Chapter 9

Media Management

This chapter describes how to manage contents inside the media, such as managing albums, songs and playlists.

Managing Albums

Album selection screen > [FUNC.]

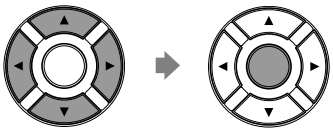
You can use the album function menu for creating, deleting and copying albums inside a medium.

☞ To select a album, see Chapter 3 “Basic Song Playback – Selecting Medium and Their Contents” on page 18.

1 Press [FUNC.] in the album selection screen.

The album function menu screen appears.

2 Select a desired function with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].



The following functions are available:
- CopyAlbum
- DeleteAlbum
- NewAlbum
- RenameAlbum
- SortAlbum
- AddToPList
- DeleteList
- NewList
- RenameList

Note:
Available functions vary depending on the medium you selected.

☞ About playlists, see Chapter 9 “Media Management – Managing Playlists” on page 84.

Making Copies of Albums

Album selection screen > [FUNC.] > “CopyAlbum”

You can make copies of the album to the different medium.

This function is available for albums on [Memory], [CD](CD-ROM), [USB1], [USB2] and [FromToPC].

Note:
Up to 99 albums can be saved in a medium.

1 **Select “CopyAlbum” in the album function menu, then press [ENTER].**

The CopyAlbum screen appears.

2 **Select a destination medium with [+/YES] and [–/NO].**

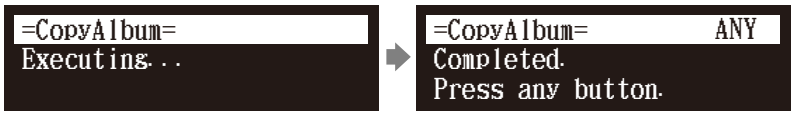
3a **To copy to the new album, press [ENTER].**

“OK?” flashes in the first line of the screen.

3b **To add to the existing album, press [►] to move the cursor to the album, and press [+/YES] and [–/NO] to select the album, then press [ENTER].**

“OK?” flashes in the first line of the screen.

4 Press [+/YES] to make a copy, [–/NO] to cancel.



After a while, the completion message appears.
Press any button to return to the album selection screen.

Deleting Albums

Album selection screen > [FUNC.] > **"DeleteAlbum"**

You can delete the albums.

This function is available for albums on [Memory], [USB1], [USB2] and [FromToPC].

1 Select "DeleteAlbum" in the album function menu, then press [ENTER].

The DeleteAlbum screen appears.

2 Press [ENTER].

"OK?" flashes in the first line of the screen.

3 Press [+/YES] to delete the album, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the album selection screen.

Creating a New Album

Album selection screen > [FUNC.] > "NewAlbum"

You can create a new album into the selected medium.

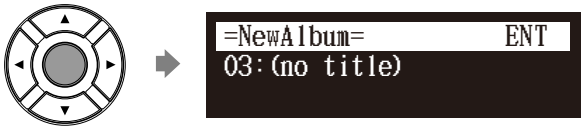
This function is available for albums on [Memory], [USB1] and [USB2].

Note:
Up to 99 albums can be created in a medium.

Note:
If you enter the same title as the album already exists, the new album is titled in the form of "album title xx" ("xx" indicates the number).

1 Select the "NewAlbum" in the album function menu, then press [ENTER].

The NewAlbum screen appears.



2 Press [ENTER].

The album title editing screen appears.

3 Enter a title to a new album.

You can enter up to 64 characters.
Follow the instructions in "Entering Characters" on page 55.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 **Press [+/YES] to create a new album, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the album selection screen.

Renaming an Album

Album selection screen > [FUNC.] > **"RenameAlbum"**

You can rename the albums which already named.

This function is available only for albums on [Memory].

1 **Select "RenameAlbum" in the album function menu, then press [ENTER].**

The RenameAlbum screen appears.

2 **Press [ENTER].**

The album title editing screen appears.

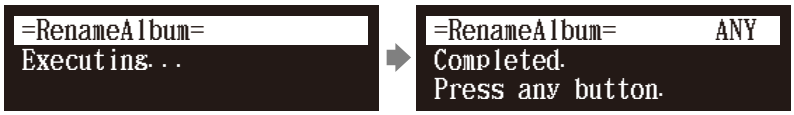
3 **Enter a new title to the selected album.**

You can enter up to 64 characters.
Follow the instructions in "Entering Characters" on page 55.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 Press [+/YES] to rename, [–/NO] to cancel.



After a while, the completion message appears.
Press any button to return the album selection screen.

Rearranging the Order of Albums

Album selection screen > [FUNC.] > "SortAlbum"

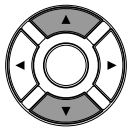
You can rearrange the order of albums that you selected.

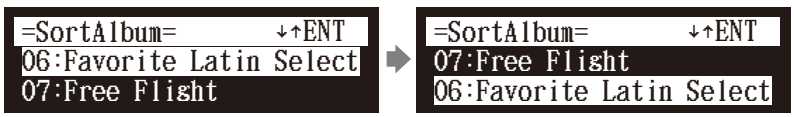
This function is available only for albums on [Memory].

1 Select "SortAlbum" in the album function menu, then press [ENTER].

The SortAlbum screen appears.

2 Press [▲] and [▼] to move the albums to the desired position.





3 Press [ENTER].

"OK?" flashes in the first line of the screen.

4 Press [+/YES] to rearrange, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the album selection screen.

Managing Songs

Song selection screen [FUNC.]

