

320 Auto

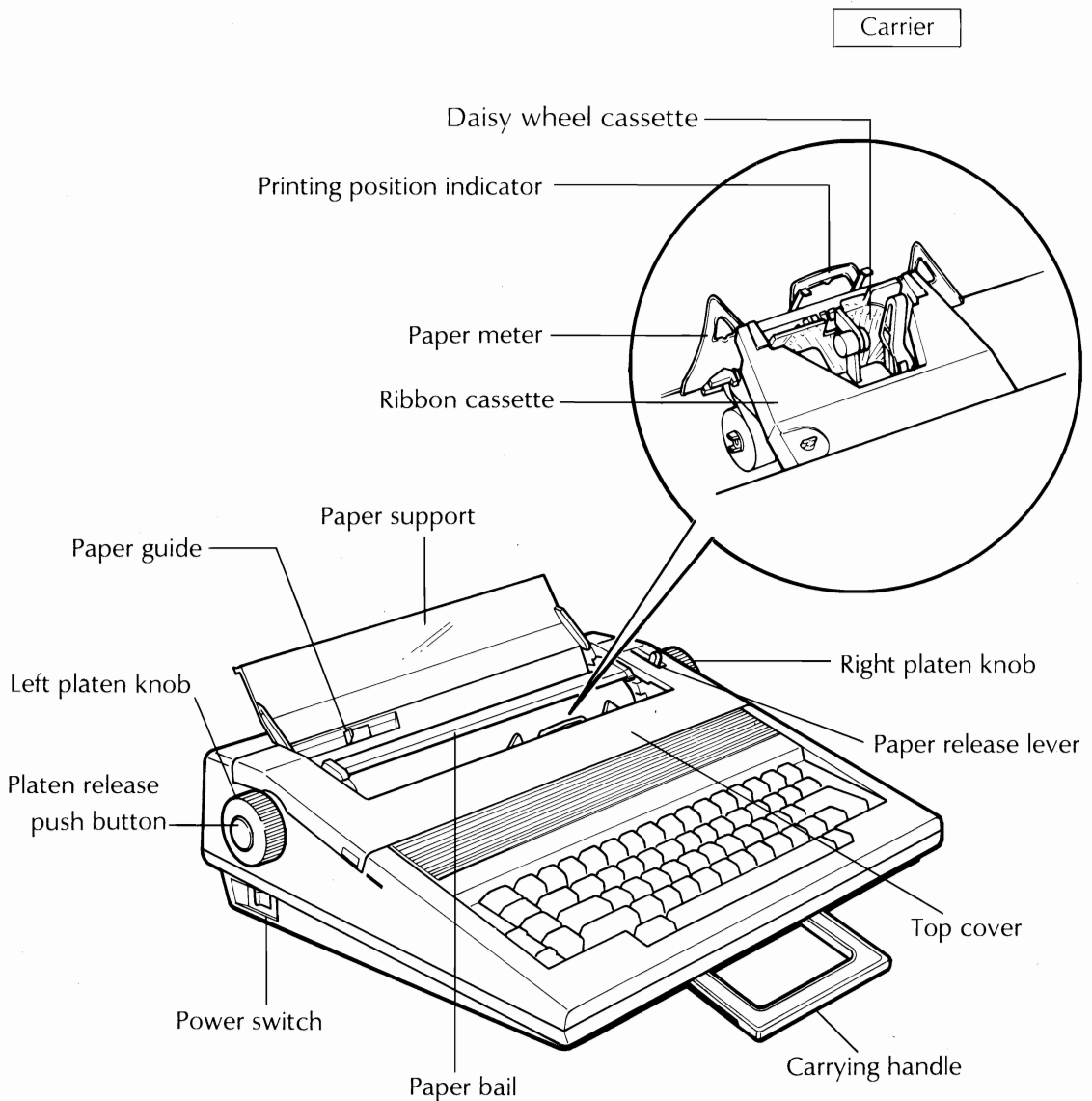
USER'S GUIDE

ELECTRONIC TYPEWRITER **AX-22**

brother®

AMERICAN

DESCRIPTION

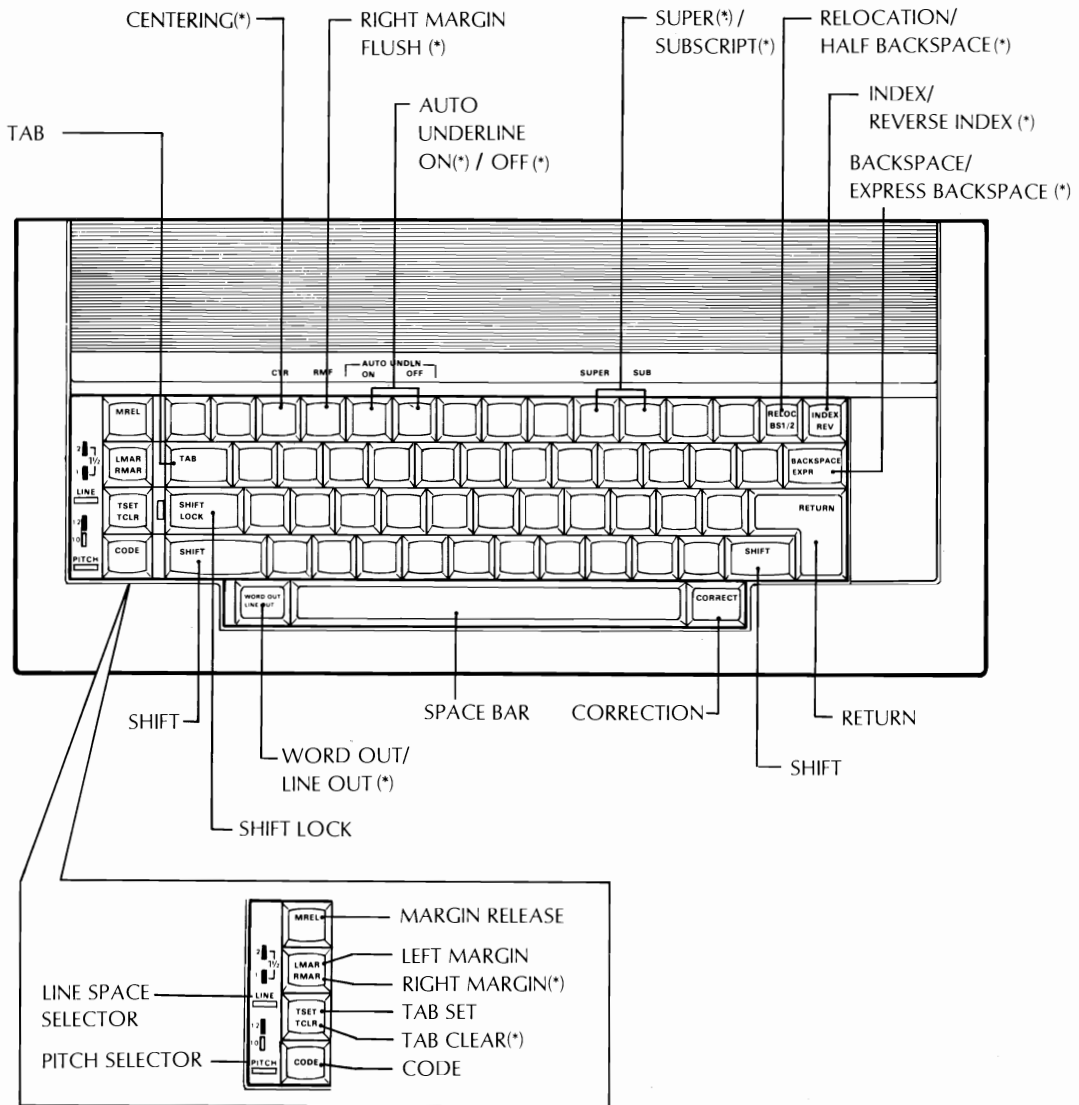


Paper guide: This guide is used to position a sheet of paper at its left edge, and is adjustable according to the paper size.

Paper release lever: Pushing this lever loosens tension on the paper so that it can be adjusted as necessary.

Platen release push button: Pressing this button allows you to move the platen regardless of the current line spacing selection.

KEYBOARD



(*) Hold down the CODE key and press the appropriate key to activate these functions.

