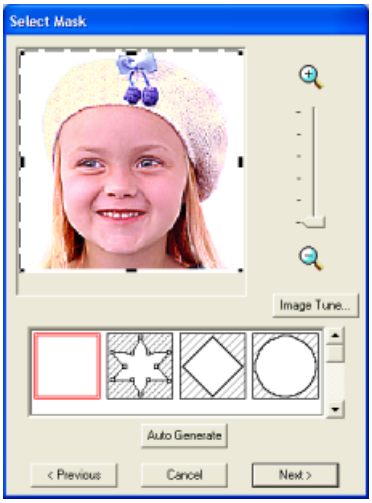


Click **Image**, then **Image to Stitch Wizard**.



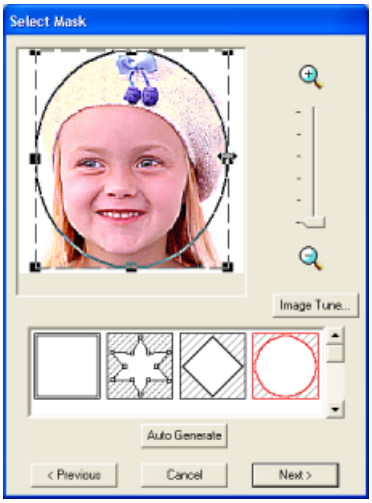
Click **Photo Stitch 1**, then **Color**, and then click **Next**.

2 **Select the area (mask shape and position) of the photo to be converted the embroidery pattern.**

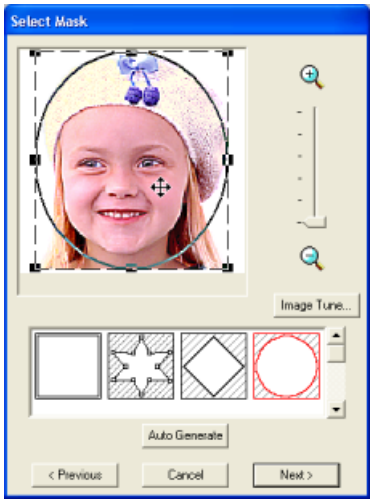


Select the shape of the mask.

If Round mask is selected



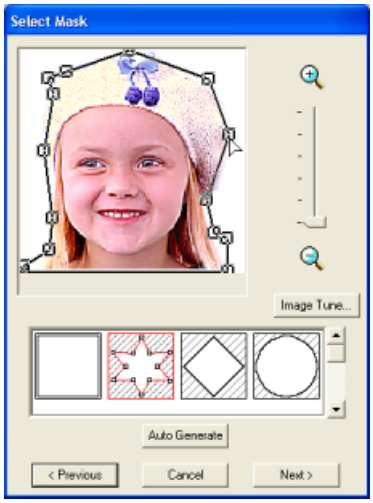
Drag the handle to adjust the mask to the desired size.



Move the pointer inside the mask, drag the mask to the desired position, and then click **Next**.

If is selected

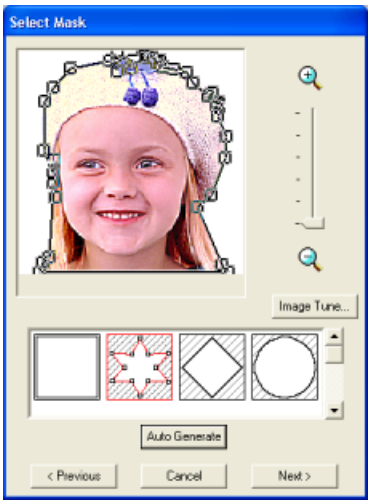
To create a mask of a desired shape, click .



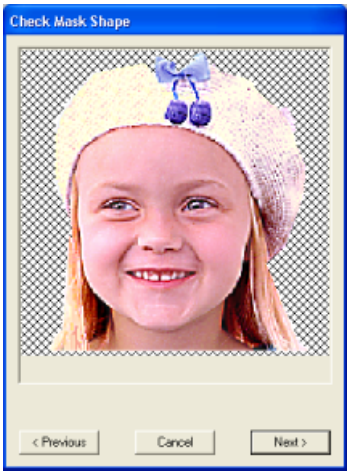
Move, enter or delete points to adjust the mask shape.
To add points, click the outline of the mask. To delete points, select the point, and then press the Delete key.
After editing is finished, click **Next**.

Memo:

*With a single-colored background, as in this example (girl_face.bmp), click **Auto Generate** to automatically detect the outline of the image.*



→ The image is analyzed, and the **Check Mask Shape** dialog box appears.



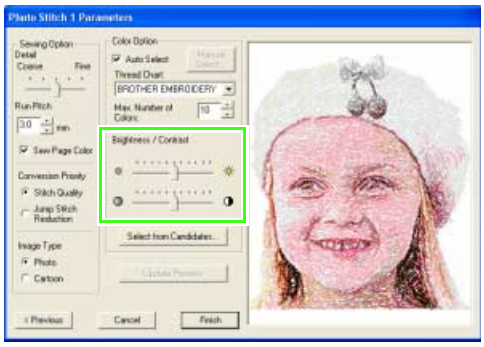
Check the preview of the area to be converted, and then click **Next**.

Memo:

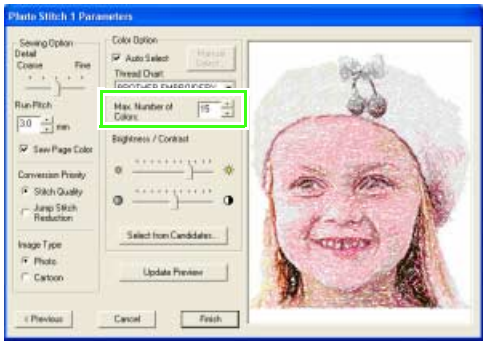
Areas not set to be sewn are filled with a crosshatch patterns.

Step 3 Setting up the Color Option

While viewing the preview image, adjust the color and brightness.



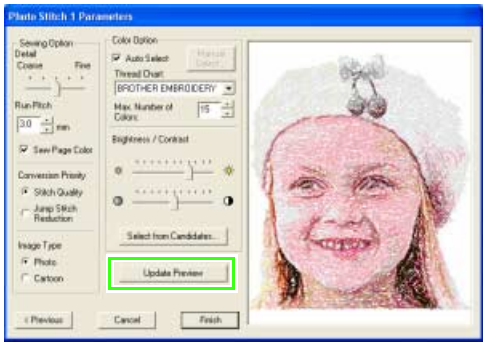
Adjust the brightness and contrast with the **Brightness/Contrast** slider.



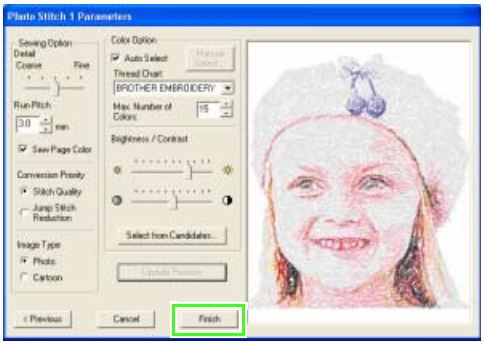
Sets the number of colors selected by the Auto Select function.

Memo:

For details the various settings, refer to “Sewing Option” on page 84

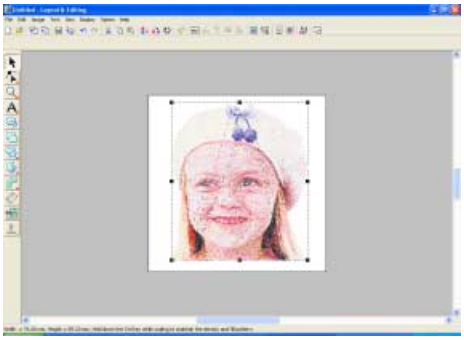


Click **Update Preview**.



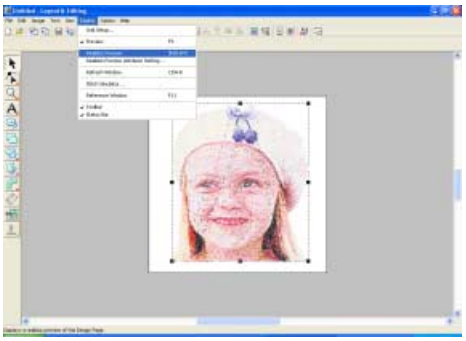
Check the preview of the conversion, and then click **Finish**.

→ The generated embroidery pattern is displayed.

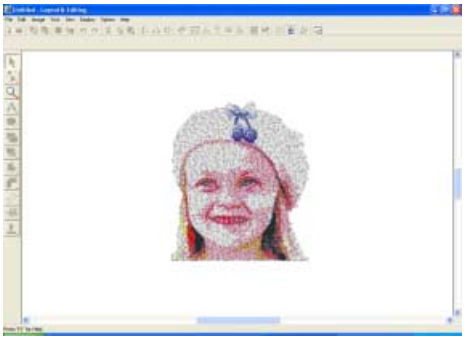


Step 4 Displaying a preview of the embroidery

Preview the finished embroidery.



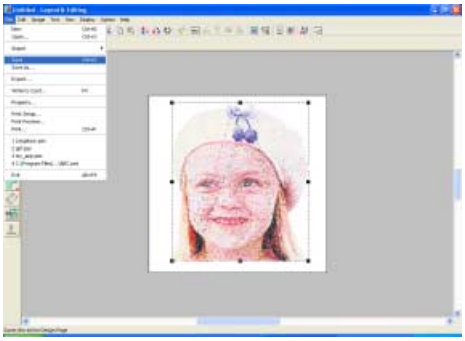
Click **Display**, then **Realistic Preview**.



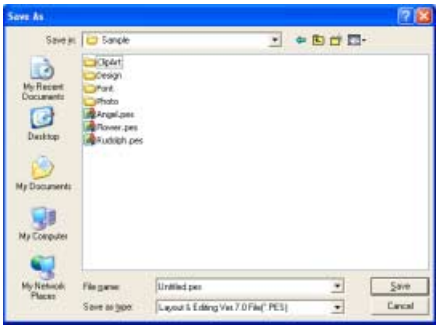
To return to the normal view, click **Display**, then **Realistic Preview**, or press the Esc key.

Step 5 Saving the embroidery design

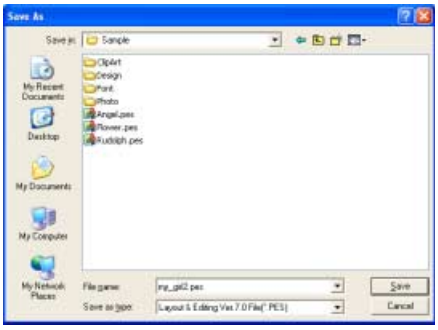
Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.



Select the drive and the folder, and then type in the file name.



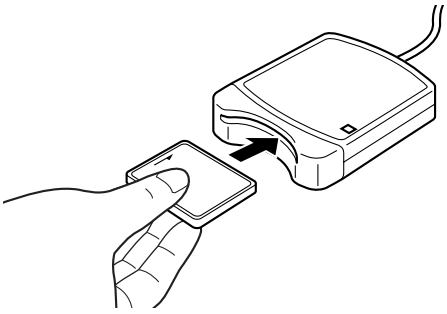
Click **Save**.

Step 6 Transferring the design to an original card

By writing a design to a media that can be used in your sewing machine and transferring it to your sewing machine, you can actually sew the design. For this example, we will transfer the design to an original card.

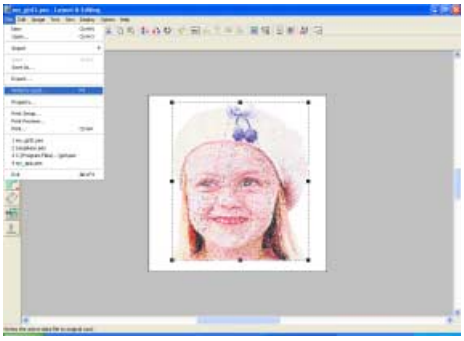
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1. **Insert an original card into the USB card writer module.**



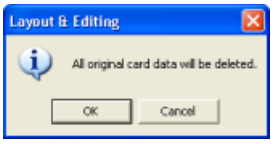
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2. **Transfer the embroidery design.**



Click **File**, then **Write to Card**.

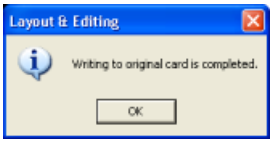
→ The following message appears.



Click **OK**.

Note:
Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.

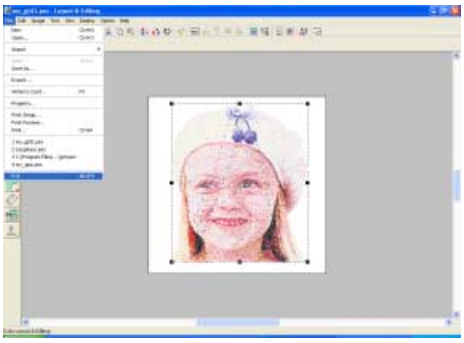
→ The following message appears.



Click **OK**.

Note:
- *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
- *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Manually Creating Custom Font (Font Creator)

With Font Creator, custom font characters that can be used in Layout & Editing can be created and edited. Using these custom characters, original embroidery patterns can be created.
This procedure will go through each step of the basic operation.

Step 1	Preparing a background image
Step 2	Opening a background image
Step 3	Creating a font character pattern
Step 4	Creating other font character patterns
Step 5	Creating an embroidery pattern using the created font characters

Step 1 Preparing a background image

Prepare a background image for creating a custom font character using the Manual Punch tools in order to create an custom character or a character for a font that is not included with the built-in fonts. Using a scanner or similar device, prepare the background image as an image file. There are many different types of files that can be imported:

Windows bitmap (.bmp)
Exif (.tif, .jpg)
ZSoftPCX (.pcx)
Windows Meta File (.wmf)
Portable Network Graphics (.png)
Encapsulated PostScript (.eps)
Kodak PhotoCD (.pcd)
FlashPix (.fpx)
JPEG2000 (.j2k)

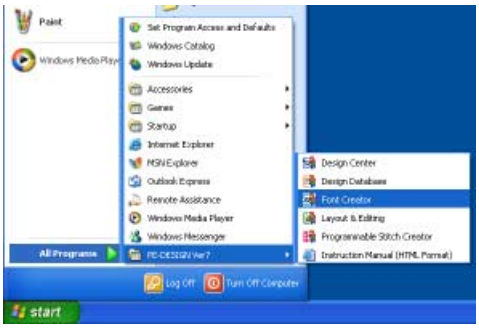
Memo:

To immediately begin using the Manual Punch tools without using a background image, skip ***Step 1*** *and* ***Step 2****.*

Step 2 Opening a background image

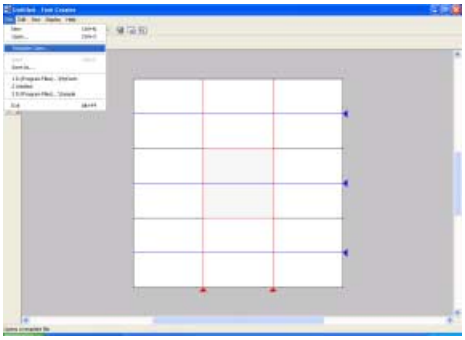
In order to create the custom font, we will open an image in the background. For this example, we will use the provided background image to create a pattern for the letter “T”.