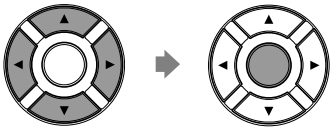
You can use the song function menu for managing the copy or the deletion songs inside the album.

☞ To select the song, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

1 Press [FUNC.] in the song selection screen.

The song function menu screen appears.

2 Select a desired function with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].



The following functions are available:
- CopySong
- DeleteSong
- RenameSong
- SortSong
- AddToPList
- ConvertSong
- Counter
- Strip XP

Note:
Available functions vary depending on the medium you selected.

Note:
If there is no available function or no song, the song function menu screen does not appear although pressing [FUNC.].

☞ About playlists, see Chapter 9 "Media Management – Managing Playlists" on page 84.

Making Copies of Songs

Song selection screen > [FUNC.] > **"CopySong"**

You can copy songs stored on an album to another.

This function is available for song in the album on [Memory], [CD](CD-ROM), [USB1], [USB2] and [FromToPC].

Note:
Copy-protected songs, such as PianoSoft songs, cannot be copied to a removable medium.

Note:
Up to 999 songs can be saved in an album.

1 Select "CopySong" in the song function menu, then press [ENTER].

The CopySong screen appears.

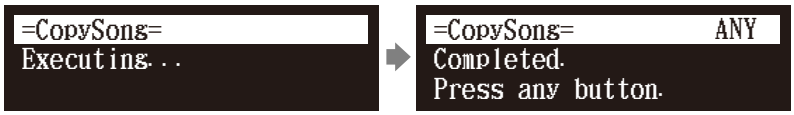
2 Select a destination medium with [+/YES] and [–/NO].

3 Press [►] to move the cursor to the album, and press [+/YES] and [–/NO] to select a destination album.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 **Press [+/YES] to make a copy, [–/NO] to cancel.**



After a while, the completion message appears.
Press any button to return to the song selection screen.

Deleting Songs

Song selection screen > [FUNC.] > **"DeleteSong"**

You can delete songs stored on an album.

This function is available for songs in the album on [Memory], [USB1], [USB2], [Playlist] and [FromToPC].

1 **Select "DeleteSong" in the song function menu, then press [ENTER].**

The DeleteSong screen appears.

2 **Press [ENTER].**

"OK?" flashes in the first line of the screen.

3 **Press [+/YES] to delete the song, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the song selection screen.

Renaming a Song

Song selection screen > [FUNC.] > **"RenameSong"**

You can rename the songs which already named.

This function is available for songs in the album on [Memory], [USB1], [USB2] and [FromToPC].

1 Select "RenameSong" in the song function menu, then press [ENTER].

The RenameSong screen appears.

2 Press [ENTER].

The song title editing screen appears.

3 Enter a new title to the selected song.

You can enter up to 64 characters.
Follow the instructions in "Entering Characters" on page 55.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

English

5 **Press [+/YES] to rename, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the song selection screen.

Rearranging the Order of Songs

Song selection screen > [FUNC.] > "SortSong"

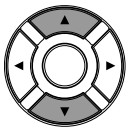
You can rearrange the order of songs in an album.

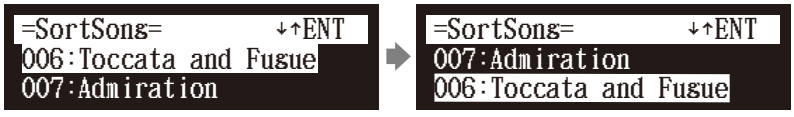
This function is available only for songs in the album on [Memory] and [Playlist].

1 **Select "SortSong" in the song function menu, then press [ENTER].**

The SortSong screen appears.

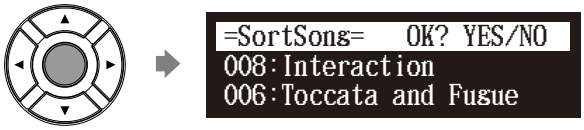
2 **Press [▲] and [▼] to move the songs to the desired position.**





3 **Press [ENTER].**

"OK?" flashes in the first line of the screen.



4 **Press [+/YES] to rearrange, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the song selection screen.

Converting Song Format

Song selection screen > [FUNC.] > **"ConvertSong"**

The song format can be converted to other format.

This function is available for songs in the album on [Memory], [USB1], [USB2] and [FromToPC].

Note:
The converted song will be newly added to the end of the album.

1 **Select "ConvertSong" in the song function menu, then press [ENTER].**

The ConvertSong screen appears.

2 Press [+/YES] and [–/NO] to select a song format.

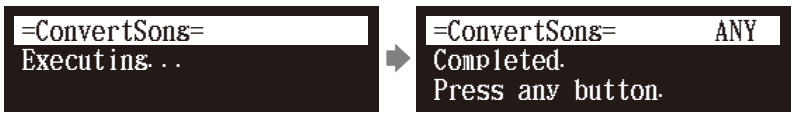
This following options are available:

Option	Song Format
E-SEQ	E-SEQ format
SMF0	SMF (Standard MIDI File) format 0
SMF1	SMF (Standard MIDI File) format 1
Piano1	E-SEQ format to play on all Disklavier in correct tempo

3 Press [ENTER].

"OK?" flashes in the first line of the screen.

4 Press [+/YES] to convert, [–/NO] to cancel.



After a while, the completion message appears.
Press any button to return to the song selection screen.

Changing the Counter Display

Song selection screen > [FUNC.] > **"Counter"**

The counter display of a song can be changed from "measures and beats"(metronome) to "minutes and seconds" or vice versa.

This function is available for songs in the album on [Memory], [USB1], [USB2] and [FromToPC].