Whenever the CODE key is used to activate a function, the following terminology is used: CODE + APPROPRIATE KEY. The CODE key must be held down while the APPROPRIATE KEY is pressed.

The following functions and characters can be repeated by holding down the corresponding keys:

NORMAL CHARACTERS, HYPHEN, SPACE BAR, BACKSPACE, RETURN, TAB (carrier moves from one tab to the next), CORRECTION, INDEX/REVERSE INDEX.

Thank you for choosing a Brother electronic typewriter! This product is designed to deliver years of reliable operation.

Your typewriter comes with the following items:

- ★ cassette ribbon
- ★ cassette daisy wheel
- ★ correction tape

Please make sure that all of these are included with this machine.

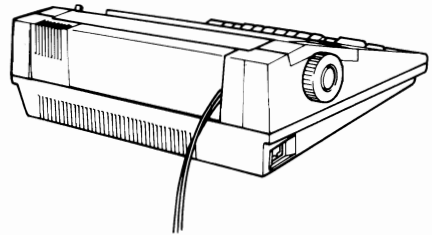
Please write the model number and the serial number of this typewriter in the blank spaces below. These numbers can be found on the rear panel of the typewriter.

MODEL NO.

SERIAL NO.

Please keep these numbers for future reference.

The power cord compartment is in the rear of the typewriter. Remove the cord and close the compartment's cover, fitting the cord into the slot. The power switch is located on the left side of the typewriter near the rear.



This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the typewriter with respect to the receiver
- move the typewriter away from the receiver
- plug the typewriter into a different outlet so that typewriter and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

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FEATURES

Your Brother electronic typewriter combines advanced performance with easy operation.

Some of the outstanding functions of this typewriter are illustrated in the letter below. The numbers in brackets refer to the page where you can find further information concerning each feature.

Right margin flush (11)
↓
January 7th, 1987

Pitch (3)
↓
Dear Sir:

Line indent (10)
↓
Thank you for your interesting paper on chemical formulas. Most people are no longer familiar with them.

Line spacing (3)
↓
I understand you did not have time to proof-read the final copy, which accounts for the typing errors on pages 25, 57, and 59.

There are some minor changes I would like to suggest that might contribute to the clarity of your paper.

Auto underline (12)
↓
Item ✓

Tabs (10)
↓
Suggestion

Tabs (10)
↓
Page/Line

HO₂

H₂O

12/15

e=mc²

e=mc² ← Superscript (13)

57/19

sodium (C₂₀H₄₂)

eicosane (C₂₀H₄₂)

59/22

Subscript (13)
↑

Did my secretary think of sending you our new address? Just in case she did not, allow me to give it to you:

Centering (11)
↓
Institute of Chemistry and Physics
100 Metro Street
New York, N.Y.

Yours sincerely,

O. Newton

BASIC TYPING

Selecting pitch

Your typewriter offers two typing pitches:

Pica (10 pitch): 10 characters per inch

Elite (12 pitch): 12 characters per inch

To change the pitch, the carrier must be at the left margin. The pitch LED is ON if you choose Elite but stays OFF if Pica is selected.

Selecting line spacing

You have a choice of single space, 1½ space and double space. The LEDs above the selector will light according to your choice; if you choose a one-line-and-a-half spacing, both LEDs will light.

Setting margins

Left margin

- 1) Move the carrier to the desired position using the SPACE bar, the BACKSPACE or MARGIN RELEASE key as required.
- 2) Press the LEFT MARGIN key. The left margin is now set.

Right margin

- 1) Move the carrier to the desired position using the SPACE bar, the BACKSPACE or MARGIN RELEASE key as required.
- 2) While holding down the CODE key, press the RIGHT MARGIN key to set the right margin.

Margin release

To move the carrier past an existing margin, press the MARGIN RELEASE key.

- 1) To move to the left of the left margin, backspace to the left margin, press the MARGIN RELEASE key and then continue to backspace.
- 2) To move past the right margin, hold the SPACE bar until the carrier reaches the right margin. Press the MARGIN RELEASE key, then continue spacing using the SPACE bar.

- ★ The minimum distance between the left and the right margins is 2 inches, i.e. either 20 (Pica pitch) or 24 characters (Elite pitch).