1 Start up Font Creator.

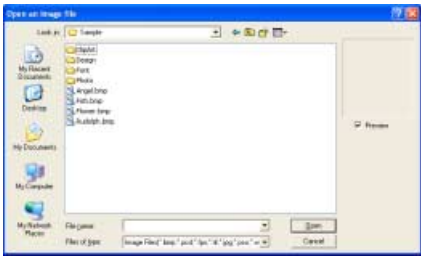


Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Font Creator**.

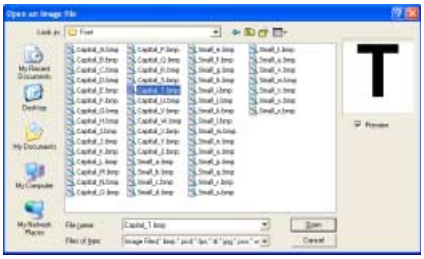
2 Import the image to be displayed in the background.



Click **File**, then **Template Open**.



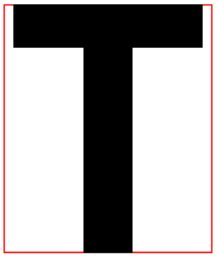
Double-click the **Font** folder to open it.



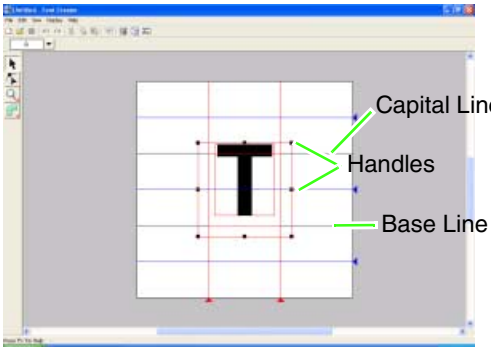
Select the sample file **Capital-T.bmp**, and then click **Open** or double-click the file's icon.

Memo:

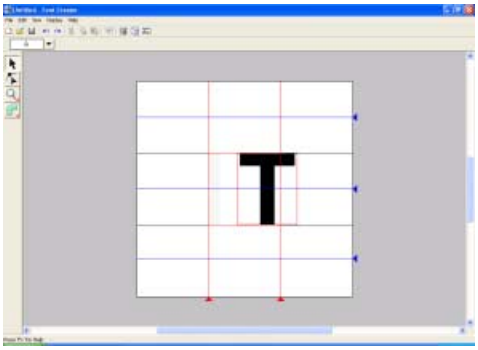
*The **Base Line**, **Capital Line** and **Set Lines**, which appear as red lines in the sample bitmap, have been added as guidelines so the background image can be positioned more easily.*



3 Adjust the background image size and position.



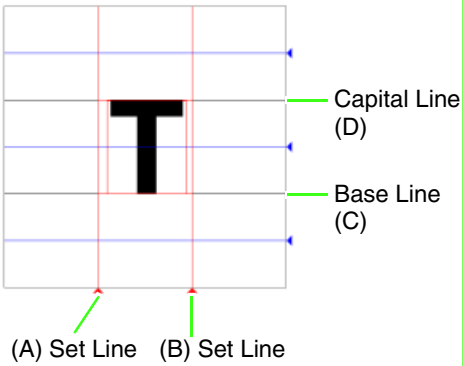
Drag the handle to adjust the selected image to the desired size.



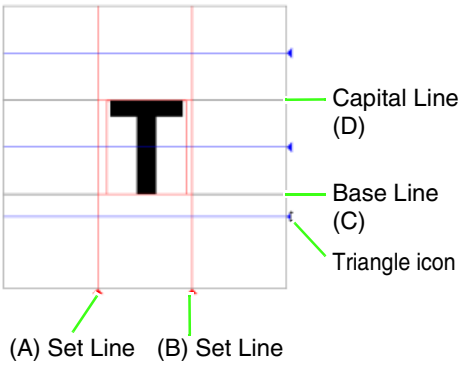
Adjust the character height to fit within the **Base Line** and the **Capital Line**.

Memo:

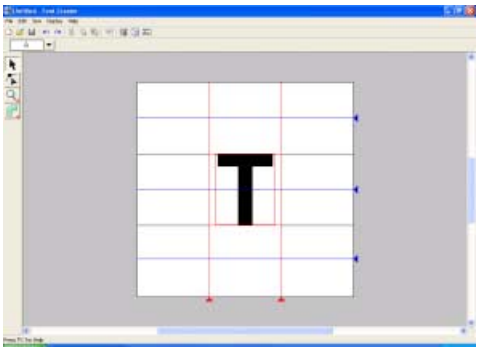
- *When characters created with Font Creator are imported into Layout & Editing, the width and height of the characters will be in the following area.*
  - *Character width: from **Set Line** (A) to **Set Line** (B)*
  - *Character height: from **Base Line** (C) to **Capital Line** (D)*



- *You can use drag operations to change positions of lines by dragging the right edge or bottom edge ▲ (triangle icon) other than **Base Line** and **Capital Line**.*



- *The **Capital Line** (D) and the **Base Line** (C), which are the references for the character height, are fixed.*
- *The character width, indicated by the **Set Lines** (A and B), can be set separately for each character.*



Move the pointer over the selected image, and then drag the image to the desired position.

Memo:

The shape of the pointer changes to ✥ when the image can be moved.

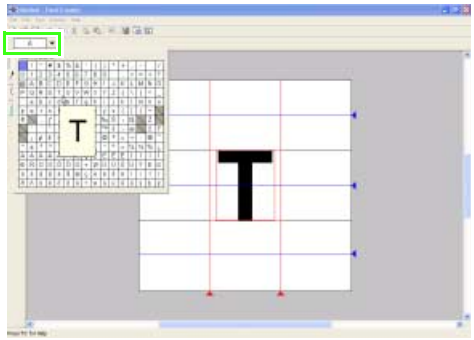
Step 3 Creating a font character pattern

In this example, we will trace a background image to create a font character pattern.

1 Select the character to be created.

Memo:

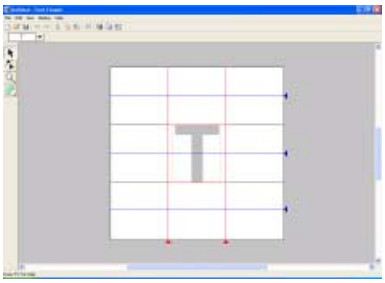
*The character must be registered in the **Select Character** table in order for the created font to be used in Layout & Editing.*



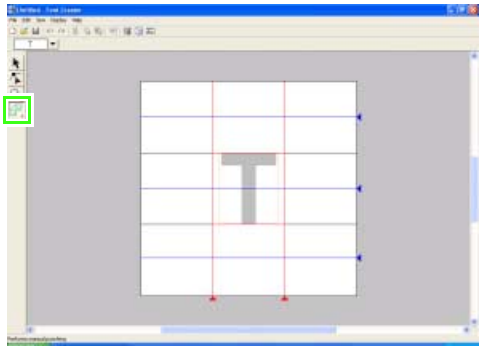
Click the **Select character** button, and then select the character to be created. For this example, select “T”.

Memo:

*The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed. For this example, click **Display-Display Template**, then select **25%**.*

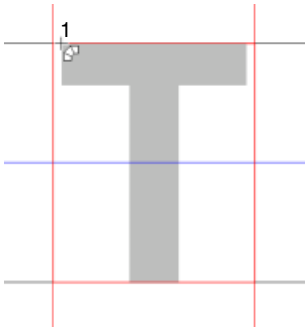


2 Create the font character pattern using the punching tool.

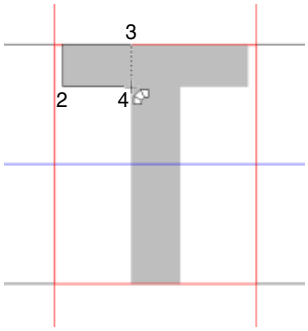


Click (Manual Punch tool).

Click (Straight Block type),or use shortcut “z” on your keyboard.

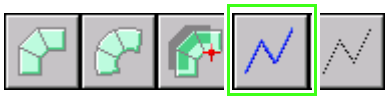


Click in the Design Page to specify point 1 (start point).

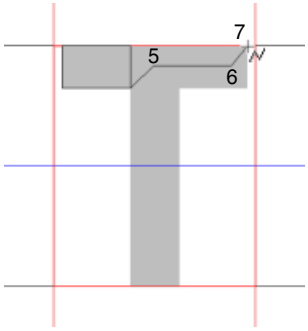


Click in the Design Page to specify points 2 through 4.

Click (Manual Punch tool).



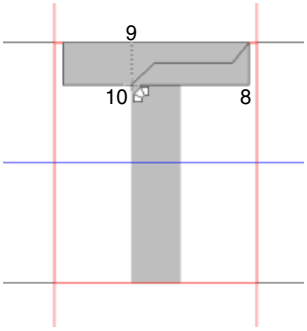
Click (Running-type pattern button),or use shortcut “v” on your keyboard.



Click in the Design Page to specify point 5 through 7.

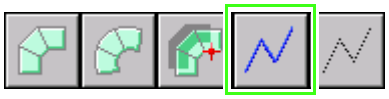
Click (Manual Punch tool).

Click (straight block-type pattern),or use shortcut “z” on your keyboard.



Click in the Design Page to specify points 8 through 10.

Click (Manual Punch tool).



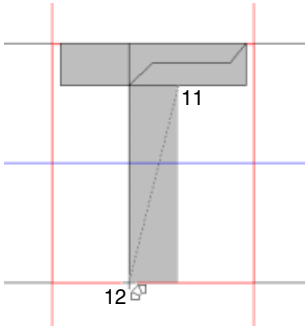
Click (Running-type pattern button),or use shortcut “v” on your keyboard.

Memo:

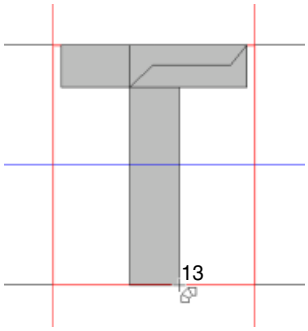
By clicking (Running-type pattern button) at this point, overlapping stitching can be prevented.

Click (Manual Punch tool).

Click (straight block-type pattern),or use shortcut “z” on your keyboard.



Click in the Design Page to specify points 11 through 12.

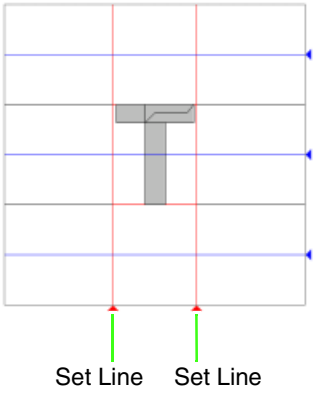


Double-click point 13 (the last point of the entire pattern).

Memo:

To remove the last point that was entered, click the right mouse button.

Click .

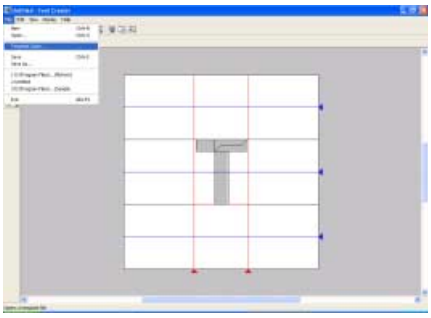


Drag **SetLine** to adjust the character width.

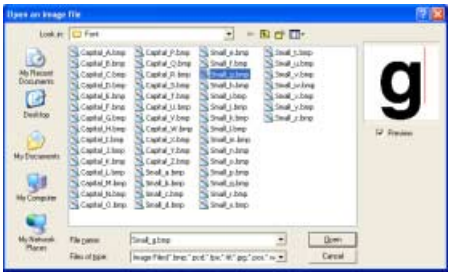
Step 4 Creating other font character patterns

Next, we will create another font character pattern. For this example, we will create a pattern for the letter “g”.

1 Import the image to be displayed in the background.

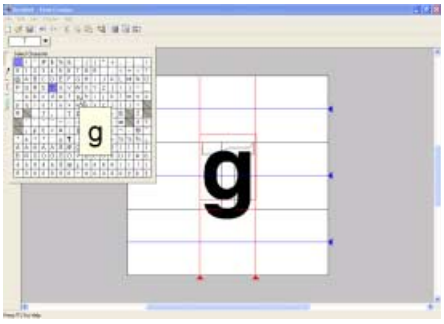


Click **File**, then **Template Open**.



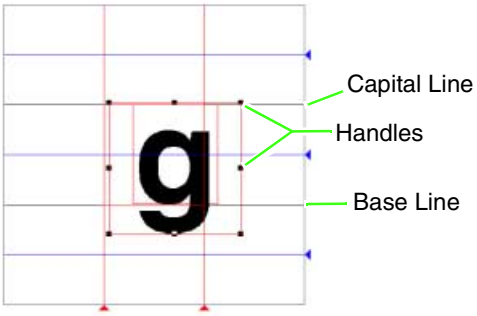
Select the sample file **Small-g.bmp**, and then click **Open** or double-click the file’s icon.

2 Select the character to be created.



Click the **Select character** button, and then select the character to be created. For this example, select “g”.

3 Adjust the background image size, position and the character hight.

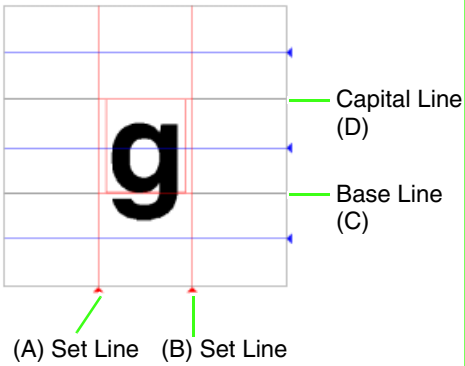


Drag the handle to adjust the selected image to the desired size.

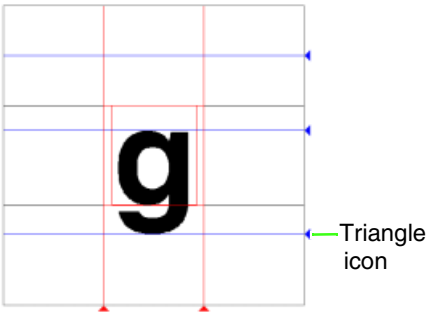
Adjust the character height to fit within the **Base Line** and the **Capital Line**.