1 **Select “Counter” in the song function menu, then press [ENTER].**

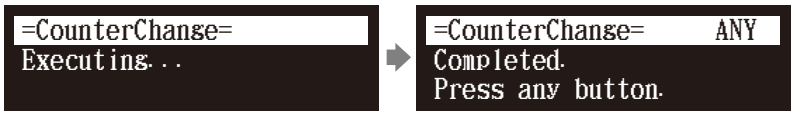
The CounterChange screen appears.

TIME: minutes and seconds display
METRONOME: measures and beats display

2 **Press [ENTER].**

“OK?” flashes in the first line of the screen.

3 **Press [+/YES] to change, [–/NO] to cancel.**



After a while, the completion message appears.
Press any button to return to the song selection screen.

Converting MIDI Data to a Standard Form (Strip XP)

Song selection screen > [FUNC.] > **“Strip XP”**

Some Disklavier pianos record highly precise control information (XP events) that becomes part of the MIDI song files. This data is used to achieve accurate playback on the Disklavier PRO model, but is not used when the file is played back on general MIDI devices. When you edit the song with external MIDI devices (for example a software sequencer), the relationship between the note data and the XP event as well as the actual performance may not be maintained. There may be cases in which songs edited in this manner cannot be played back normally, depending on the instrument’s settings. In such cases, use the Strip XP function to remove the XP event to convert the song to standard MIDI format before using it for playback. Strip XP also makes it possible to reduce the size of MIDI files when desired.

Note:
Once the XP event is stripped, the original data cannot be restored. Before converting valuable music data, be sure to backup the original data.

1 **Select “Strip XP” in the song function menu, then press [ENTER].**

The Strip XP screen appears.

2 **Press [ENTER].**

“OK?” flashes in the first line of the screen.

3 **Press [+/YES] to execute, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the song selection screen.

Managing Playlists

By creating lists of your favorite songs, you can program your Disklavier to automatically play back a series of songs.

At the initial factory settings, no playlist is created in the internal flash memory. First create your own playlist, then play back that list.

☞ To create a playlist, see Chapter 9 “Media Management – Creating a New Playlist” on page 87.

Adding Songs/Albums to the Playlist

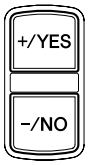
Media selection screen > "Memory" > Album or song selection screen > [FUNC.] > **"AddToPList"**

This function is available only for songs/albums on [Memory].

1 Select "AddToPList" in the album or song function menu, then press [ENTER].

The AddToPList screen appears.

2 Select a destination playlist with [+/YES] and [–/NO].



3 Press [ENTER].

"OK?" flashes in the first line of the screen.

4 Press [+/YES] to add, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the album or song selection screen.

Note:
Up to 999 songs can be added to a playlist.

Note:
You cannot add songs on media other than [Memory] directly to the playlist. First, copy songs to the internal flash memory.

Note:
If "New Playlist" is selected in step 2, the title of added album is copied to that playlist.

Note:
If you select "New Playlist" and add songs to it, the playlist is titled as "My Playlist."

Note:
The new playlist created in this procedure can be selected from "Playlist" in the media selection screen.

English

Deleting a Playlist

Media selection screen > "Playlist" > Album selection screen > [FUNC.] > **"DeleteList"**

You can delete the playlists which already registered.

Note:
Even if you delete the playlist, songs or albums added to that playlist remain in the internal flash memory.

1 Select "DeleteList" in the album function menu for the playlist, then press [ENTER].

The DeleteList screen appears.

2 Press [ENTER].

"OK?" flashes in the first line of the screen.

3 Press [+/YES] to delete the playlist, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the album selection screen for the playlist.

Creating a New Playlist

Media selection screen > "Playlist" > Album selection screen > [FUNC.] > **"NewList"**

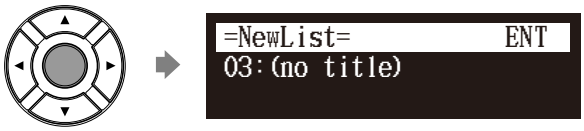
You can create a new playlist for playing back your favorite songs in your selected order.

Note:
Up to 99 playlists can be created.

Note:
If you enter the same title as the playlist already exists, the new playlist is titled in the form of "playlist title [xx]" ("xx" indicates the number).

1 Select "NewList" in the album function menu for the playlist, then press [ENTER].

The NewList screen appears.



2 Press [ENTER].

The playlist title editing screen appears.

3 Enter a title to a new playlist.

You can enter up to 64 characters.
Follow the instructions in "Entering Characters" on page 55.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 **Press [+/YES] to create a new playlist, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the album selection screen for the playlist.

Note:
The new playlist created in this procedure can be selected from "Playlist" in the media selection screen.

Renaming a Playlist

Media selection screen > "Playlist" > Album selection screen > [FUNC.] > **"RenameList"**

You can rename a playlist which already registered.

1 **Select "RenameList" in the album function menu for the playlist, then press [ENTER].**

The RenameList screen appears.

2 **Press [ENTER].**

The playlist title editing screen appears.

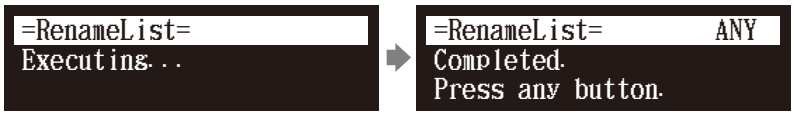
3 **Enter a new title to the selected playlist.**

You can enter up to 64 characters.
Follow the instructions in "Entering Characters" on page 55.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 Press [+/YES] to rename, [–/NO] to cancel.