Typing uppercase characters

To type uppercase characters, press either the right or left SHIFT key. Releasing this key returns the keyboard to the lowercase mode.

For continuous uppercase typing, press the SHIFT LOCK key. To return to lowercase typing, press either the right or left SHIFT key.

The SHIFT LOCK LED lights whenever the SHIFT or SHIFT LOCK keys are pressed.

- ★ To type a character repeatedly, hold down the corresponding key for more than half a second.

Hot zone

The hot zone starts 6 spaces before the right margin and extends to the right edge of the paper. A warning beep will sound when the hot zone is reached.

Returning the carrier

Returning the carrier to the left margin advances the paper by the number of lines set with the line space selector (1, 1½ or 2).

To return the carrier, simply press the RETURN key in the lower right corner of the keyboard. Holding down this key will feed the paper repeatedly.

Backspacing

Your typewriter has three different backspace functions.

1) Simple backspace

To move back one space at a time, press the BACKSPACE key. To move continuously to the left, hold this key down.

2) Express backspace

To move the carrier quickly to the left margin, press CODE + EXPRESS BACKSPACE.

3) Half backspace

To move back half a space, press CODE + HALF BACKSPACE. The use of this function is explained in the Insertions & Deletions section.

MEMORY CORRECTION

This typewriter has a 1-line correction memory that makes it possible to delete or correct any character, word, or line within this range with the touch of a single key.

Correcting one character

- 1) Use the BACKSPACE key or the SPACE bar to line up the carrier with the error.
 - 2) Press the CORRECTION key. (The incorrect character will be eliminated.)
 - 3) Type in the correct letter.
- ★ To erase a series of characters, merely hold down the CORRECTION key. The carrier will backspace and correct continuously until you release the key.
 - ★ Super/subscripts, and underlining can also be corrected using the CORRECTION key.

Relocation

The RELOCATION key allows you to space to the end of your typing line rapidly. Press the RELOCATION key to bring the carrier back to the position it occupied before the correction.

Word out

This function allows you to erase one word at a time.

- 1) Use the BACKSPACE key or the SPACE bar to move the carrier to the last character of the word to be deleted or to the space immediately after it. (The small triangle mark indicates the location of the carrier.)

cal formulas. Most people feel_△

- 2) Press WORD OUT. The word is erased and the carrier is now on the space previously occupied by the first character of the erased word.

cal formulas. Most people _△

- 3) And you may now continue typing your text.

cal formulas. Most people are no longer familiar

- ★ If the carrier is positioned in the middle of a word, only the letters from that position to the beginning of the word will be erased.
- ★ This function erases super/subscripts and underlining if they are part of the word.
- ★ To interrupt the word out function, press the CORRECTION key.

Line out

This function allows you to delete an entire line at a time. Line Out will delete the last line you typed as long as you haven't passed carrier return.

- 1) Use the BACKSPACE key or the SPACE bar to move the carrier to the end of the last word of the line to be erased (or to the space immediately after it).

errors on pages 25, 57, and 59.
I would like to suggest some minor changes △

- 2) Press CODE + LINE OUT to delete the line automatically. The carrier will stop at the space previously occupied by the last character to be deleted.

errors on pages 25, 57, and 59.
△

- ★ If the carrier is positioned in the middle of a word, correction will start from that position to the beginning of the line.
- ★ Line deletion includes superscripts, subscripts and underlining.
- ★ To interrupt the line out function, press the CORRECTION key.

MANUAL CORRECTION

Manual correction is used for mistakes outside of the correction memory range.

Correcting one character

- 1) Press INDEX or CODE + REVERSE INDEX (more about this later) to return the paper to the same line as the character to be corrected.
- 2) Align the carrier with the error using BACKSPACE or the SPACE bar.

Thank you for your intesesting paper on chemi-

- 3) Press CODE + CORRECTION
- 4) Type in the incorrect character to erase it. (Use the SHIFT key for uppercase characters.)

Thank you for your interesting paper on chemi-

- 5) Type in the correct character.