Memo:

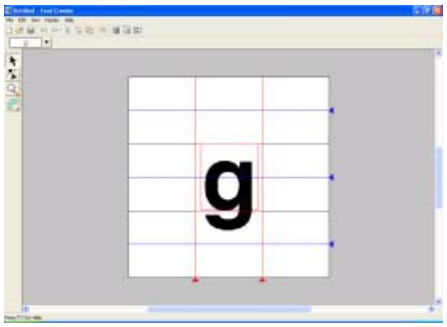
- *When characters created with Font Creator are imported into Layout & Editing, the width and height of the characters will be in the following area.*
  - *Character width: from **Set Line** (A) to **Set Line** (B)*
  - *Character height: from **Base Line** (C) to **Capital Line** (D)*



- *You can use drag operations to change positions of lines by dragging the right edge or bottom edge ▲ (triangle icon) other than **Base Line** and **Capital Line**.*



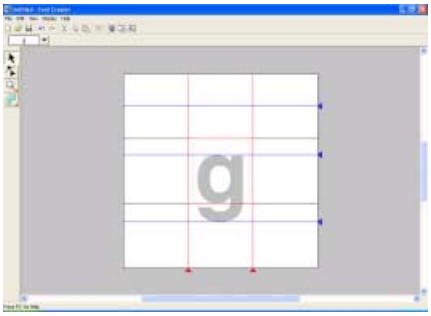
- *The **Capital Line** (D) and the **Base Line** (C), which are the references for the character height, are fixed.*
- *The character width, indicated by the **Set Lines** (A and B), can be set separately for each character.*



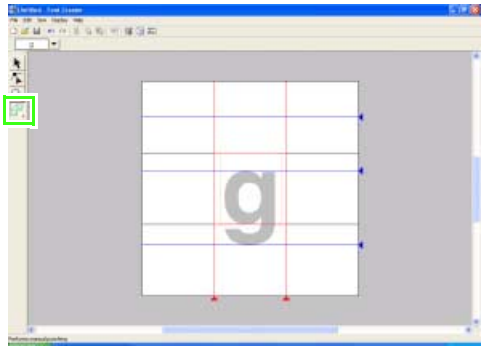
Move the pointer over the selected image, and then drag the image to the desired position.

Memo:

- *The shape of the pointer changes to* *when the image can be moved.*
- *The template image that remains in the work area can be displayed or hidden, or a faded copy of the image can be displayed. For this example, click **Display-Display Template**, then select **25%**.*

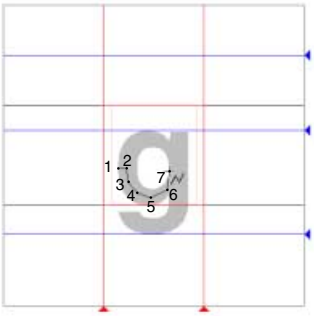


4 Create the font character pattern.



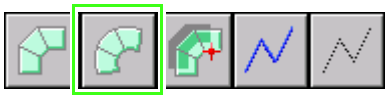
Click (Manual Punch tool).

Click (Running-type pattern button).

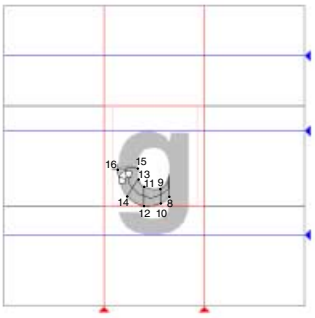


Refer to the numbers and arrow, and click in the Design Page to specify the points.

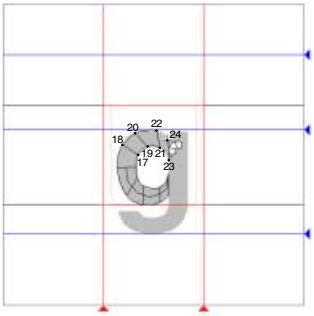
Click (Manual Punch tool).



Click (Curved Block type),or use shortcut “x” on your keyboard.



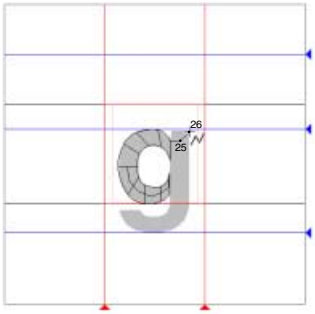
Draw the curve shown in the illustration above.



Continue drawing the curve, as shown in the illustration above.

Click (Manual Punch tool).

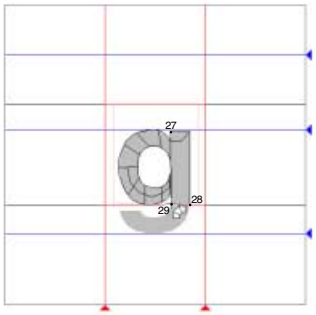
Click (Running-type pattern button),or use shortcut “v” on your keyboard.



Draw the curve shown in the illustration above.

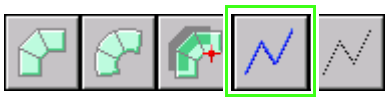
Click (Manual Punch tool).

Click (Straight Block type),or use shortcut “z” on your keyboard.

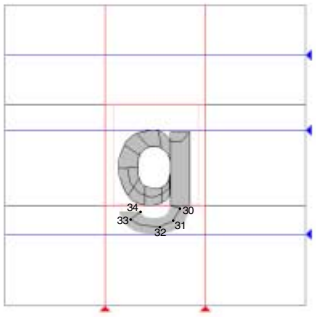


Draw the curve shown in the illustration above.

Click (Manual Punch tool).



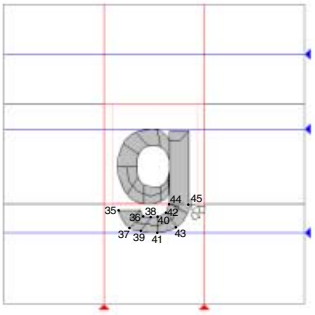
Click (Running-type pattern button),or use shortcut “v” on your keyboard.



Draw the curve shown in the illustration above.

Click (Manual Punch tool).

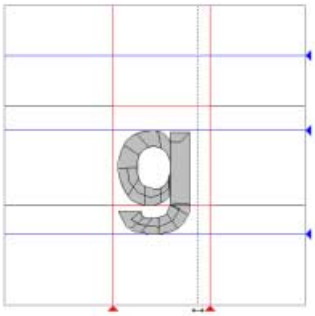
Click (Curved Block type),or use shortcut “x” on your keyboard.



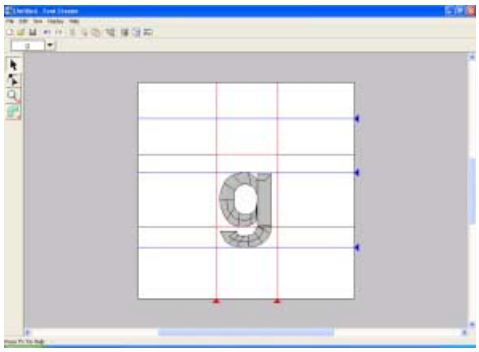
As shown in the figure above, click on the Design Page and draw a “g”. Double-click at the end.

Memo:

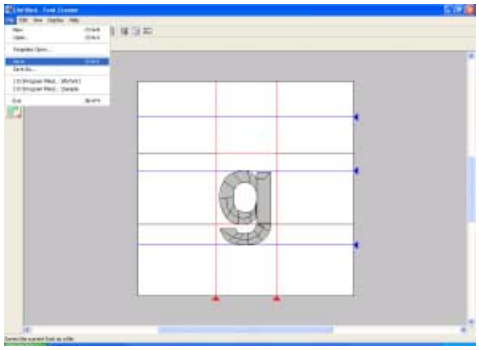
By drawing a line as a running-type punching pattern along the center of the blocks, cleaner stitching can be sewn.



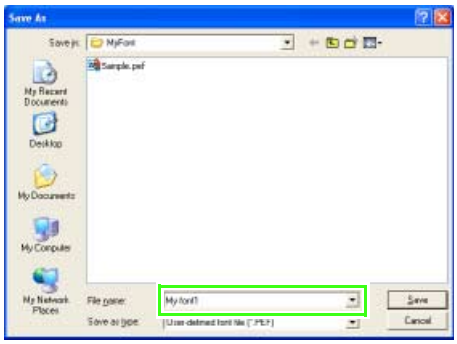
Drag **SetLine** to adjust the character width.



5 **Save the font character pattern.**



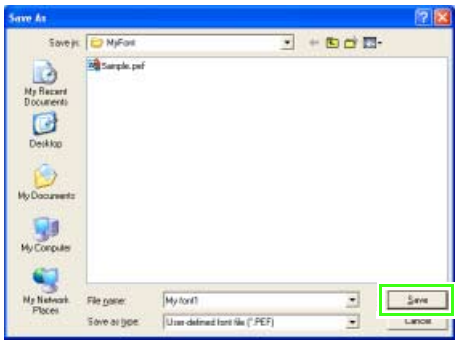
Click **File**, then **Save**.



Select the drive and folder, and then type in the file name. For this example, type in the name “My font1”.

Note:

- *Save the font created in the location below. The font will not be usable in the Layout & Editing if it’s stored in a different folder. (Drive where PE-DESIGN was installed) \Program Files\Brother\PE-DESIGN Ver7\My font*
- *If Layout & Editing has already started up when a new character is saved in Font Creator, that character will not appear in the Font selector list in Layout & Editing. In this case, exit Layout & Editing, and then start it up again.*

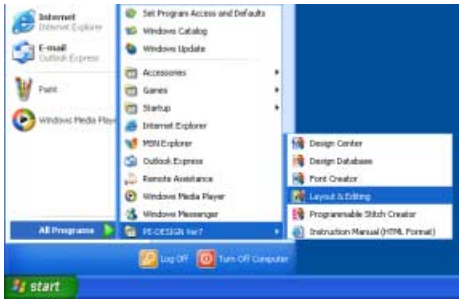


Click **Save**.

Step 5 Creating an embroidery pattern using the created font characters

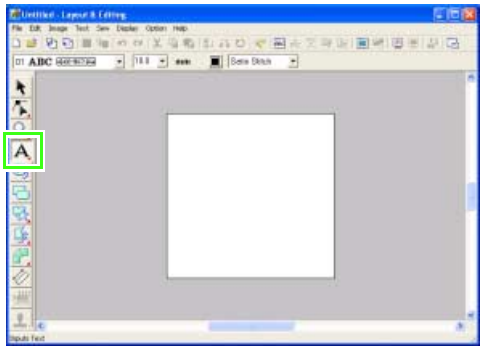
The created font characters can be used in Layout & Editing.

1 **Start up Layout & Editing.**

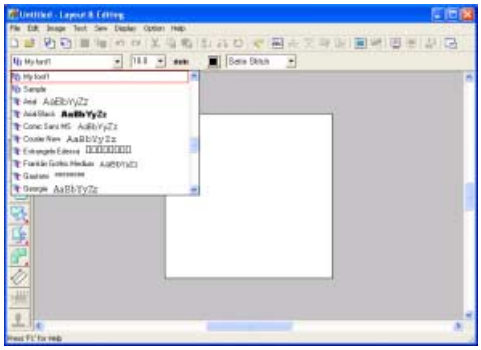


Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

2 **Use the created font and type in text.**

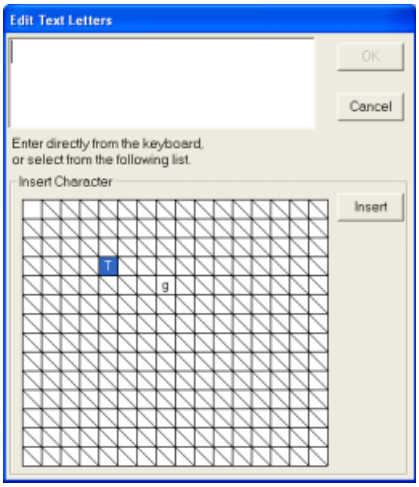


Click A, and then click A.



Click in the Font selector, and then select “My font1”.

Click in the Design Page.

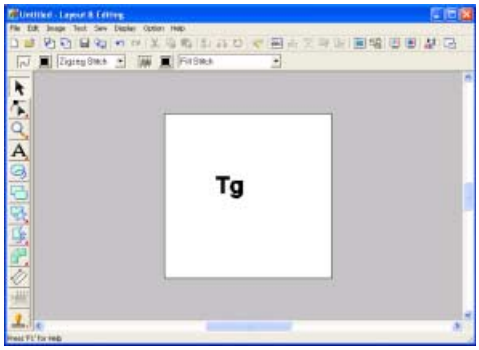


Type your text, and then click **OK**.

→ The text is displayed in the Design Page.

Memo:

You can also enter a character by selecting it in the character table, then clicking Insert, or simply by double-clicking it. This is particularly useful if you have to enter accented characters that are not available on your keyboard.



Memo:

The font created in Font Creator can be used in Layout & Editing. In addition, it can be edited in the same way as other built-in fonts.

Creating Custom Stitch Patterns (Programmable Stitch Creator)

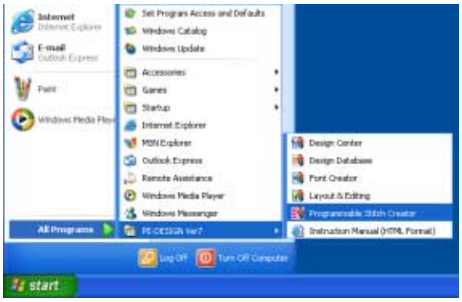
Programmable Stitch Creator allows you to create and edit programmable fill stitch and motif stitch patterns, which can be used in both Layout & Editing and Design Center. More decorative stitch patterns can be designed by using these patterns.
This procedure will go through each step of the basic operation.

Step 1	Opening a programmable stitch pattern
Step 2	[Case 1] Drawing lines to edit the stitch pattern
	[Case 2] Creating patterns (embossing/engraving) for region sewing (Fill/Stamp mode)
	[Case 3] Reshaping a single line to create custom stitch patterns (Motif mode)
Step 3	Saving the edited stitch pattern

Step 1 Opening a programmable stitch pattern

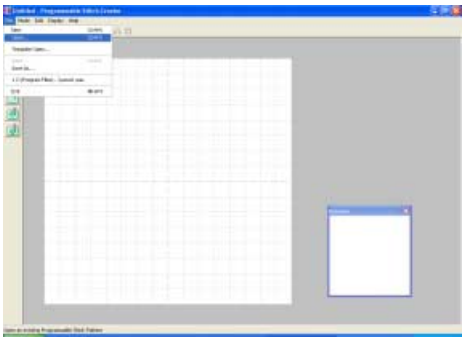
First, we will open the fill stitch pattern to be edited. In this example, we will use stitch pattern wave1.pas.