After a while, the completion message appears.
Press any button to return to the album selection screen for the playlist.

Managing Media

Media selection screen → [FUNC.]

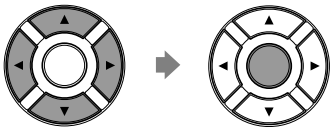
You can use the media function menu for copying or deleting entire contents inside the media.

☞ To select a media, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

1 Press [FUNC.] in the media selection screen.

The media function menu screen appears.

2 Select a desired function with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].



The following functions are available:
- CopyAll
- DeleteAll
- Format
- Refresh

Note:
Available functions vary depending on the medium you selected.

Note:
If there is no available functions, the media function menu screen does not appears although pressing [FUNC.].

Making Copies of the Entire Contents in a Medium

Media selection screen > [FUNC.] > **"CopyAll"**

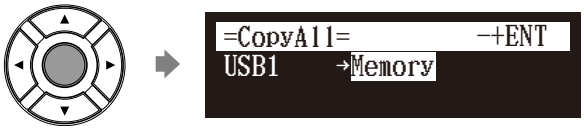
You can copy the entire contents in a medium to the another medium.

The function is available for [Memory], [CD](CD-ROM), [USB1], [USB2] and [FromToPC].

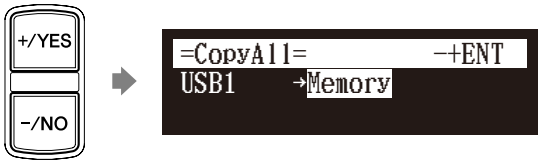
☞ To select a medium, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

1 Select "CopyAll" in the media function menu, then press [ENTER].

The CopyAll screen appears.



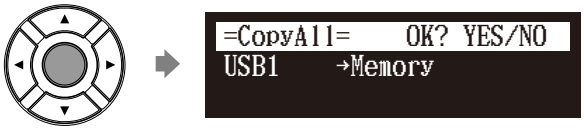
2 Select a destination medium with [+/YES] and [–/NO].



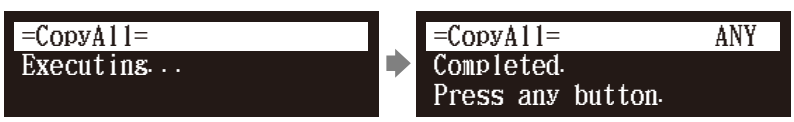
Note:
Confirm that the destination medium has enough space to store the contents.

3 Press [ENTER].

"OK?" flashes in the first line of the screen.



4 Press [+/YES] to make a copy, [–/NO] to cancel.



After a while, the completion message appears.
Press any button to return to the media selection screen.

Note:
If the maximum number of the albums in the destination medium exceeds 99, copying stops.

Deleting the Entire Contents in a Medium

Media selection screen > [FUNC.] > "DeleteAll"

You can delete the entire contents in a medium.

This function is available for [Memory], [USB1], [USB2] and [FromToPC].

☞ To select a medium, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

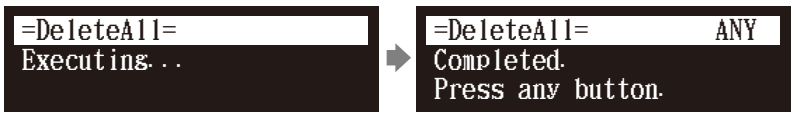
1 Select "DeleteAll" in the media function menu, then press [ENTER].

The DeleteAll screen appears.

2 Press [ENTER].

"OK?" flashes in the first line of the screen.

3 Press [+/YES] to delete, [–/NO] to cancel.

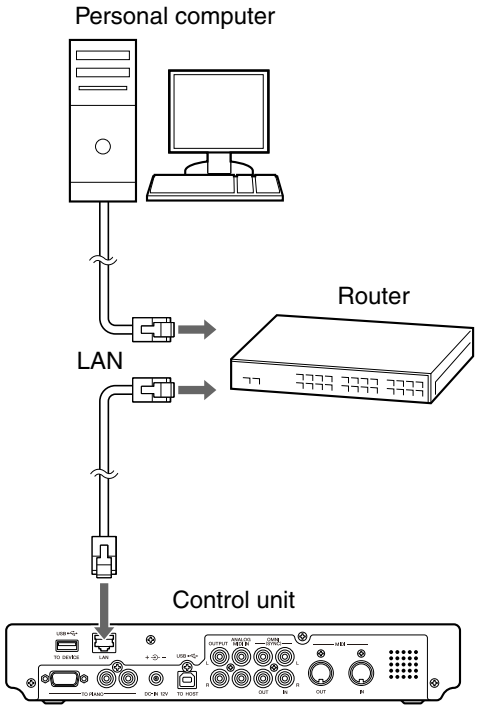


After a while, the completion message appears.
Press any button to return to the media selection screen.

Copying Song File from a Personal Computer to the Disklavier

You can copy song files from a Windows or Macintosh computer to a special folder on the Disklavier called [FromToPC] and then play them on the Disklavier.

1 Connect the control unit to a LAN (local area network) to which a personal computer with a song file is also connected.



Note:
Copy-protected files, such as PianoSoft and PianoSoft·Plus songs, cannot be copied to the [FromToPC] folder.

Note:
Do not copy the files other than Disklavier song files.

Note:
Do not access the [FromToPC] folder while the Disklavier is engaged in another operation (such as file copying or deleting).

Note:
It is necessary to configure the Disklavier properly for network communications by enabling it to get a DHCP IP address automatically (recommended) or by assigning an appropriate address manually. The procedure is the same as the one used for setting up the Disklavier for Internet communications. Please follow the instructions in Chapter 10 “Internet Direct Connection (IDC) – Setting the Disklavier for the Internet Connection” on page 107.