Thank you for your interesting paper on chemi-
 Δ

INSERTIONS & DELETIONS

Insertions

Your typewriter features a half-backspace function that makes it easy to add letters to — or remove them from — a text you have already typed.

```
cal fomulas. Most people are no longer familiar
```

In the example above, the “r” of the word “formulas” has been omitted. This mistake can be corrected using the simple correction method explained in the previous section, but unless the entire line is deleted and then retyped, this creates a cluttered, unbalanced look. Therefore:

- 1) Delete the entire misspelled word.
- 2) Line the carrier up with the first letter of the deleted word.
- 3) Press CODE + HALF BACKSPACE to move the carrier half a space to the left.

```
cal     Most people are no longer familiar
```

- 4) Type in the correct word. Because of the half-backspace function, the corrected word is separated from the next word by a half-space instead of running into it.

```
cal formulas. Most people are no longer familiar
```

Deletions

```
There are some minnor changes I would like
```

In the example above, there are too many “n’s” in the word “minor”. Therefore:

- 1) Delete the entire misspelled word.
- 2) Align the carrier with the second letter of the deleted word.

```
There are some     changes I would like
```

- 3) Press CODE + HALF BACKSPACE.
- 4) Type in the correct word.

```
There are some minor changes I would like
```

OTHER FUNCTIONS

Setting tabs

- 1) To set a tab, move the carrier to the desired position using the SPACE bar or BACKSPACE.
 - 2) Press the TAB SET key to set the tab. A maximum of 12 tabs can be set.
 - 3) Repeat steps 1 and 2 to set the next tab stop.
- ★ The right margin and the right end are considered tab positions.

Clearing tabs

Caution: if you press CODE + TAB CLEAR for more than half a second, all tabs will be deleted. A beep will sound three times.

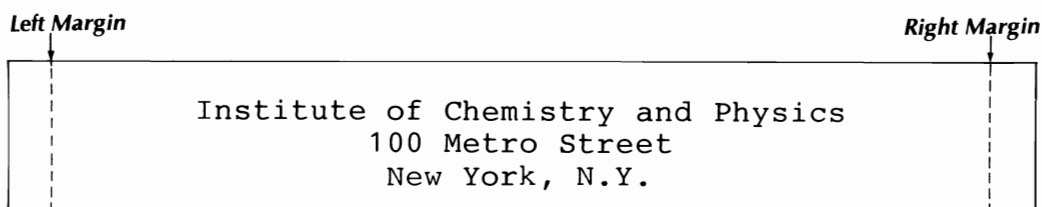
Clearing a single tab

- 1) Using the TAB key, move the carrier to the tab stop you wish to clear.
- 2) Press CODE + TAB CLEAR to clear the tab.

Centering

Your Brother typewriter allows you to center a line automatically.

- 1) To enter the centering mode, move the carrier to the left margin and press CODE + CENTERING.
The carrier will advance to a point halfway between both margins.
- 2) Type the text. The characters are not printed immediately; the carrier will backspace one half-space for each character typed.
- 3) To print the text, press CODE + CENTERING, TAB or RETURN.



- ★ If you make a mistake, press CORRECTION, WORD OUT, or CODE + LINE OUT. Pressing one of these keys will erase the whole text and return the carrier halfway between the margins.
To cancel the centering mode altogether, press one of those keys or CODE + CENTERING without typing any text. The carrier will then return to the left margin.

Right margin flush

This typewriter can automatically print text flush with the right margin. This is particularly useful for dates and other headings.

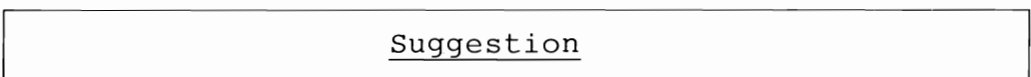
- 1) Press CODE + RIGHT MARGIN FLUSH. The carrier will advance to the right margin.
- 2) Type the text. The characters will not be printed immediately: the carrier will backspace once for each character entered.
- 3) To print the text, press CODE + RIGHT MARGIN FLUSH, TAB or RETURN.



- ★ If you make a mistake, press CORRECTION, WORD OUT or CODE + LINE OUT. Pressing one of these keys will erase the whole line and return the carrier to the right margin.
To cancel the right margin flush mode altogether, press one of the above keys once again or CODE + RIGHT MARGIN FLUSH. The carrier now returns to the left margin.