1 Start up Programmable Stitch Creator.



Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Programmable Stitch Creator**.

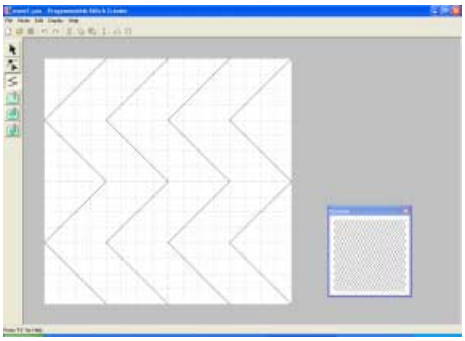
2 Open the programmable fill stitch pattern.



Click **File**, then **Open**.

Select the stitch pattern file **wave1.pas** in the **Pattern** folder.

Click **Open**, or double-click the files icon.

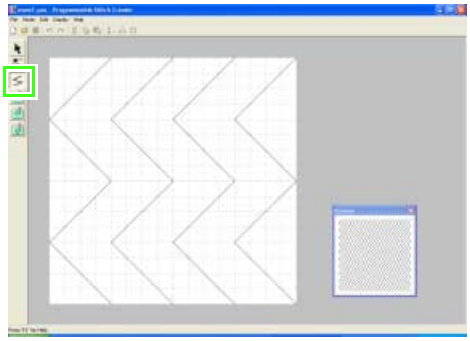


Step 2 [Case 1] Drawing lines to edit the stitch pattern

Now, we are going to draw lines between the displayed ones using the Line tool of the Tool Box.

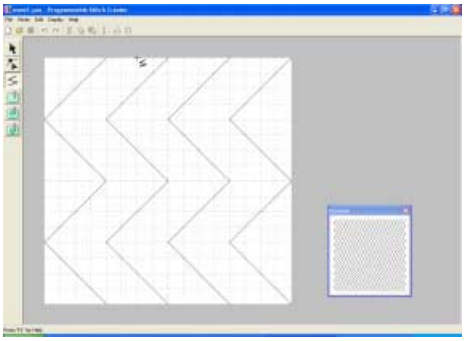
> **Memo:**
> *For this example, we will use the grid setting **Medium** with which the stitch pattern was saved. Grid settings should be selected depending on how detailed you want to draw. Select the grid setting **Narrow** for more detailed stitches and the grid setting **Wide** for more simple stitches. For more information on the grid settings, refer to "Changing the grid settings" on page 273.*

1 Draw the straight lines.



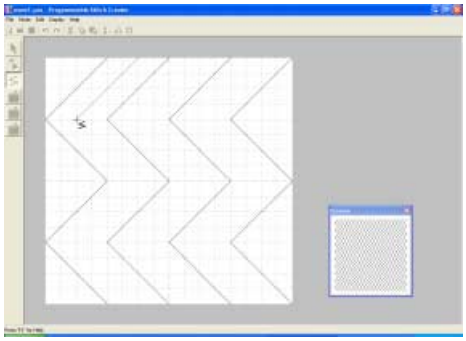
Click .

→ The pointer change to look like .



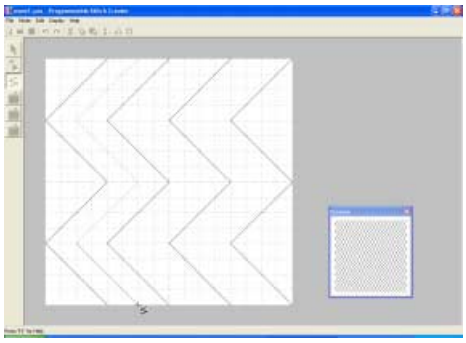
Move the pointer to the second vertical grid line to the right of the leftmost wave, and then click the top edge of the work area.

> **Memo:**
> *The horizontal and vertical lines that you draw on the work area always follow the grid. The points that you create by clicking are inserted at the intersection of the horizontal and vertical grid lines, enabling you to draw diagonal lines as well. Therefore, regardless of where you click, a point will automatically be inserted at the nearest intersection.*

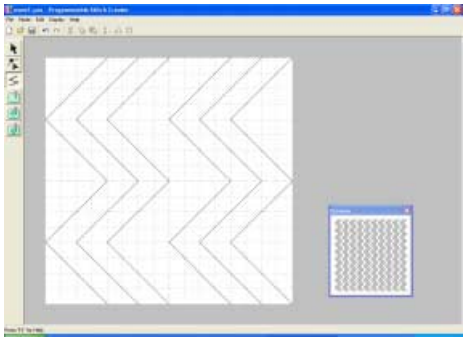


Move the pointer parallel to the wave, and then click the second vertical grid line to the right of the corner in the leftmost wave.

> **Memo:**
> *To remove the last point that was entered, click the right mouse button.*



Repeat the previous operation until you reach the end of the wave, and then double-click the bottom edge of the work area.

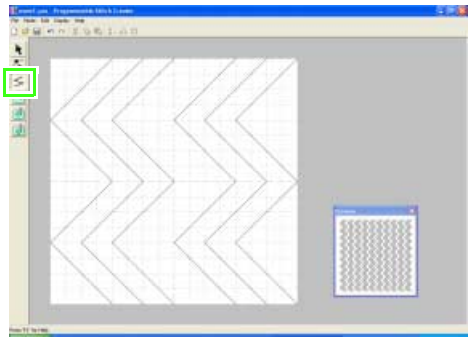


Repeat the previous operations to add another wave between the first and second waves on the right side.

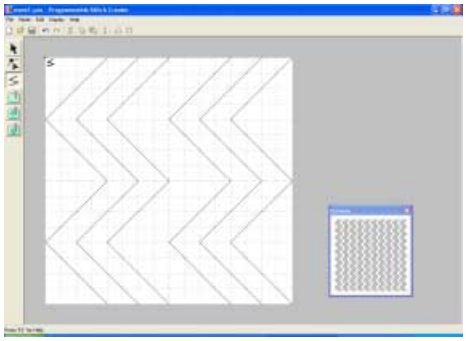
Step 2 [Case 2] Creating patterns (embossing/ engraving) for region sewing (Fill/Stamp mode)

A stamp can be made by sewing regions of a fill stitch pattern with the fill stitch, satin stitch or the base stitch set for the embroidery pattern in order to create embossing and engraving effects.
In order to do this, the lines of the stitch pattern must form closed regions. In our example, the lines do not form closed regions, so we will need to add enclosing lines.

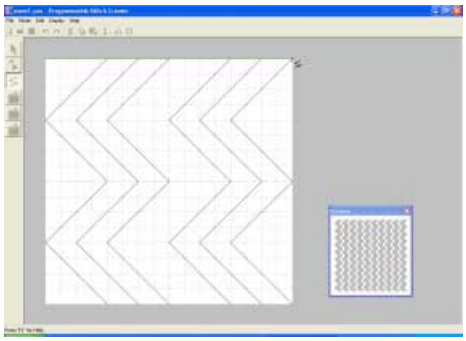
1 Draw a line around the work area.



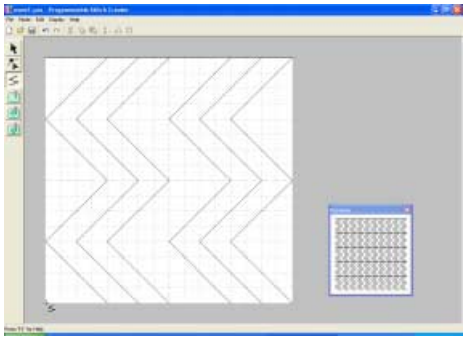
Click .



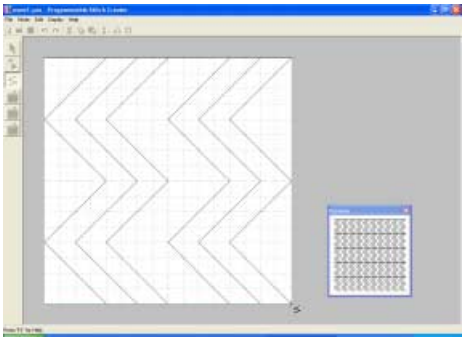
Click the upper-left corner of the work area.



Move the pointer along the top edge of the work area, and then double-click the upper-right corner to draw a line along the top edge.

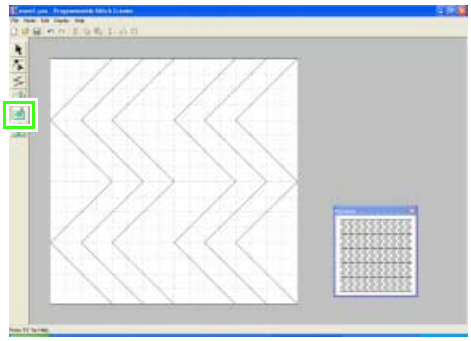


Click the lower-left corner of the work area.

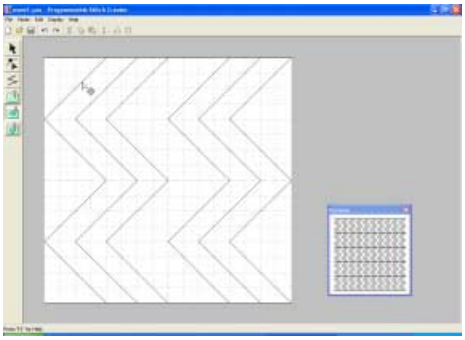


Move the pointer along the bottom edge of the work area, and then double-click the lower-right corner to draw a line along the bottom edge of the work area.

2 Apply the embossing/engraving effects.

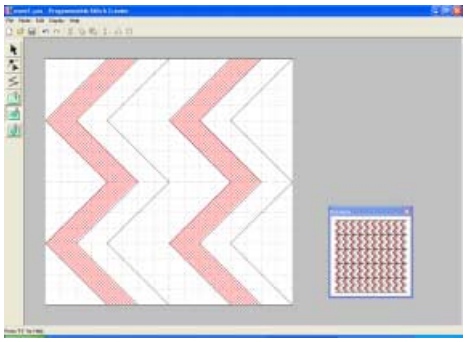


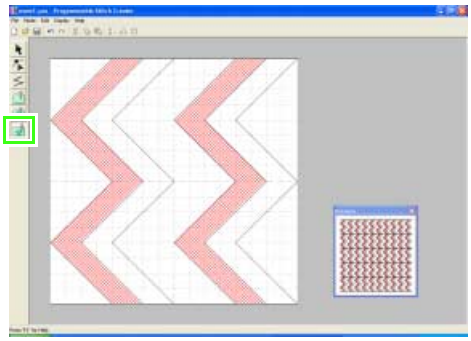
Click (**Region (engrave)**) .



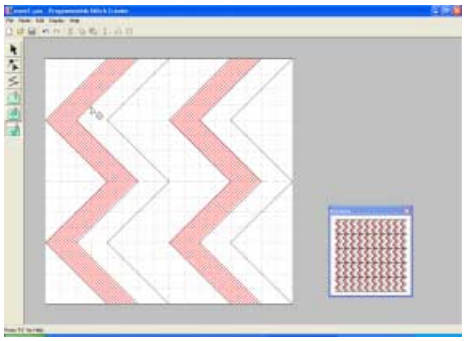
Click the first and fourth wave regions.

→ These regions appear in red and will be sewn with short stitches to give the effect of engraving.



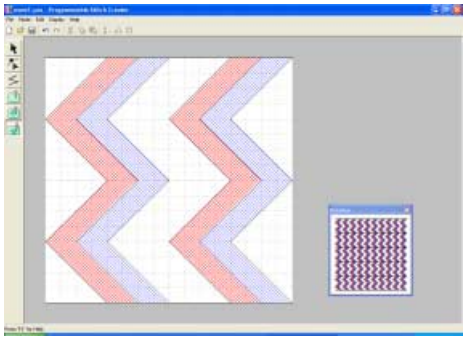


Click (**Region (emboss)**).



Click the second and fifth wave regions.

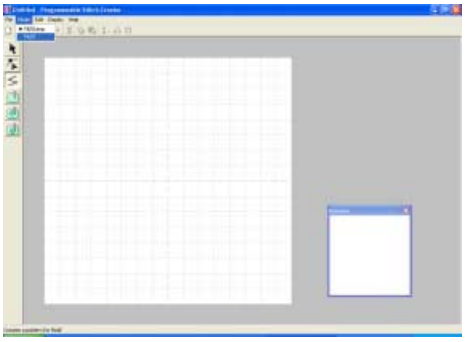
→ This region appears in blue and will be sewn with no dropped stitches to give the effect of embossing.



Step 2 [Case 3] Reshaping a single line to create custom stitch patterns (Motif mode)

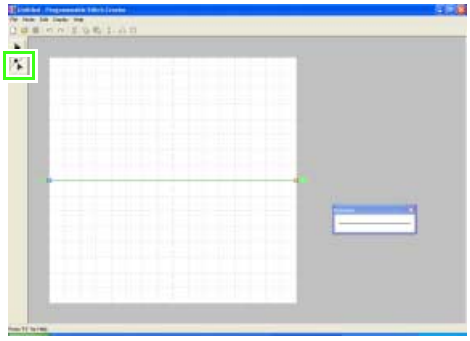
In Motif mode, you can create original stitch patterns by changing the shape of a single line. These stitch patterns can be applied in line sewing and region sewing in Layout & Editing, and region sewing in Design Center.

1 Switch to Motif mode.

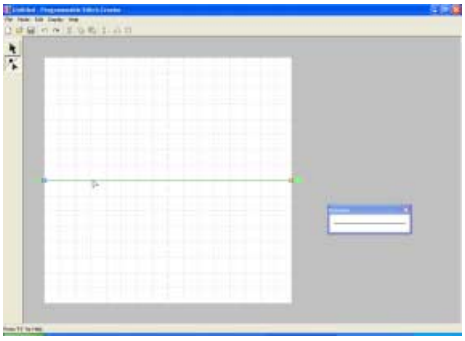


Click **Mode**, then **Motif**.

2 Create the pattern.

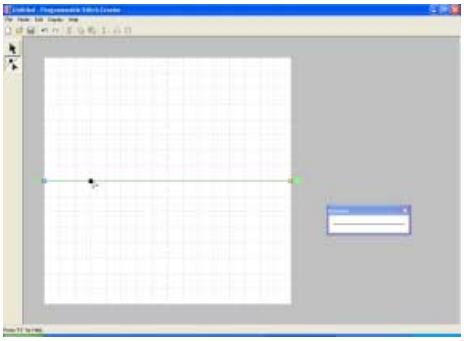


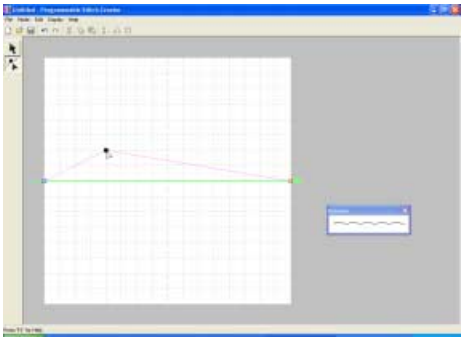
Click .