Note:
Use an STP (shielded twisted pair) cable for connection. For details, see Chapter 10 “Internet Direct Connection (IDC) – Connecting the Disklavier to the Internet” on page 101.

Note:
For information about configuring a personal computer for network communications, please refer to the documentation that came with the computer.

■ For Windows

2 **On the computer screen, click [Start] and then select [My Network Places].**

The [My Network Places] window appears. Confirm that the [Dkv******] icon is shown in the [My Network Places] window.

3 **Double-click the [Dkv*******] icon.**

The [Dkv*******] folder opens. Confirm that the [FromToPC] icon is shown in the [Dkv******] folder.

4 **Double-click the [FromToPC] icon.**

The [FromToPC] folder opens.

5 **Copy the desired song files to the [FromToPC] folder.**

6 **Refresh the contents in the folder.**

■ For Windows: In case that you cannot find the [Dkv******] icon

1. Press [SETUP] on the remote control.
2. Select “Network” in the setup menu screen.
3. Select “Information” to display the information of network settings.
4. Press [▼] several times to display “NAME=DKV******” and memorize that name.
5. Open the [My Network Places] on the computer, and then click the [Search] icon on the top of the window.
6. Enter the name confirmed in step 4 in the [Computer name] box, and then click [Search] to start searching.
7. Open [Dkv******] and confirm that the [FromToPC] folder is shown under that.
8. Copy the desired song files to the [FromToPC] folder.

Note:
[Dkv******] differs depending on each Disklavier.

Note:
The folder or icon name differs depending on the version of your operating system.

☞
See Chapter 9 “Media Management – Refreshing the Contents in [FromToPC]” on page 96.

■ For Mac OS X 10.3 or 10.4

2 **Click the [Finder] icon in the dock, and then click the [Network] icon in the left side of the window.**

The [Network] window appears. Confirm that the [Dkv] icon is shown in the [Network] window.

3 **Click the [Dkv] icon.**

The [Dkv] folder opens. Confirm that the [Dkv******] icon is shown in the [Dkv] folder.

Note:
[Dkv******] differs depending on each Disklavier.

4 **Click the [Dkv******] icon.**

5 **In the first dialog that appears, select [FromToPC] from the mini-menu and click [OK].**

Note:
If the user ID and password are required during the process, enter any name for the ID and leave the space for the password blank.

6 **Click [OK] again in the next dialog that appears.**

Connection process completes and the [FromToPC] icon appears in the left side of the window.

7 **Click the [FromToPC] icon.**

The [FromToPC] folder opens.

8 **Copy the desired song files to the [FromToPC] folder.**

9 **Refresh the contents in the folder.**

☞
See Chapter 9 “Media Management – Refreshing the Contents in [FromToPC]” on page 96.

■ For Mac OS X 10.5 or 10.6

2 **Click the [Finder] icon in the dock, and then select [Go] and then [Network] from the menu bar.**

The [Network] window appears. Confirm that the [Dkv******] icon is shown in the [Network] window.

Note:
[Dkv******] differs depending on each Disklavier.

3 **Click the [Dkv*******] icon.**

The [Dkv*******] folder opens. Confirm that the [FromToPC] icon is shown in the [Dkv******] folder.

Note:
If the user ID and password are required during the process, enter any name for the ID and leave the space for the password blank.

4 **Click the [FromToPC] icon.**

The [FromToPC] folder opens.

5 **Copy the desired song files to the [FromToPC] folder.**

6 **Refresh the contents in the folder.**

☞
See Chapter 9 “Media Management – Refreshing the Contents in [FromToPC]” on page 96.

■ For Macintosh: In case that you cannot find the [Dkv******] icon

1. Press [SETUP] on the remote control.
2. Select “Network” in the setup menu screen.
3. Select “Information” to display the information of network settings.
4. Press [▼] several times to display “NAME=DKV******” and memorize that name.
5. Select [Go] and then [Connect to Server] from the menu bar on the computer.
6. Enter the name confirmed in step 4 in the address field, and then click [Connect]. Use syntax “smb://” when entering the name (“smb://Dkv******”).
7. Select [FromToPC] from the mini-menu in the first window appears and click [OK]. Click [OK] again in the next window that appears.
8. Copy the desired song files to the [FromToPC] folder on the left side of the finder window.

Refreshing the Contents in [FromToPC]

Media selection screen > "FromToPC" > [FUNC.] > **"Refresh"**

You must refresh the contents in the [FromToPC] folder after copying song files from a personal computer, in order to play them on the Disklavier.

☞ To select a medium, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

1 Select "Refresh" in the media function menu, then press [ENTER].

The Refresh screen appears.

2 Press [ENTER].

"OK?" flashes in the first line of the screen.

3 Press [+/YES] to refresh, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the media selection screen.

Formatting the Floppy Disk (Optional)

Select the floppy disk > [FUNC.] > **"Format"**

In the case of using the unformatted floppy disk on the floppy drive (optional) or deleting the entire contents on the floppy disk, format the floppy disk.

1 Connect the floppy drive (optional) to the USB port on the control unit.

2 Insert a floppy disk to the floppy drive.

3 Select "Format" in the media function menu, then press [ENTER].

The Format screen appears.

4 Press [ENTER].

"OK?" flashes in the first line of the screen.

5 Press [+/YES] to format, [–/NO] to cancel.

After a while, the completion message appears.
Press any button to return to the media selection screen.