Automatic underlining

- 1) Press CODE + AUTO UNDERLINE ON to turn on the automatic underlining feature.
- 2) Type your text. All characters and the spaces will be automatically underlined.
To cancel the automatic underlining feature, press CODE + AUTO UNDERLINE OFF.



- ★ This function can be used together with the automatic centering and the right margin flush functions.

Index/reverse index

This function allows you to move the carrier upwards or downwards by 1, 1½ or 2 lines depending on what the line space selector is set at.

Press the INDEX key to lower the carrier by 1, 1½ or 2 lines at a time.

Press CODE + REVERSE INDEX to raise the carrier by one line.

To move the carrier continuously in either direction, hold down the appropriate key(s) for more than half a second.

Superimposing characters

Some characters not found on your keyboard can be created as follows. If you want the symbol for Japanese yen:

- 1) Type the letter "Y".
- 2) Press BACKSPACE.
- 3) Type the symbol "=".

- ★ To erase superimposed characters, you may use the automatic correction function for the second character but you have to use the manual method for the first character.

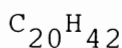
Superscript/subscript

Superscripts and subscripts are used mainly for scientific text composition (for instance, exponents, chemical symbols, or reference to footnotes).

To print a superscript, press CODE + SUPERScript to raise the carrier by 1/12 inch, and then type the character that you want in superscript.

$$e=mc^2$$

To print a subscript, press CODE + SUBSCRIPT to lower the carrier by 1/12 inch, and then type the character that you want in subscript.



- ★ In super/subscript mode, the carrier will always move by 1/12 inch, regardless of the current line spacing.
- ★ Super/subscripts of more than 1/12 inch are not possible.

Extra character set

To type the special characters and symbols marked in green on the bottom of certain keys, hold down CODE and press the desired key.

REPLACING THE RIBBON, ETC.

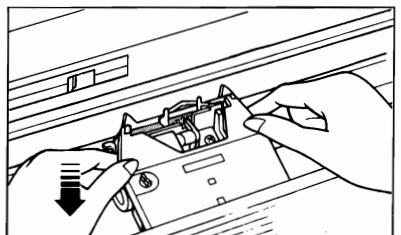
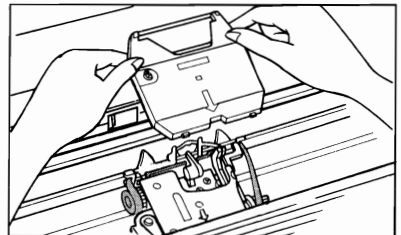
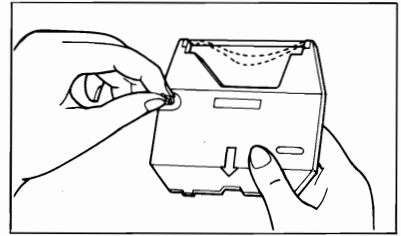
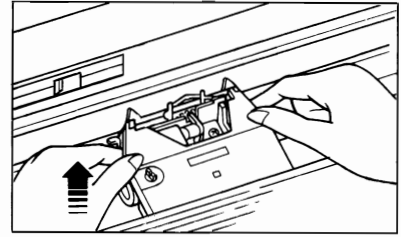
Opening the top cover automatically shuts off the power. The carrier stays where it is. As soon as you close the cover, the carrier moves to the extreme left and then returns to the position it was in when the cover was lifted. If you were printing a document, printing resumes where it left off.

Replacing the cassette ribbon

Two types of ribbons are available: correctable film ribbon and nylon ribbon.

To replace the cassette ribbon

- 1) Move the carrier to the center of the platen.
 - 2) Open the top cover.
 - 3) Holding the cassette with both hands, lift the front of the cassette up and out.
 - 4) Move the cassette towards the platen to remove it.
 - 5) Turn the feed knob (on the left side of the cassette) counter-clockwise to tighten the ribbon in the new cassette.
 - 6) Aligning the arrow on the cassette with the arrow on the cassette holder, use both hands to ease the cassette into the holder, back first.
 - 7) Gently press down on the front of the cassette until it clicks into place.
 - 8) Again turn the feed knob counter-clockwise to take up any slack.
 - 9) Close the cover.
- ★ The amount of tape remaining can be checked through the viewing hole on the right side of the cassette.
 - ★ Make sure to use only Brother-authorized cassette ribbons, correction tapes and cassette daisy wheels.
- Brother cannot be held responsible for trouble caused by the use of unauthorized supplies.