Click the base line between the start point (blue square) and end point (red square).

→ A block square appears.





Drag the point that you want to move to a new position.
The line that moves turns pink when moving a point.

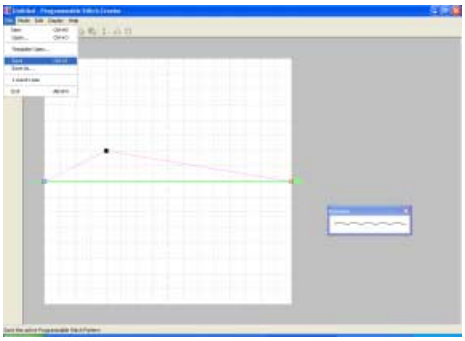
Memo:

- *To move the point horizontally or vertically, hold down the* Shift *key while dragging it.*
- *Pressing the arrow keys moves the selected point one grid mark in the direction of the arrow on the key. If the grid is not displayed, the pattern moves a distance smaller than the smallest grid interval in the direction of the arrow on the key.*
- *To delete a selected point, press the* Delete *key.*

Step 3 Saving the edited stitch pattern

In order to apply your edited stitch pattern as a programmable fill stitch or as a stamp to a region in Layout & Editing or Design Center, you must first save it as a .pas file. (In Motif mode, the file is saved as a .pmf file.)
For this example, the file is saved as a .pas file.

1 Save the created pattern.

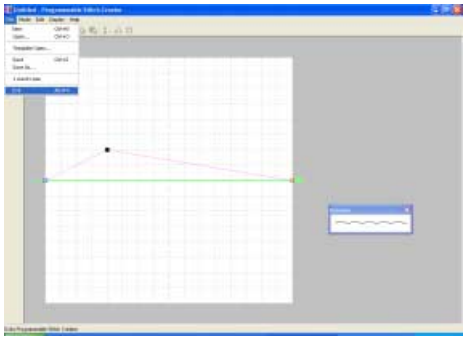


Click **File**, then **Save**.

Select the drive and the folder, and then type in the file name.

Click **Save**.

2 Quit Programmable Stitch Creator.



Click **File**, then **Exit**.

Creating Large-Size Embroidery Designs

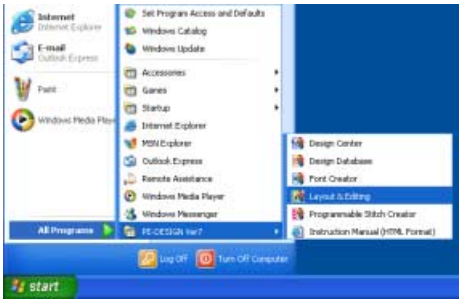
Large-size embroidery designs can be created in Layout & Editing.
This procedure will go through each step of the basic operation.

Step 1	Specifying the Design Page size in Layout & Editing
Step 2	Creating the embroidery design
Step 3	Checking the embroidering order
Step 4	Saving the design
Step 5	Transferring the design to an original card

Step 1 Specifying the Design Page size in Layout & Editing

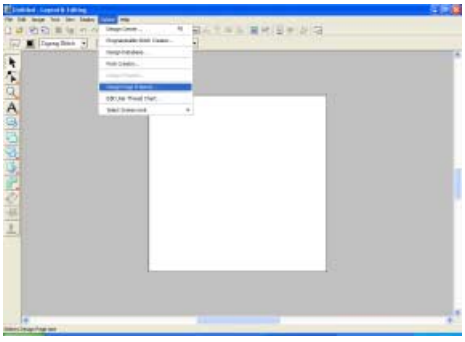
First, we will specify the size of the Design Page to match the size of the embroidery design.

1 Start up Layout & Editing.

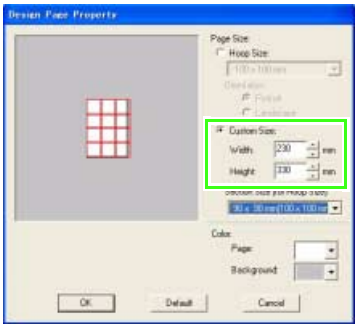


Click start, then select **All Programs**, then **PE-DESIGN Ver7**, then **Layout & Editing**.

2 Specify the Design Page size.

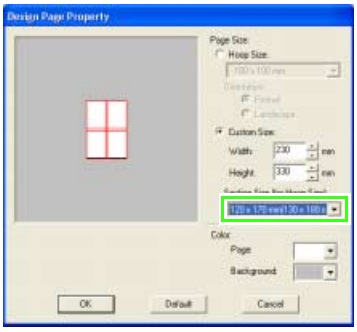


Click **Option**, then **Design Page Property**.



Select **Custom Size**, and then type or select the desired width and height for the Design Page.

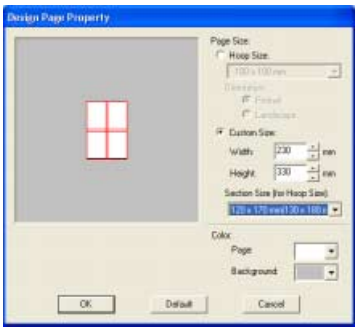
The setting range for **Width** and **Height** is 100 mm to 1000 mm (3.9 inch to 39.4 inch). This setting is to specify the exact width and height of a design.
For this example, set width to 230 mm and height to 330 mm



Click in the **Section Size (for Hoop Size)** selector, and then select the size of the sections (your embroidery hoop). For this example, select **120 × 170 mm (130 × 180 mm)**.

Memo:

- *With the Section Size (for Hoop Size) setting, the width and height of the sections are 10mm smaller than the actual hoop size in order to provide space for fine positioning adjustments with adjustment sections. The 10mm is for overlapping.*
- *It is not necessary for the **Section size (for Hoop Size)** to match the Design Page size. Select the hoop size to be used for sewing.*

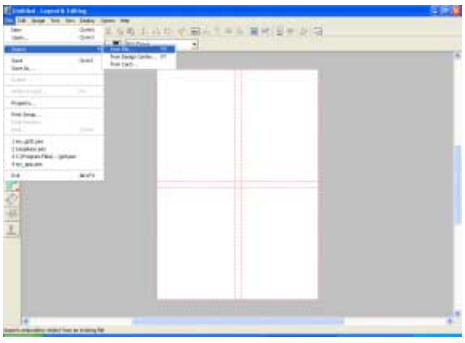


Click **OK**.

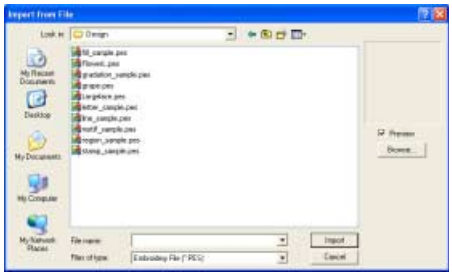
Step 2 Creating the embroidery design

For this example, we will use one of the lace embroidery patterns provided with the application.

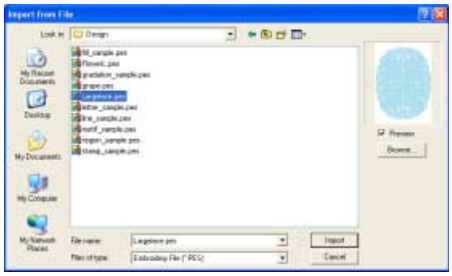
1 Import the embroidery pattern.



Click **File** on the menu bar, point to **Import**, and then click **from File** on the submenu.



Select the embroidery pattern file **Largelace.pes** in the **Sample\Design** folder.



Click **Import** to import the embroidery pattern file.

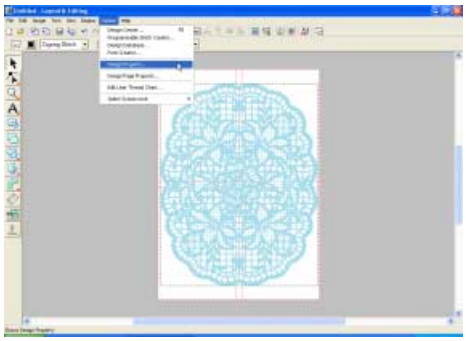
Step 3 Checking the embroidering order

Before the embroidery pattern is sewn, check the embroidering order to see the order that the design sections are sewn and determine which parts of the fabric should be hooped.
The design sections are sewn in order from left to right, top to bottom.

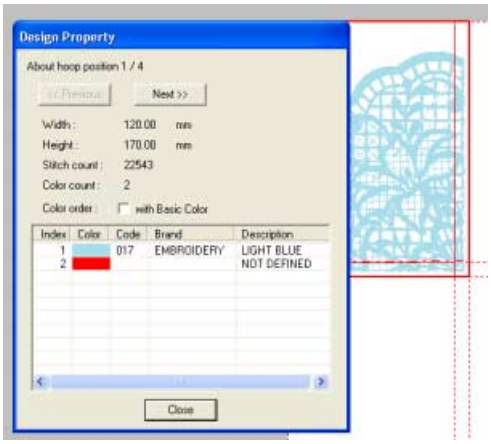
1 Check the embroidery design.

Memo:

The embroidery order cannot be checked while the pattern is selected; therefore, be sure to deselect the pattern before trying to check the embroidery order.



Click **Option** on the menu bar, and then click **Design Property**.

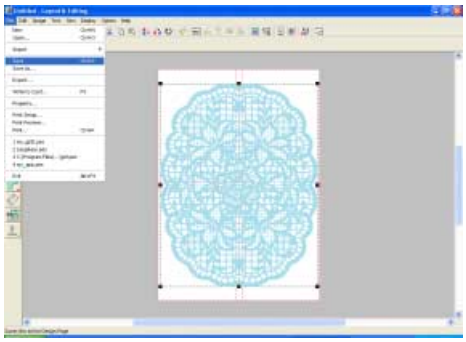


To display information for the other design sections in the emboroidery, click on **Next** and **Previous** to move back and forth through each section.
Check the design, and then click **Close**.

> **Note:**
> *Before an embroidery pattern created in a custom Design Page is saved or transferred to an original card, running stitches are added at the edges of the design sections so that the design sections can easily be aligned during sewing. This alignment stitching appears in the **NOT DEFINED** color and cannot be edited. (For more details, refer to "Embroidering" on page 191.)*

Step 4 Saving the design

Once the embroidery design is finished, you may want to save it in order to retrieve it later.



Click **File**, then **Save**.

Select the drive and the folder, and then type in the file name.

Click **Save**.

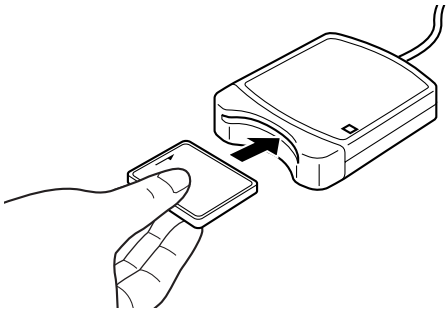
> **Note:**
> *If a section of the design exceeds the maximum allowed for the stitch count or number of colors, a message appears, describing the limitations and asking whether or not the pattern should be saved anyway. If the embroidery pattern extends off the Design Page, a message appears, asking whether or not the pattern should be saved anyway. If the design is saved anyway, it must be edited before it will be sewn.*

Step 5 Transferring the design to an original card

By writing a design to a media that can be used in your embroidery machine and transferring it to your embroidery machine, you can actually sew the design. For this example, we will transfer the design to an original card.

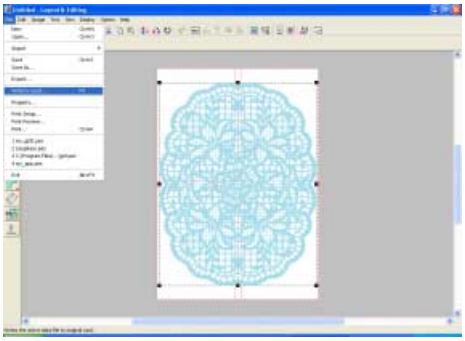
> **Memo:**
> *For other media you may use include floppy disks, compact flash memory, USB media and etc.*

1 Insert an original card into the USB card writer module.



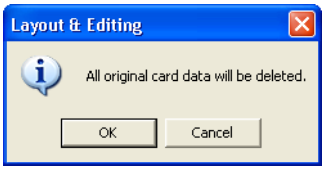
> **Note:**
> *The original card is inserted correctly when you hear it snap into place.*

2 Transfer the embroidery design.



Click **File**, then **Write to Card**.

→ The following message appears.



Click **OK**.

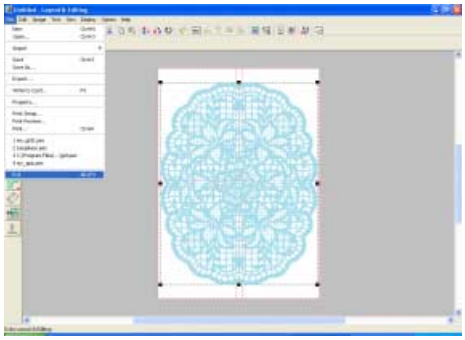
> **Note:**
> *Before using the original card, make sure that the designs on the card are no longer needed or make sure to store them on your hard drive or other storage media.*

→ The following message appears.

Click **OK**.

> **Note:**
> - *If the card writer module is not correctly connected or powered, an error message of "No card writer module is connected. Please connect card writer module." will appear.*
> - *If the original card is not inserted or is defective, an error message of "No original card is inserted. Please insert an original card." will appear.*

3 Quit Layout & Editing.



Click **File**, then **Exit**.

Sew Types

The sewing attributes for each sew type are first set to their default settings; however, by changing the settings of the sewing attributes, you can create custom stitching.

For more details, refer to "Line sewing attributes" on page 153 (Layout & Editing).

For more details, refer to "Line sewing attributes" on page 218 (Design Center).

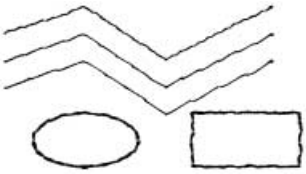
For more details, refer to "Region sewing attributes" on page 155 (Layout & Editing).

For more details, refer to "Region sewing attributes" on page 219 (Design Center).