Important:
Formatting a floppy disk erases all data that stored in the disk, so make sure that the disk you are going to format does not contain the data you want to keep.

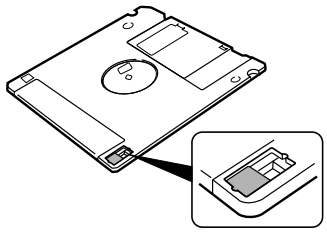
☞
To select a medium, see Chapter 3 "Basic Song Playback – Selecting Medium and Their Contents" on page 18.

Note:
If you are formatting a floppy disk, make sure that the floppy disk's erasure protection tab is set to "unprotected."

■ Floppy Disk Accidental Erasure Protection

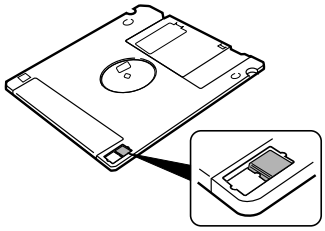
Floppy disks have an erasure protection tab located on the reverse side of the disk in the bottom right-hand corner. When formatting a disk, make sure that its erasure protection tab is set to “unprotected.”

Protected



When the tab window is open, formatting and recording are not possible.

Unprotected



When the tab window is closed, formatting and recording are possible.

Making Backups of Songs

[SYSTEM] “Backup”

You can make a backup copy of the songs and playlists. In order to protect your valuable music data, Yamaha strongly recommends that you backup your memory on regular basis.

If the floppy disk is inserted to the optional floppy disk drive, eject it before you start making backups.

Note:
Be sure to use the USB medium described in Chapter 2 “Getting Started – Compatible Media Format for the Removable Media” on page 15.

Note:
Make sure that the USB medium has enough space to save the backup data.

1 Connect an external USB medium to the USB port on the control unit.

2 Press [SYSTEM] on the remote control.

The system menu screen appears.

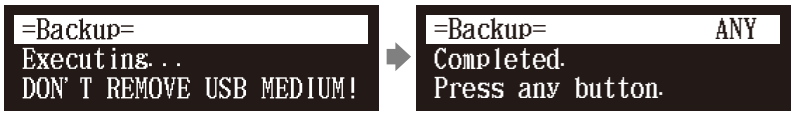
3 **Select “Backup” with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The Backup screen appears.

4 **Press [ENTER].**

“OK?” flashes in the first line of the screen.

5 **Press [+/YES] to make a backup, [–/NO] to cancel.**



After a while, the completion message appears.
Press any button to return to the system menu screen.

Restoring the Backups

[SYSTEM] “Restore”

You can restore the current condition of the internal memory to the previous condition that you made a backup copy.

1 **Connect an external USB medium in which you made backup last time to the USB port on the control unit.**

2 **Press [SYSTEM] on the remote control.**

The system menu screen appears.

☞
To make a backup, see Chapter 9 “Media Management – Making Backups of Songs” on page 98.

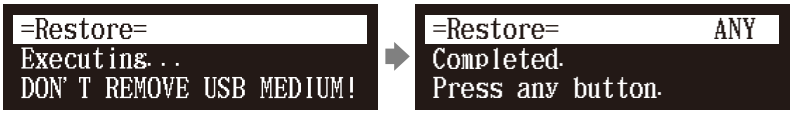
3 **Select “Restore” with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The Restore screen appears.

4 **Press [ENTER].**

“OK?” flashes in the first line of the screen.

5 **Press [+/YES] to restore, [–/NO] to cancel.**



After a while, the completion message appears.
Press any button to return to the system menu screen.

Chapter 10

Internet Direct Connection (IDC)

By connecting to the Internet, you can enjoy a streaming broadcast or download update programs directly.

What is Internet Direct Connection (IDC)?

Internet Direct Connection (IDC) is a feature that allows you to connect your Disklavier directly to the Internet. Internet Direct Connection users are able to listen to a streaming broadcast (DisklavierRadio), and receive valuable information such as product updates. Your Disklavier can be upgraded remotely as new technologies and services are developed through the IDC service.

Obtaining an ID and Password for the IDC Service (IDC Registration)

To use the IDC service, initial registration is required using an Internet-connected computer.

Please register at the following website:
https://member.yamaha.com/myproduct/regist/

Once you have an IDC account, you will interact with that account using the remote control. To use the full IDC service, you are required to enter your registered ID (e-mail address) and password with the remote control.

Note:
If you have already registered for the IDC service with any other instrument (such as the Clavinova), you do not need to register again. You can use your ID and password obtained through that registration.

Note:
Some IDC service functions do not require an ID and password.

Connecting the Disklavier to the Internet

You can connect the Disklavier to a full-time online Internet connection (ADSL, optical fiber, cable Internet, etc.) via a router or a modem equipped with a router.

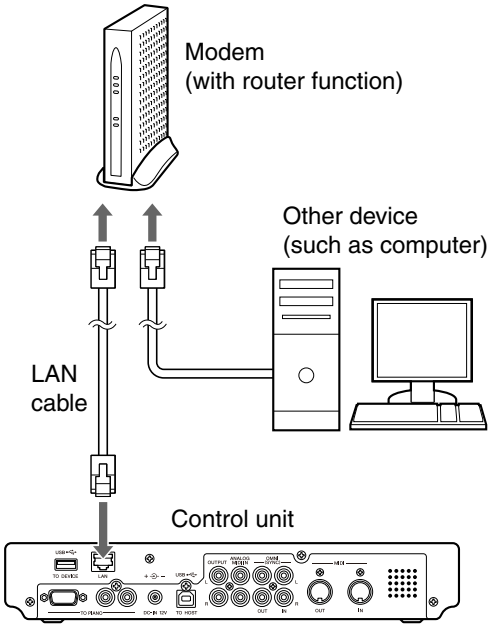
■ Preparations

- To use the Internet connection, you will first need to subscribe to an Internet service or provider.
- Use a computer to obtain and configure Internet service. You cannot obtain Internet service or configure router settings on a local area network using the Disklavier itself.
- Use an STP (shielded twisted pair) cable to connect the control unit and a router.
- Before connecting the LAN cable, make sure to turn off (or shut down) the Disklavier.