Replacing the correction tape

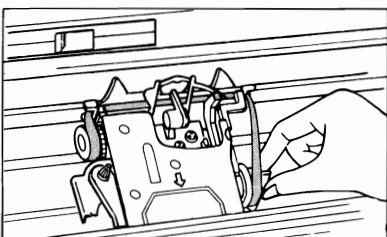
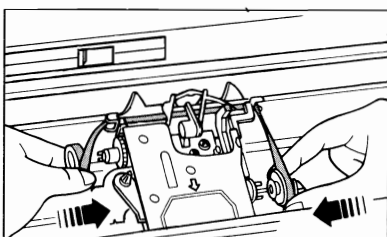
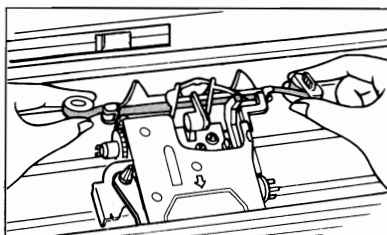
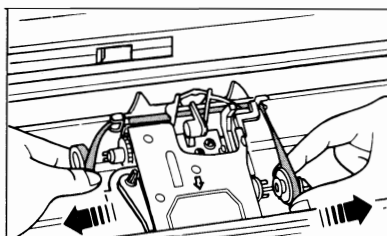
Two types of correction tape are available:

Lift-off correction tape, to be used with correctable film ribbon.

Cover-up correction tape, to be used with nylon ribbon.

To replace the correction tape

- 1) Move the carrier to the center of the platen.
- 2) Open the top cover.
- 3) Remove the cassette ribbon, if installed.
- 4) Pull off both spools, pressing against the correction tape with your thumbs. Bring it back to a position parallel with the platen, and lift it up and out.
- 5) Pass the new tape through the left guide, behind the ribbon guide, and out through the right guide. The rough (sticky) side of the tape should face the platen.
- 6) Attach the feeder spool to the pin on the left.
- 7) Attach the take-up spool to the pin on the right.
- 8) Turn the take-up spool counter-clockwise until a small amount of white tape has wound around it.
- 9) Replace the cassette ribbon and close the cover.

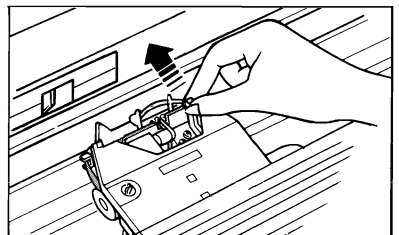
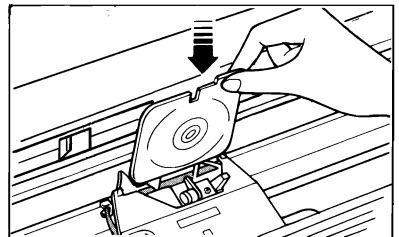
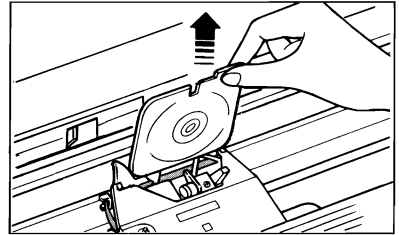
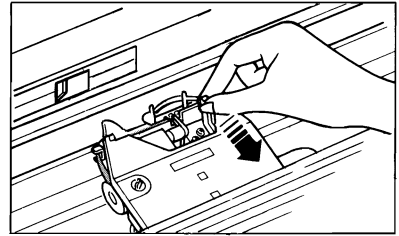


Replacing the cassette daisy wheel

The daisy wheel is housed in a clear plastic cassette for easy, damage-free handling and quick typeface changes.