Line sew types

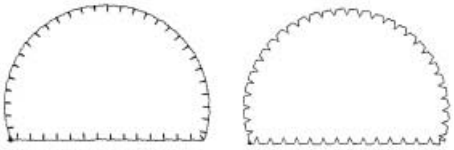
Zigzag Stitch

Running Stitch/Triple Stitch



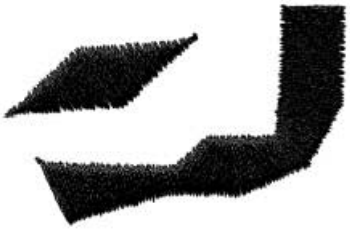
Motif Stitch

E/V Stitch



Region sew types

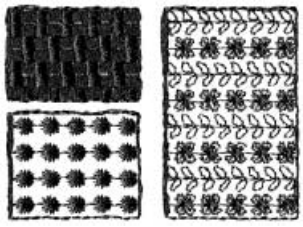
Satin Stitch



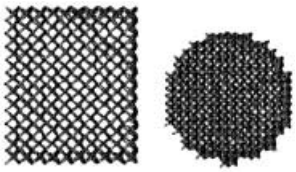
Fill Stitch

Programmable Fill Stitch

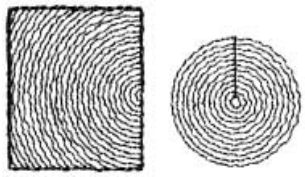
Motif Stitch



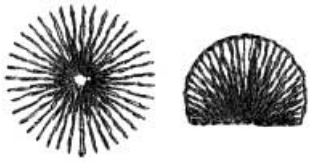
Cross Stitch



Concentric Circle Stitch

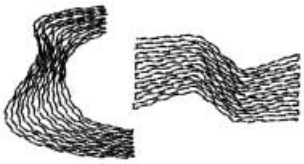


Radial Stitch

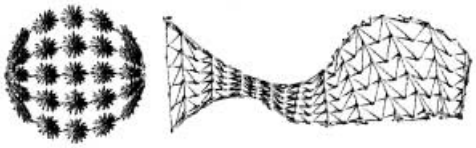


Spiral Stitch

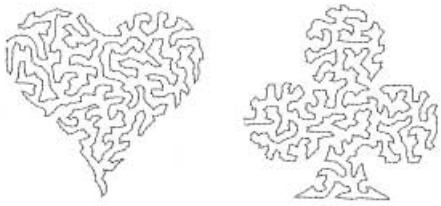
Piping Stitch



Piping Stitch (motif setting)



Random Walking Stitch



Memo:

The stitching for the programmable fill stitch and the motif stitch depends on the selected stitch pattern.

- *For more details, refer to "Programmable fill stitch" on page 157 (Layout & Editing).*
- *For more details, refer to "Programmable fill stitch" on page 221 (Design Center).*
- *For more details, refer to "Motif stitch" on page 154 in "Line sewing attributes" (Layout & Editing).*
- *For more details, refer to "Motif stitch" on page 159 in "Region sewing attributes" (Layout & Editing).*
- *For more details, refer to "Motif stitch" on page 223 in "Region sewing attributes" (Design Center).*

Enlarging/Reducing Embroidery Patterns

There are several ways of enlarging or reducing an imported embroidery pattern in Layout & Editing. You may choose to scale your pattern with the pointer, or apply the Stitch to Block function, then scale the pattern.

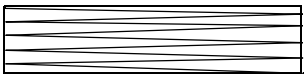
When you normally scale an imported pattern, the number of stitches that will be sewn remains the same, resulting in a change of embroidery quality if the size of the pattern is greatly changed. However, by holding down the Ctrl key while scaling the imported embroidery pattern, the original embroidery quality can be maintained, since the stitch density and fill pattern automatically adapts to the new size.

Another method of maintaining the original embroidery quality of the pattern is to select the **Sew** – **Stitch to Block** command, then scale the pattern. When a pattern is scaled only moderately, it may not be necessary to apply the Stitch to Block function.

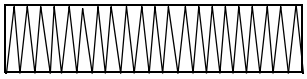
This system allows you to create a wide variety of embroidery patterns and supports wider ranges for the setting of the sewing attributes (thread density, sewing pitch, etc.). However, the final result also depends on your particular embroidery machine model. We recommend that you make a trial sewing sample with your sewing data before sewing on the final material. Remember to sew your trial sample on the same type of fabric as your final material and to use the same needle and the same machine embroidery thread.

Sewing Direction

In order to limit shrinking, select a stitch direction perpendicular to the larger edge of the area.



Shrinking more likely to occur



Shrinking less likely to occur

Sewing Order

After creating an embroidery pattern made of several different parts (in Layout & Editing or Design Center), be sure to check the sewing order and correct it if necessary.

With Layout & Editing, the default sewing order is the order in which the elements are drawn.

With Design Center, the default sewing order is the order in which the sewing attributes are applied.

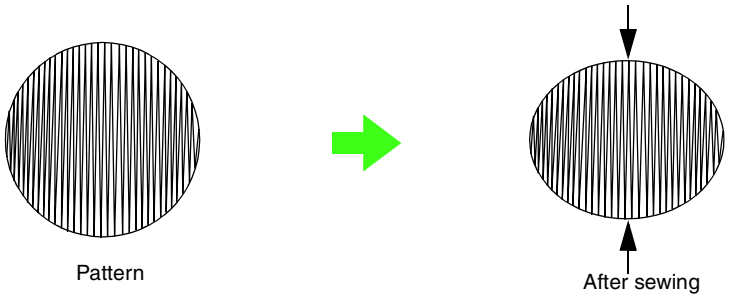
Sewing Wide Areas

- For best sewing results, set **Under sewing** to **On** when sewing wide regions.

  For more details, refer to “Under sewing” on page 153.

- Changing the **Sewing Direction** setting prevents shrinkage of the stitching.
- Affixing stabilizer material to the back of the fabric prevents shrinkage of the stitching and misaligned patterns.

- When satin stitching is sewn in a wide area, the stitched area may shrink after sewing, depending on the material and the type of thread used. If this happens, switch to this alternate method: Select the fill stitch and use stabilizer material on the reverse side of the fabric.



Note:
When using the satin stitch in a wide area, the needle may move out of position by about 10 mm with some machines. In order to avoid this, use the above-mentioned alternate method.

Tips for Importing Images for Design Center

Refer to the following when importing images for Design Center.

When scanning illustrations

- If the outline is not clear, trace the outline on tracing paper.
- Better scanning results may be produced by reducing the tone of the image.

Removing Sections of Stitch Pattern (by Using the Split Stitch tool)

Click on the Tool Box in Layout & Editing, click a frame around the desired section of the stitch pattern, and then double-click to remove the framed section.

For more details, refer to "Splitting off parts of a stitch pattern" on page 116.

Creating Beautiful Photo Embroidery

For Photo Stitch

- Select a photograph that shows a large image. (A photograph with an intricate image, for example, one that contains many objects, is not suitable.)
- Increase the contrast.
- An image with a width and height between 300 and 500 dots is suitable.
- For best results with human portraits, the main focus of the image should be the area between the chest and the top of the head and the image should be framed in an area of 130 × 180 mm (5 × 7 inches) or more.

at 100 mm × 100 mm

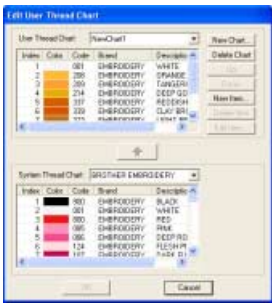
at 130 mm × 180 mm

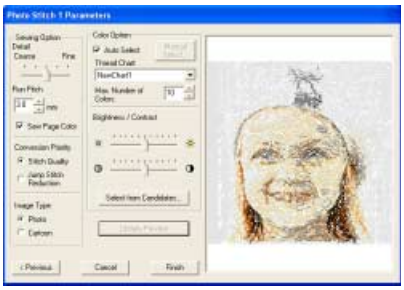
- For best results when using a dark original image, we recommend setting **Brightness** in the **Photo Stitch Parameters** dialog box to a higher setting.
- If the created embroidery pattern contains colors that you do not wish to emphasize (for example, grays in the face), change the sewing order in the **Sewing Order/Color** dialog box so that the undesirable color is sewn before all other colors.

For more details, refer to "Changing colors of a stitch pattern" on page 115.

- To create sepia photo embroidery, first create a sepia user thread chart in the **Edit User Thread Chart** dialog box, and then select the created sepia user thread chart under **Color Option** in the **Photo Stitch Parameters** dialog box.

For more details, refer to “Editing User Thread Color Lists” on page 162.





Fonts Suitable for Embroidering

When sewing small fonts

For best results when embroidering designs containing small font patterns, follow the recommendations described below.

1. Reduce the thread tension to less than what is used when embroidering normal designs.
2. Sew at a speed slower than what is used when embroidering normal designs.
   (For details on adjusting the thread tension and sewing speed, refer to the Instruction Manual provided with your embroidery machine.)
3. For best results when sewing small font patterns, do not cut the jump stitches between the characters.
   (For details on setting the machine for thread cutting, refer to the Instruction Manual for the embroidery machine.)

When converting TrueType fonts to embroidery patterns

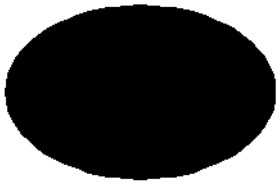
For best results when converting TrueType fonts to embroidery patterns, select a font where all lines are as thick as possible, such as with a Gothic font.

Creating Outlined Characters (Using Text Converted to Outline Object)

Outlined characters within a shape can be created by applying the **Convert to Outline Object** command to a character of a TrueType font.

1. Use a **Shape tool** to draw a shape.

For more details, refer to "Drawing Shapes" on page 118.



2. Select a character in a TrueType font.

3. Right-click the character, and then select **Convert to Outline Object** from the menu that appeared.

For more details, refer to "Converting text to outline pattern" on page 138.

4. Position the character so that it is framed by the shape.

5. After selecting the outlined character pattern, hold down the Ctrl key and select a Shape tool to select **Set Hole Sewing**.

For more details, refer to "Preventing overlapping stitching (hole sewing)" on page 166.

6. Select the outlined pattern inside the character, and then click the **Region sew** button .
(Since the background color in this example is black, the color selected with the **Region color** button is black.)

→ The outlined character is completed.

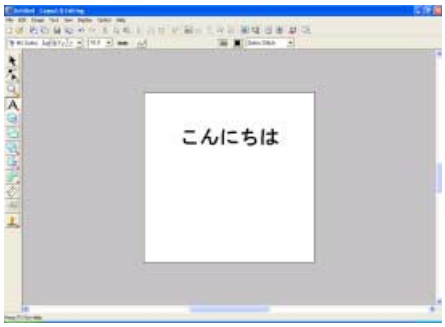
Converting Characters (Japanese, Chinese, Korean, etc) to Embroidery Patterns

Embroidery patterns can be created from various characters, such as Japanese, Chinese, Korean etc, using TrueType fonts.

For this example, we will create an embroidery pattern from Japanese characters.

1. Select a Text tool, and then select a Japanese TrueType font (for example, “MS Gothic”).
2. Click in the Design Page where you want to enter the text. The **Edit Text Letters** dialog box appears.
3. Display a character code table different from the one that appeared in step 2. (**Start** – **All Programs** – **Accessories** – **System Tools** – **Character Map**)
4. Select **MS Gothic** from the **Font** list in **Character Map**, and then select the **Advanced view** check box. Next, select **Windows: Japanese** from the **Character set** list, select the desired character, and then click **Select**.
   (This example shows the Japanese hiragana for the word meaning “Good Afternoon”.)

5. After selecting all of the desired characters, click **Copy** to copy the characters.
6. Paste the characters into the **Edit Text Letters** dialog box in Layout & Editing, and then click **OK**.



Memo:

- *The following procedure describes how to install Japanese, Chinese and Korean fonts on the English operating system for Windows® XP.*
  1) *Click **Start**, select **Control Panel**, and then click **Date, Time, Language, and Regional Options**.*
  2) *Click **Regional and Language Options**, and then click the **Language** tab.*
  3) *Select the **Install files for East Asian languages** check box under **Supplemental language support**, and then click **OK**.*
  4) *Complete the Windows® installation by following the instructions that appear.*
- *If Japanese or Korean can be entered directly from the computer keyboard, those characters can be entered directly into the **Edit Text Letters** dialog box.*

Layout & Editing

List of Tool Box Buttons

Tool Box	Purpose	Reference
	Sets the pointer in selection mode. When you start up the application, the selection mode is selected. Pointer shape:	p. 101
	Sets the pointer in point edit mode. Pointer shape: or	p. 106 p. 110
	Sets the pointer in zoom mode. Pointer shape: or	p. 168
	Sets the pointer in text, small text and monogram input mode. Pointer shape:	p. 127
	Sets the pointer in circle, arc, fan shape and arc & string drawing mode. Pointer shape:	p. 118
	Sets the pointer in rectangle drawing mode. Pointer shape:	p. 121
	Sets the pointer in various shape drawing mode. Pointer shape: , , ,

Tool Box	Purpose	Reference
	Sets the pointer in stamp input or stamp edit mode. Pointer shape:	p. 144

List of Menus

Memo:

Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling file input/output, such as opening, saving and printing.

Menu		Toolbar	Purpose	Shortcut key	Reference
New			Creates a new Design Page.	Ctrl + N	p. 94
Open			Opens a previously saved embroidery design.	Ctrl + O	p. 94
Import	**from File**		Imports embroidery designs from embroidery cards (.pec) and files created in the Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna/Viking (.hus, .vip, .shv), Janome (.jef, .sew), Singer (.csd, .xxx) and embroidery sewing machine (.phc) formats can be imported and added to the current Design Page.	F8	p. 95
	from Design Center		Imports an embroidery pattern from Design Center.	F7	p. 98
	from Card	—	Imports an embroidery design from an embroidery card.	—	p. 97
Save			Saves your embroidery design on the computer's hard disk as a latest version file (default).	Ctrl + S	p. 177
Save As		—	Saves your embroidery design on the computer's hard disk under a new file name.	—	p. 177
Export		—	Exports the design shown in the Design Page as a file of a different format (.dst, .exp, .pcs, .hus, .vip, .shv, ,jef, .sew, .csd and .xxx).	—	p. 177
Write to Card			Writes your embroidery design to an original card.	F4	p. 178
Property		—	Used to enter comments in the .pes file being edited.	—	p. 179
Print Setup		—	Allows you to change the printing settings for previewed embroidery.	—	p. 180

Menu	Toolbar	Purpose	Shortcut key	Reference
Print Preview	—	Allows you to preview the contents of the Design Page and check the sewing color order, the dimensions and the needle count before printing.	—	p. 181
Print	—	Prints your Design Page and some sewing information.	Ctrl + P	p. 181
Exit	—	Exits the application.	Alt + F4	p. 12

Edit menu

The **Edit** menu contains commands for performing simple actions on selected patterns, such as cutting and pasting.