■ Connecting the Control Unit to the Internet

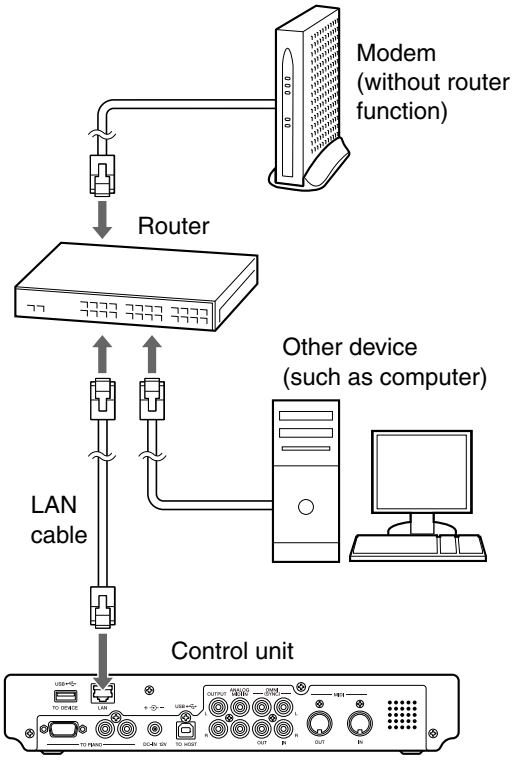
Connection example 1:

Using a modem with router function



Connection example 2:

Using a modem without router function



Note:
Depending on the contract with your Internet provider, you may not be able to connect two or more devices (for example, a computer and the Disklavier) to the Internet. Please check your contract or contact your Internet provider for further information.

Note:
Some types of modems (such as ADSL modems or cable modems) have multiple ports for connecting two or more devices (such as computer, musical instrument, etc.). If your modems have only one port, an optional router or hub is required in order to connect several devices simultaneously.

Note:
Use an STP (shielded twisted pair) cable for connection.

For further information on the Internet connection (only a wired LAN connection is supported), visit the Yamaha Disklavier website:

http://services.music.yamaha.com/radio/

■ Notes on Network Security

The Disklavier E3 attempts to achieve a balance between security and usability in its network implementation. However, a determined hacker may be able to defeat these security measures and utilize the network of the purchaser in an unauthorized manner. Since each network is different, only the purchaser can determine whether the security measures discussed here will adequately protect their network.

The purchaser acknowledges that connection to the Internet and use of the Disklavier E3 Internet features is done at the risk of the purchaser. In no event shall Yamaha, its subsidiaries or Yamaha's and/or its subsidiaries' directors, officers, or employees be responsible for unauthorized access, loss or alteration of the data of the purchaser or be liable for any damage from intrusions.

Accessing the Internet

[INTERNET]

Once you have established an IDC account and successfully connected your Disklavier to the Internet, you can access a special Disklavier website where you can access the DisklavierRadio, and download software updates.

D-Radio

Select this to listen to streaming broadcasts of music, with many channels of music content. You can enjoy listening to piano performances that play continuously.

MyAccount

Select this to log in to the IDC service. You can also refer to the help information from this option.

Update

Select this to update the Disklavier using Internet connection.

Note:
Free contents that do not require an ID and password are available.

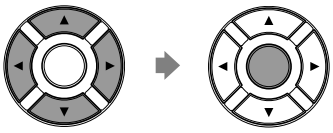
Note:
The service contents are subject to change without prior notice.

☞
See Chapter 3 "Basic Song Playback – Listening to the DisklavierRadio" on page 26.

1 **Press [INTERNET] on the remote control.**

The Internet menu screen appears.

2 **Select a desired menu with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**



Perform operations on the screen that appears.

Checking Your Account Information

[INTERNET] "MyAccount"

You can confirm your current account information of IDC service. You can also log out from the IDC service.

Login
Select this to log in to the IDC service. You need to enter your ID and password.

Logout
If you wish to use another IDC account or prevent the current account from being used by others, select this to log out from the IDC service.

Account Information
Select this to confirm your account information.

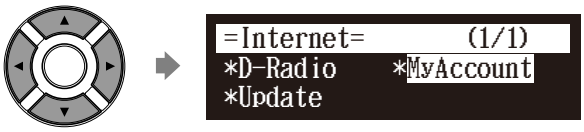
Subscription Status
Select this to confirm your DisklavierRadio subscription status.

Note:
ID and password are not required for free contents (such as free channel of DisklavierRadio).

1 **Press [INTERNET] on the remote control.**

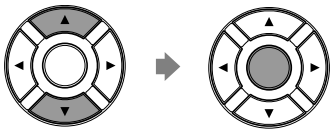
The Internet menu screen appears.

2 Select “MyAccount” with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].



The MyAccount screen appears.

3 Select a desired option with the cursor buttons ([▲] [▼]), then press [ENTER].



Perform operations on the screen that appears.

Updating the Disklavier Using the Internet

[INTERNET] “Update”

You can download the update program directly from the Internet and update the firmware of the Disklavier.