To replace the cassette daisy wheel

- 1) Open the top cover.
 - 2) Pull the lever towards you to release the daisy wheel lock.
 - 3) Remove the cassette daisy wheel by pulling it out of the machine by the protruding “ear” on the top right.
 - 4) Insert the desired cassette daisy wheel into the slot and press down gently.
 - 5) Slide the lever back to its original position to lock the cassette daisy wheel in place. Make sure to press the lever firmly until a clicking sound is heard.
 - 6) Close the cover.
-
- ★ Make sure the cassette daisy wheel is not inserted backwards. The “ear” should always be on the upper right.
 - ★ If the cassette daisy wheel is not inserted properly, characters will not be printed correctly.
 - ★ It is not necessary to remove the cassette ribbon when replacing the daisy wheel.



TROUBLESHOOTING

Problem

Nothing happens when power switch is turned on

1. Is the power cord plugged in?
2. Is the top cover closed?

Poor printing performance

1. Is the daisy wheel properly installed?
(Has the lever been pressed firmly?)
2. Have you run out of ribbon?

Poor correction performance

1. Has the correction tape been properly installed?
2. Have you run out of correction tape?
3. Are you using the proper correction tape?

CARE OF UNIT & SPECIFICATIONS

Care of unit

Beware of tiny objects

Take precautions to prevent anything from slipping into the typewriter or between the keys. Be especially careful of metal objects such as paper clips and staples.

Cleaning

Never use volatile liquids such as thinner or benzine to clean the exterior surface of the typewriter. Use only a soft cloth dampened with a mild detergent solution.

Location

Do not expose your typewriter to direct sunlight, heat or intense vibration. Be sure to replace the keyboard cover when the typewriter is not in use.

Ventilation

Do not block the ventilation slits provided at the back of the unit to prevent overheating.

Specifications

Paper capacity	12.0" (304.8mm)
Typing capacity	9.0" (228.6mm)
Typing speed	12 characters per second*
Typing pitches	10, 12
Number of character keys	46
Line spacing	1, 1.5, 2
Ribbons	Correctable film-model 1230 and Nylon-model 1032
Correction tapes	Lift-off (model 3010 for use with correctable film ribbon) & cover-up (model 4010 for use with nylon ribbon)
Dimensions	15.9" (W) x 13.8" (D) x 4.9" (H)
Weight	9.6 lbs (4.8 kg)

Starter kit (SK-100)

This starter kit provides you with a good supply of ribbons, a script daisy wheel and an extra correction tape at a great savings.

This includes:

- 3 correctable film ribbons
- 1 script 1012 daisy wheel
- 1 lift-off correction tape



ACCESSORY ORDER FORM

Dear Customer

Please use this order form when ordering accessories for your typewriter.

All prices include shipping and handling charges.

Starter kit

Item No.		Price	Quantity	Total
SK-100	3 Correctable Film Ribbons 1 Script 1012 Daisy Wheel 1 Lift-off Correction Tape	\$39.95		

Cassette ribbons/correction tapes

Item No.		Price	Quantity	Total
1230	Correctable Film Ribbon (2 pack)	\$10.95		
1032	Nylon Ribbon	\$5.45		
3010	Lift-Off Correction Tape (2 pcs.)	\$9.90		
4010	Cover-up Correction Tape (2 pcs.)	\$9.90		

Cassette daisy wheels

Item No.		Type Pitch	Price	Quantity	Total
M401	Pica 10 (Standard Pica)	10	\$24.95		
M402	Prestige 1012	10, 12	\$24.95		
M403	Elite 12 (Standard Elite)	12	\$24.95		
M405	Script 1012	10, 12	\$24.95		
M408	Grande 10	10	\$24.95		
M409	Quadro 1012	10, 12	\$24.95		
M411	Brougham 10	10	\$24.95		
M412	Brougham 12	12	\$24.95		
M414	Prestige Italic 1012	10, 12	\$24.95		
M415	OCR-B 10	10	\$24.95		
M416	OCR-A 10	10	\$24.95		
M417	Letter Gothic 12	12	\$24.95		

★ Above pricing subject to change without notice.

For further information on these accessory items, call toll free 1-800-284-HELP.

SHIPPING LABEL

Brother International Corporation
Typewriter Division
P.O. Box 159
Piscataway, New Jersey 08854

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

Sub Total

CA, GA, IL, NJ, NY and TX residents add
applicable sales tax _____

Total _____

Method of payment (check one)

☐ Check or Money Order enclosed

Please charge my ☐ Master card

☐ Visa.

Account Number

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Expiration Date _____

Signature _____