Menu	Toolbar	Purpose	Shortcut key	Reference
Undo		Undoes the last operation.	Ctrl + Z	
Redo		Cancels the effect of the last Undo.	Ctrl + A	
Group	—	Turns several selected patterns into one object.	Ctrl + G	p. 105
Ungroup	—	Cancels the grouping for grouped patterns.	Shift+ G	
Cut		Removes the selected pattern(s) from the screen while saving a copy in the Clipboard.	Ctrl + X	
Copy		Saves the selected pattern(s) in the Clipboard without removing them from the screen.	Ctrl + C	
Duplicate	—	Makes a copy of the selected pattern(s).	Ctrl + D	
Paste		Pastes the contents of the Clipboard on the screen.	Ctrl + V	
Delete	—	Removes the selected pattern(s) from the screen without saving them in the Clipboard.	Delete	p. 79 p. 108

Menu		Toolbar	Purpose	Shortcut key	Reference
Point	To Straight	—	Straightens the two rounded lines that meet at a point on a curve.	—	p. 108
	To Curve	—	Rounds off the two straight lines that meet at a corner point.	—	p. 108
	To Smooth	—	Smoothes out the path at a point.	—	p. 109
	To Symmetry	—	Adjusts the control handles of a point symmetrically.	—	p. 109
	To Cusp	—	Transforms to a pointed path.	—	p. 110
	Delete	—	Removes the selected point(s).	—	p. 108
Mirror	Horizontal		Flips the selected pattern(s) up/down.	Ctrl + H	p. 104
	Vertical		Flips the selected pattern(s) left/right.	Ctrl + J	
Rotate			Allows you to manually rotate the selected pattern(s) by an arbitrary angle.	Ctrl + Y	p. 104
Numerical Setting	Size	—	Resizes the selected pattern numerically.	—	p. 103
	Rotate	—	Rotates the selected pattern numerically.	—	p. 105
Center		—	Moves the selected pattern to the center of the Design Page.	Ctrl + M	p. 102
Align	Left	—	Aligns the selected patterns on their left sides.	—	p. 102
	Center	—	Aligns the selected patterns on their left/right centers.	—	
	Right	—	Aligns the selected patterns on their right sides.	—	
	Top	—	Aligns the selected patterns on their top edges.	—	
	Middle	—	Aligns the selected patterns on their top/bottom centers.	—	
	Bottom	—	Aligns the selected patterns on their bottom edges.	—	
Select All		—	Selects all of the patterns.	Ctrl + E	p. 101

Image menu

The **Image** menu contains commands for importing and exporting image data and creating embroidery data from image data.

Menu		Toolbar	Purpose	Shortcut key	Reference
Input	**from File**	—	Imports image data from an existing file so that it can be used as a guide for creating embroidery data. **Note:** *The file name extension must be one of the following: Windows bitmap (.bmp), Exif (.tif, .jpg), ZSoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).*	—	p. 76
	from TWAIN device	—	Operates a TWAIN standardized scanner or other device to import an image.	—	p. 76
	from Portrait	—	Combines images of facial features that are provided with the application to create an original portrait.	—	p. 77
	from Clipboard	—	Imports image data from the Clipboard.	—	p. 78
Output	**to File**	—	Saves the image data as a file.	—	p. 100
	to Clipboard	—	Copies the image data onto the Clipboard.	—	p. 100
Select TWAIN device		—	Selects which TWAIN device installed in the computer to use.	—	p. 76
Modify		—	Adjusts the size and position of the image data.	—	p. 79
Image to Stitch Wizard			Gives step-by-step instruction for creating embroidery pattern from image data.	—	p. 80
Display Image	**On (100%)**	—	Displays the template image (density: 100%).	F6	p. 79
	75%	—	Displays a faded copy of the template image (density: 75%).	F6	
	50%	—	Displays a faded copy of the template image (density: 50%).	F6	
	25%	—	Displays a faded copy of the template image (density: 25%).	F6	
	Off	—	Hides the template image.	F6	

Text menu

The **Text** menu contains commands for performing actions on text patterns, such as fitting text to a curved path.

Menu	Toolbar	Purpose	Shortcut key	Reference
Edit Letters	—	Allows you to edit entered text.	Ctrl + L	p. 142
Text Attribute Setting		Allows for precise control of character attributes.	Ctrl + K	p. 132
Fit Text to Path Setting		Fits a line of text along a path.	Ctrl + T	p. 135
Release Text from Path		Releases the text from the path.	Ctrl + Q	p. 137
Transform Text		Applies a preset transformation to text.	F2	p. 137
Clear Transformation		Restores the original shape of the text.	F3	p. 137
True Type Font Attribute Setting	—	Sets the attributes, such as the style, for TrueType fonts that are converted to embroidery pattern.	—	p. 137
Convert to Outline Object	—	Creates outline data from text pattern converted from a TrueType font.	—	p. 138

Sew menu

The **Sew** menu contains commands for controlling the way each pattern will be sewn.

Menu	Toolbar	Purpose	Shortcut key	Reference
Sewing Attribute Setting		Sets the sewing attributes of the regions and the outlines of a pattern.	Ctrl + W	p. 151
Sewing Order/Color		Allows you to check and change the sewing order of pattern colors and individual patterns.	F10	p. 115
Set hole sewing	—	Sets a pair of patterns for hole sewing (to avoid sewing twice at the same place when a pattern encloses another one).	—	p. 166
Cancel hole sewing	—	Cancels hole sewing.	—	p. 167
Stitch to Block	—	Converts imported stitch patterns into blocks (manual punching data), allowing you to set sewing attributes and to keep the stitching quality when scaling.	—	p. 115
Convert to Stitch	—	Converts a shape pattern to a stitch pattern.	—	p. 113
Applique Wizard	—	Provides step-by-step instructions for easily creating appliqués.	—	p. 167
Select Sewing Area	—	Sets the sewing area.	—	p. 169
Optimize hoop change	—	Optimizes the sewing order of patterns in a Design Page for multi-position embroidery frames (100 × 172 mm, 172 × 100 mm, 130 × 300 mm, or 300 × 130 mm).	—	p. 185
Optimize Entry/ Exit points	—	Optimizes the positions of the entry points and the exit points for the embroidery pattern.	—	p. 111

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu	Toolbar	Purpose	Shortcut key	Reference
Grid Setup	—	Controls the display and characteristics of the grid.	—	p. 183
Preview		Specifies whether the patterns appear as stitches or in the normal view.	F9	p. 172
Realistic Preview		Displays a realistic image of how either selected patterns or all patterns will look after being embroidered. **Note:** *The Realistic Preview function cannot display a clean preview of the pattern if the monitor is set to 256 colors or less. The monitor should be set to at least 16-bit High Color (65536 colors).*	Shift + F9	
Realistic Preview Attribute Setting	—	Sets the preview attributes for the Realistic Preview function.	—	p. 172
Refresh Window	—	Updates the screen.	Ctrl + R	—
Stitch Simulator		Displays a simulation of the machine stitching.	—	p. 173
Reference Window		Hides/displays the Reference Window.	F11	p. 175
Toolbar	—	Hides/displays the Toolbar.	—	p. 13
Status Bar	—	Hides/displays the status bar.	—	

Option menu

The **Option** menu contains commands for providing additional options.

Menu		Toolbar	Purpose	Shortcut key	Reference
Design Center		—	Starts up Design Center and displays its window up front.	F5	p. 14 p. 33
Programmable Stitch Creator		—	Starts up Programmable Stitch Creator and displays its window up front.	—	p. 16 p. 307
Design Database		—	Starts up Design Database and displays its window up front.	—	p. 17 p. 274
Font Creator		—	Starts up Font Creater and displays its window up front.	—	p. 15 p. 237
Design Property		—	Displays a dialog box containing sewing information for the selected pattern(s).	—	p. 174
Design Page Property		—	Allows you to change the size of the Design Page, and the color of the Design Page and the background.	—	p. 99
Edit User Thread Chart		—	Allows original thread charts to be created and edited.	—	p. 162
Select System Unit	**mm**	—	Allows you to change the system units to millimeters.	—	p. 183
	inch	—	Allows you to change the system units to inches.	—	

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	Reference
Instruction Manual	—	Starts up the Instruction Manual (HTML format) for this application.	F1	p. 3
Check for Updates	—	Checks for the updated version on the Web. **Note:** *Access to the Internet is required in order to use this function.*	—	p. 9
Customer Support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **Note:** *This function cannot be used if there is no Internet connection.*	—	p. 9
Online Registration	—	Displays the online registration page from our Web site. **Note:** *This function is available only if the Internet browser is correctly installed and an Internet connection can be established. *Online registration is not possible in certain countries and regions.*	—	p. 9
About Layout & Editing	—	Gives information about the version of this application.	—	

Design Center

List of Tool Box Buttons

Line Image Stage

In the Line Image Stage, the Tool Box is used to modify the line image generated from the original image or to create a line image from scratch.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	Reference
	The five first buttons are used as pens and erasers of different thicknesses. Pointer shape when moved or dragged over the work area: for the pens and for the erasers (when the right mouse button is held down). When you start up the application, the second Pen tool is selected.	p. 35 p. 198
	Sets the pointer in zoom-in mode. Pointer shape:	p. 35
	Maximizes the selected Design Page to fit in the window.	p. 36
	Sets the pointer in zoom-out mode. Pointer shape:	p. 35

Figure Handle Stage

In the Figure Handle Stage, outline data that has been generated automatically can be edited using the Tool Box.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	Reference
	Sets the pointer in selection mode.When you start up the application, the selection mode is selected. Pointer shape:	p. 202
	Sets the pointer in point edit mode. Pointer shape:	p. 205
	Sets the pointer in line drawing mode. Pointer shape:	p. 206
	Sets the pointer in zoom-in mode. Pointer shape:	
	Maximizes the selected Design Page to fit in the window.	
	Sets the pointer in zoom-out mode. Pointer shape:	
	Fills the display with the selected objects.	

Sew Setting Stage

In the Sew Setting Stage, outline pattern from the Figure Handle Stage are assigned line and region sewing attributes. This is done by using the Tool Box and the Sewing Attributes bar.

Selecting a button on the Tool Box changes the pointer mode and shape. A description of each tool appears at the left side of the status bar.

Tool Box	Purpose	Reference
	Sets the pointer in region sewing mode. When you start up the application, this tool is selected. Pointer shape:	p. 209
	Sets the pointer in line (all) sewing mode. Pointer shape:	p. 211
	Sets the pointer in line (part) sewing mode. Pointer shape:	p. 211
	Sets the pointer in hole sewing mode. Pointer shape:	p. 227
	Sets the pointer in zoom-in mode. Pointer shape:	
	Maximizes the selected Design Page to fit in the window.	
	Sets the pointer in zoom-out mode. Pointer shape:	
	Sets the pointer in stamp input mode. Pointer shape:	p. 228
	Sets the pointer in stamp edit mode. Pointer shape:	p. 229

List of Menus

Memo:

Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling file input/output, such as opening and saving.

Menu	Toolbar	Purpose	Shortcut key	Reference
New Line Image		Creates a new Design Page and switches to the Line Image Stage.	Ctrl + N	p. 197
New Figure Data	—	Creates a new Design Page and switches to the Figure Handle Stage.	—	p. 202
Wizard	—	Gives a step-by-step guide for creating pattern, according the type of data you want to create.	F3	p. 194
Open		Opens a previously saved file (.pem, .pel) or image file (Windows bitmap (.bmp), Exif (.tif, .jpg), ZSoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k). **Note:** *For .pcd and .fpx files containing many pages, only the first page can be displayed. Tiff files that have used LZW compression cannot be opened.*	Ctrl + O	
Select TWAIN device	—	Selects which TWAIN device installed in the computer to use.	—	p. 195
Input from TWAIN device	—	Operates a TWAIN standardized scanner or other device to import an image.	—	
Input from Clipboard	—	Opens a new Design Page in the Original Image Stage, and imports the image data on the Clipboard.	—	
Output to Clipboard	—	Copies the Original Image Stage image data to the Clipboard.	—	
Import Figure		Adds a .pem file to your Design Page (available only in the Figure Handle stage).	F8	
Save		Saves your Design Page on the disk as latest version file (default).	Ctrl + S	p. 234
Save As	—	Saves the current pattern under a new file name. Savable files are: in the Original Image Stage, Bitmap files (.bmp); in the Line Image Stage, .pel files; and in the Figure Handle Stage and the Sew Setting Stage, .pem files.	—	p. 234

Menu	Toolbar	Purpose	Shortcut key	Reference
Exit	—	Exits the application.	Alt + F4	p. 12

Edit menu

The **Edit** menu contains commands for performing simple actions on selected patterns, such as cutting and pasting.

Menu		Toolbar	Purpose	Shortcut key	Reference
Undo			Undoes the last operation.	Ctrl + Z	p. 37 p. 204
Redo			Cancels the effect of the last Undo.	Ctrl + A	p. 204
Cut			Removes the selected pattern from the screen while saving a copy in the Clipboard.	Ctrl + X	p. 204
Copy			Saves the selected pattern in the Clipboard without removing them from the screen.	Ctrl + C	p. 204
Duplicate		—	Makes a copy of the selected pattern.	Ctrl + D	
Paste			Pastes the contents of the Clipboard on the screen.	Ctrl + V	p. 204
Delete		—	Removes the selected pattern from the screen without saving them in the Clipboard.	Delete	p. 204
Split		—	Splits the point into two.	—	p. 206
Mirror	**Horizon-tal**		Flips the selected pattern up/down.	Ctrl + H	p. 203
	Vertical		Flips the selected pattern left/right.	Ctrl + J	
Rotate			Allows you to change the direction of the pattern.	Ctrl + Y	p. 203
Numerical Setting	**Size**	—	Resizes the selection numerically.	—	p. 203
	Rotate	—	Rotates the selected pattern numerically.	—	p. 204
Select All		—	Selects all of the pattern.	Ctrl + E	

Sew menu

The **Sew** menu contains commands for controlling the way the pattern will be sewn.

Menu	Toolbar	Purpose	Shortcut key	Reference
Sewing Attributes		Sets the sewing attributes for outlines and regions.	Ctrl + W	p. 216
Sewing Order		Allows you to check and modify the sewing order of the different colors of a pattern as well as the sewing order of each color individually.	F10	p. 230

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu		Toolbar	Purpose	Shortcut key	Reference
Grid Setup		—	Allows you to set up the grid, to switch it on or off, and to display it with or without the horizontal and vertical lines.	—	p. 236
Modify Template		—	Adjusts the size and position of the background image.	—	p. 200
Display Template	**On**	—	Displays the template image.	F6	p. 200
	Faded	—	Displays a faded copy of the template image.	F6	
	Off	—	Hides the template image.	F6	
Preview			Specifies whether the patterns appear as stitches or in the normal view.	F9	p. 231
Realistic Preview			Displays a realistic image of how the patterns will look after being embroidered.	Shift + F9	
Realistic Preview Attribute Setting		—	Sets the preview attributes for Realistic Preview.	—	p. 232
Refresh Window		—	Updates the screen.	Ctrl + R	
Stitch Simulator			Displays a simulation of the machine stitching.	—	p. 231
Reference Window			Hides/displays the Reference Window.	F11	p. 207
Toolbar		—	Hides/displays the Toolbar.	—	p. 14
Status Bar		—	Hides/displays the status bar.	—	

Option menu

The **Option** menu contains commands for selecting the Design Page size and the unit system.

Menu		Toolbar	Purpose	Shortcut key	Reference
Layout & Editing		—	Starts up Layout & Editing and displays its window up front.	F5	p. 76 p. 94
Programmable Stitch Creator		—	Starts up Programmable Stitch Creator and displays its window up front.	—	p. 256
Design Page Property		—	Allows you to change the size of the Design Page and the color of the Design Page and the background.	—	p. 201
Select System Unit	**mm**	—	Allows you to change the system units to millimeters.	—	p. 236
	inch	—	Allows you to change the system units to inches.	—	

Stage menu

The **Stage** menu contains commands for moving from one stage to the next or to a previous one.

Menu	Toolbar	Purpose	Shortcut key	Reference
To Original Image		Moves back to the Original Image Stage. **Note:** *This function can only be used if there is image data in the Original Image Stage, for example, if image data was opened or if image data was pasted from the Clipboard. If you have started with a new file from the Line Image Stage, for example, the function is not available.*	—	
To Line Image		Moves to the Line Image Stage. **Note:** *If you have started with a new figure handle file from the Figure Handle Stage, this function is not available.*	—	p. 196
To Figure Handle		Moves to the Figure Handle Stage.	—	p. 199
To Sew Setting		Moves from the Figure Handle Stage to the Sew Setting Stage.	—	p. 209
To Layout & Editing		Exports the embroidery pattern from the Sew Setting Stage to Layout & Editing.	—	p. 235

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	Reference
Instruction Manual	—	Starts up the Instruction Manual (HTML format) for this application.	F1	p. 3
Customer Support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	p. 9
About Design Center	—	Gives information about the version of this application.	—	

Font Creator

List of Tool Box Buttons

Tool Box	Purpose	Reference
	Sets the pointer in selection mode. When you start up the application, the selection mode is selected. Pointer shape:	p. 244
	Sets the pointer in point edit mode. Pointer shape:	p. 248
	Sets the pointer in zoom mode. Pointer shape: or	p. 252
	Sets the pointer in manual punching mode. Pointer shape: , , , or	p. 242

List of Menus

Memo:

Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling files, such as opening and saving.

Menu	Toolbar	Purpose	Shortcut key	Reference
New		Creates a new work area.	Ctrl + N	p. 237
Open		Opens a previously saved font file.	Ctrl + O	p. 237

Menu	Toolbar	Purpose	Shortcut key	Reference
Template Open	—	Opens a background image file that can be used as a guide to draw a Font Pattern. **Note:** *The following file formats can be opened: Windows bitmap (.bmp), Exif (.tif, .jpg), ZsoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).*	—	p. 238
Save		Saves created font pattern on the disk.	Ctrl + S	p. 253
Save As	—	Saves the current font pattern under a new file name.	—	p. 253
Exit	—	Exits the application.	Alt + F4	p. 12

Edit menu

The **Edit** menu contains commands for performing simple actions on selected lines and patterns, such as cutting and pasting.

Menu	Toolbar	Purpose	Shortcut key	Reference
Undo		Undoes the last operation.	Ctrl + Z	
Redo		Cancels the effect of the last Undo.	Ctrl + A	
Cut		Removes the selected pattern(s) from the screen while saving a copy in the Clipboard.	Ctrl + X	p. 245
Copy		Saves the selected pattern(s) in the Clipboard without removing them from the screen.	Ctrl + C	p. 245
Duplicate	—	Adds a copy of the selected pattern(s) to the work area.	Ctrl + D	p. 245
Paste		Pastes the contents of the Clipboard on the screen.	Ctrl + V	p. 245
Delete	—	Removes the selected pattern(s) from the screen without saving them in the Clipboard.	Delete	p. 245

Menu		Toolbar	Purpose	Shortcut key	Reference
Point	To Straight	—	Straightens the two rounded lines that meet at a point on a curve.	—	p. 249
	To Curve	—	Rounds off the two straight lines that meet at a corner point.	—	
	To Smooth	—	Smoothes out the path at a point.	—	
	To Symmetry	—	Adjusts the control handles of a point symmetrically.	—	
	To Cusp	—	Transforms to a pointed path.	—	
	Delete	—	Removes the selected point(s).	—	p. 249
Mirror	Horizontal	—	Flips the selected pattern(s) up/down.	Ctrl + H	p. 246
	Vertical	—	Flips the selected pattern(s) left/right.	Ctrl + J	p. 246
Rotate		—	Allows you to manually rotate the selected pattern(s) by an arbitrary angle.	Ctrl + Y	p. 246
Align	Left	—	Aligns the selected patterns on their left sides.	—	p. 244
	Center	—	Aligns the selected patterns on their left/right centers.	—	
	Right	—	Aligns the selected patterns on their right sides.	—	
	Top	—	Aligns the selected patterns on their top edges.	—	
	Middle	—	Aligns the selected patterns on their top/bottom centers.	—	
	Bottom	—	Aligns the selected patterns on their bottom edges.	—	
Select All		—	Selects all of the patterns.	Ctrl + E	p. 244

Sew menu

The **Sew** menu contains commands for controlling the way the pattern will be sewn.

Menu	Toolbar	Purpose	Shortcut key	Reference
Sewing Order		Allows you to check and change the sewing order of individual patterns.	F10	p. 250

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu		Toolbar	Purpose	Shortcut key	Reference
Grid Setup		—	Selects the work grid.	—	p. 255
Fill Mode			Switches the display mode between fill mode (blocks appear filled in) and outline mode (blocks do not appear filled in).	F9	p. 254
Preview Window			Hides/displays the Preview Window.	F11	p. 250
Browse Window			Displays the Browse Window.	—	p. 251
Modify Template		—	Adjusts the size and position of the background image.	—	p. 254
Display Template	**On (100%)**	—	Displays the template image (density: 100%).	F6	p. 254
	75%	—	Displays a faded copy of the template image (density: 75%).	F6	
	50%	—	Displays a faded copy of the template image (density: 50%).	F6	
	25%	—	Displays a faded copy of the template image (density: 25%).	F6	
	Off	—	Hides the template image.	F6	
Toolbar		—	Hides/displays the Toolbar.	—	p. 15
Status Bar		—	Hides/displays the status bar.	—	p. 15

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	Reference
Instruction Manual	—	Starts up the Instruction Manual (HTML format) for this application.	F1	
Customer Support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	p. 9
About Font Creator	—	Gives information about the version of this application.	—	

Programmable Stitch Creator

List of Tool Box Buttons

Tool Box	Purpose	Reference
	Sets the pointer in selection mode. Pointer shape:	p. 262 p. 270
	Sets the pointer in point edit mode. Pointer shape:	p. 266 p. 269
	Sets the pointer in line drawing mode. When you start up the application, the drawing mode is selected. Pointer shape:	p. 261
	Sets the pointer in region (reset) mode. Pointer shape:	p. 268
	Sets the pointer in region (engrave) mode. Pointer shape:	
	Sets the pointer in region (emboss) mode. Pointer shape:	

List of Menus

Memo:

Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling files, such as opening and saving.

Menu	Toolbar	Purpose	Shortcut key	Reference
New		Creates a new work area.	Ctrl + N	p. 258
Open		Opens a previously saved programmable stitch file.	Ctrl + O	p. 256
Template Open	—	Opens a background image file that can be used as a guide to draw a new pattern for a programmable fill or motif stitch. **Note:** *The following file formats can be opened: Windows bitmap (.bmp), Exif (.tif, .jpg), ZsoftPCX (.pcx), Windows Meta File (.wmf), Portable Network Graphics (.png), Encapsulated PostScript (.eps), Kodak PhotoCD (.pcd), FlashPix (.fpx), JPEG2000 (.j2k).*	—	p. 257
Save		Saves your work area on the disk.	Ctrl + S	p. 272
Save As	—	Saves the current stitch pattern under a new file name.	—	p. 272
Exit	—	Exits the application.	Alt + F4	

Mode menu

You can use Programmable Stitch Creator to create patterns for programmable fill stitches, motif fill or motif line stitches, and stamps. However, the method and work area are different for each. Use the **Mode** menu to select the mode for the pattern that you want to create.

Menu	Toolbar	Purpose	Shortcut key	Reference
Fill/Stamp	—	Enters Fill/Stamp mode for creating stitch patterns for programmable fill stitches and stamps.	—	p. 258
Motif	—	Enters Motif mode for creating stitch patterns for motif stitches.	—	

Edit menu

The **Edit** menu contains commands for performing simple actions on selected lines and patterns, such as cutting and pasting.

Menu		Toolbar	Purpose	Shortcut key	Reference
Undo			Undoes the last operation.	Ctrl + Z	
Redo			Cancels the effect of the last Undo.	Ctrl + A	
Cut			Removes the selected line(s) from the screen while saving a copy in the Clipboard.	Ctrl + X	p. 263
Copy			Saves the selected line(s) in the Clipboard without removing them from the screen.	Ctrl + C	p. 263
Duplicate		—	Adds a copy of the selected line(s) to the work area.	Ctrl + D	p. 263
Paste			Pastes the lines of the Clipboard on the screen.	Ctrl + V	p. 263
Delete		—	Removes the selected line(s) from the screen without saving them in the Clipboard.	Delete	p. 263
Mirror	**Horizon-tal**		Flips the selected line(s) up/down.	Ctrl + H	p. 264
	Vertical		Flips the selected line(s) left/right.	Ctrl + J	p. 264
Rotate			Allows you to manually rotate the selected line(s) by an arbitrary angle.	Ctrl + Y	p. 264
Select All		—	Selects all of the patterns.	Ctrl + E	p. 262

Display menu

The **Display** menu contains commands for modifying the appearance of the screen.

Menu		Toolbar	Purpose	Shortcut key	Reference
Grid	**Wide**	—	Displays the grid interval of 1/8 of a work area's edge.	—	p. 273
	Medium	—	Displays the grid interval of 1/16 of a work area's edge.	—	
	Narrow	—	Displays the grid interval of 1/32 of a work area's edge.	—	
	None	—	Hides the grid.	—	
Template	**On (100%)**	—	Displays the template image (density: 100%).	F6	p. 273
	75%	—	Displays a faded copy of the template image (density: 75%).	F6	
	50%	—	Displays a faded copy of the template image (density: 50%).	F6	
	25%	—	Displays a faded copy of the template image (density: 25%).	F6	
	Off	—	Hides the template image.	F6	
Preview		—	Hides/displays the repeating image display of the pattern being created.	—	p. 260
Toolbar		—	Hides/displays the Toolbar.	—	p. 16
Status Bar		—	Hides/displays the status bar.	—	

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	Reference
Instruction Manual	—	Starts up the Instruction Manual (HTML format) for this application.	F1	Quick Reference Guide
Customer Support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	
About Programmable Stitch Creator	—	Gives information about the version of this application.	—	

Design Database

List of Menus

Memo:

Many menu commands are available as buttons on the Toolbar or in the menu that appears when the right mouse button is clicked.

File menu

The **File** menu contains commands for handling files, such as opening, importing and converting, and for creating catalogs.

Menu	Toolbar	Purpose	Shortcut key	Reference
Open in Layout & Editing	—	Opens the embroidery design file with Layout & Editing. **Note:** *Only .pes files can be opened.*	—	p. 277
Import into Layout & Editing	—	Imports the embroidery design file into Layout & Editing. **Note:** *The following file formats can be imported.: .pes, Tajima (.dst), Melco (.exp), Pfaff (.pcs), Husqvarna/Viking (.hus), Husqvarna/Viking (.vip), Viking D1 (.shv), Janome (.jef), Janome/Elna (.sew), Poem/Singer EU (.csd), Singer PSW/XXX (.xxx) and embroidery sewing machine (.phc).*	—	p. 277
Create New Folder	—	Creates a new folder in the selected folder.	—	p. 274
Convert Format	—	Converts the embroidery design file to one of a different format.	—	p. 282
Delete	—	Deletes the selected embroidery design file.	Delete	p. 275
Search	—	Allows the desired embroidery design file to be searched for.	Ctrl + F	p. 280
Print Setup	—	Allows you to change the printing settings for catalogs of embroidery design files.	—	p. 287
Print Preview	—	Allows you to preview the catalog of embroidery design files before printing.	—	
Print	—	Prints the catalog of embroidery design files.	Ctrl + P	p. 287
Create HTML	—	Outputs the catalog of embroidery design files as an HTML file.	—	p. 287

Menu	Toolbar	Purpose	Shortcut key	Reference
Create CSV	—	Outputs the catalog of embroidery design files sewing information as a CSV file.	—	p. 288
Exit	—	Exits the application.	Alt + F4	p. 12

Edit menu

Menu	Toolbar	Purpose	Shortcut key	Reference
Cut		Removes the selected embroidery design file(s) from the folder while saving a copy in the Clipboard.	Ctrl + X	p. 275
Copy		Saves the selected embroidery design file(s) in the Clipboard without removing them from the folder.	Ctrl + C	
Paste		Pastes the embroidery design file(s) from the Clipboard into the selected folder.	Ctrl + V	

Display menu

Menu	Toolbar	Purpose	Shortcut key	Reference
Large Thumbnails		Lists the embroidery design file(s) in the contents pane as large thumbnails.	—	p. 276
Small Thumbnails		Lists the embroidery design file(s) in the contents pane as small thumbnails.	—	
Details		Lists the embroidery design file(s) in the contents pane by their sewing information.	—	
Preview		Displays a preview of the selected embroidery design file.	—	p. 278
Property		Displays the sewing information for the selected embroidery design file.	—	p. 278
Refresh	—	Refreshes the display of embroidery design file(s) in the contents pane.	Ctrl + R	
Toolbar	—	Hides/displays the Toolbar.	—	p. 17
Status Bar	—	Hides/displays the status bar.	—	

Option menu

The **Option** menu contains a command for changing the units of measure.

Menu		Toolbar	Purpose	Shortcut key	Reference
Select System Unit	**mm**	—	Allows you to change the system units to millimeters.	—	p. 183
	inch	—	Allows you to change the system units to inches.	—	

Help menu

The **Help** menu contains commands for accessing the on-screen help information system.

Menu	Toolbar	Purpose	Shortcut key	Reference
Instruction Manual	—	Starts up the Instruction Manual (HTML format) for this application.	F1	
Customer support	—	Opens the FAQ (Frequently Asked Questions) page on our Web site. **Note:** *This function cannot be used if there is no Internet browser correctly installed in the computer.*	—	
About Design Database	—	Gives information about the version of this application.	—	

If a problem occurs, visit the following Web site to find causes and solutions to those problems and answers to frequently asked questions.

http://welcome.solutions.brother.com/bsc/public/midlink2.aspx?prod=pe-design7&lang=all