1 Press [INTERNET] on the remote control.

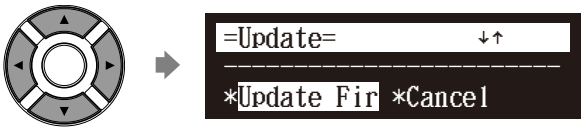
The Internet menu screen appears.

2 **Select “Update” with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The update screen appears if there is any update program available.

You can scroll the screen up or down with the cursor buttons ([▲] [▼]).

3 **Following the instructions on the screen, select the option with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**



The download process of the update program starts.

4 **Shut down the Disklavier with [ON/OFF] on the control unit after the download process is completed.**

The update program is now prepared.
Update the firmware following the procedures in Chapter 12 “Other Settings – Updating the Disklavier” on page 129.

Setting the Disklavier for the Internet Connection

[SETUP] "Network"

You can change various settings related to the Internet connection. In most cases, you do not have to change the default factory settings.

Information

You can confirm the information of network settings.

Use DHCP

Select the method to determine several addresses. If your router has DHCP server function, we recommend that you to select "DHCP" or "DHCP+DNS."

DNS1/DNS2

Enter the address of the primary and secondary DNS server. These settings must be made when Use DHCP is set to "DHCP+DNS" or "MANUAL."

IPAddr./SubMask/Gateway

Enter the address of the control unit, subnet mask and gateway server. These settings must be made when Use DHCP is set to "MANUAL."

Proxy/Proxy Port

Enter the name and the port number for the proxy server. These settings are necessary only when a proxy server is located in your local network.

1 Press [SETUP] on the remote control.

The setup menu screen appears.

2 Select "Network" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The network setting screen appears.

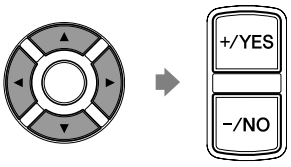
☞
To use the Internet connection, inquire of your Internet service provider.

Note:
For information about DNS server address, IP address, subnet mask and gateway server address, inquire of your internet service provider.

Note:
The "Reverb" option appears only on models equipped with the Silent Piano™ function.

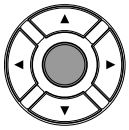
English

3 Select a desired option with the cursor buttons ([◄] [►] [▲] [▼]), then press [+/YES] and [–/NO] to change setting.



If you select “Information” on the network setting screen, the current network setting appears. To return to the network setting screen, press [ENTER] after confirming.

4 Press [ENTER] to complete the operation.



Initializing Internet Settings

[SETUP] **“Reset”**

If you want to initialize the Internet settings, first you must reset the Disklavier to its initial factory setting.
However, cookies are still remain after parameter resetting. To delete cookies, perform the appropriate operation on the reset screen.

☞ For details on cookies, see Chapter 16 “Glossary” on page 140.

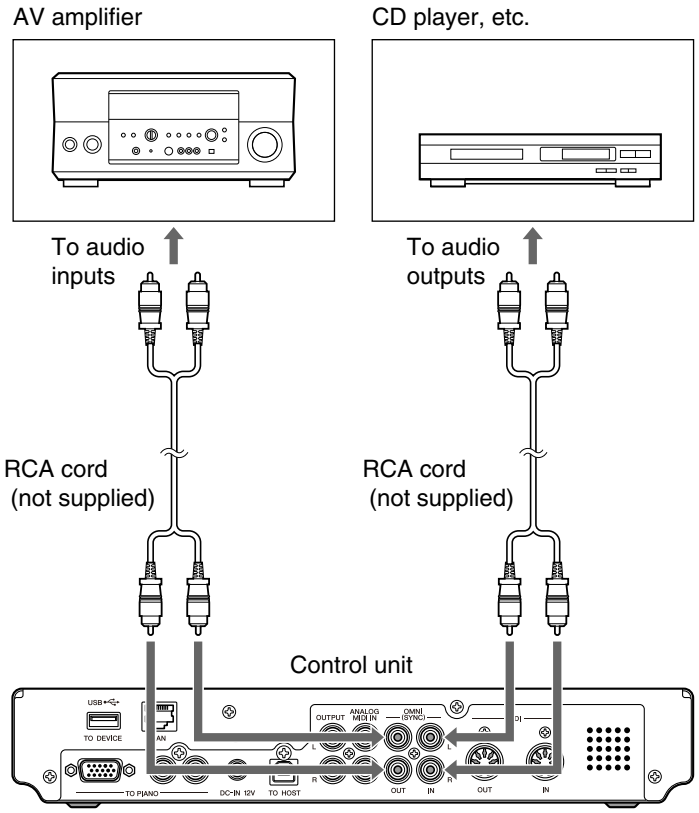
☞ See Chapter 12 “Other Settings – Resetting the Disklavier” on page 126.

Chapter 11

Enhancing the Disklavier by Hooking Up Other Devices

Hooking Up Audio Equipment

If you connect the Disklavier to an audio system, you can hear the sound played/played back on the Disklavier from the connected audio system, and the sound played back on the connected audio system from the Disklavier.



Setting the Disklavier for Audio Data Reception/Transmission

[SETUP] "AudioI/O"

You can select the kind of the incoming/outgoing audio signals. The following options should be set up in advance.

OMNI IN

Selects the appropriate option to match the incoming data input to the OMNI (SYNC) IN jacks.

Auto Detect:
Select this to have the Disklavier detect the input signal automatically.

Audio: Select this when you play back audio from a connected CD player, etc. and reproduce the sound from the monitor speakers*.

OFF: Select this when you cancel the data reception from the OMNI (SYNC) IN jacks.

* *Only for models supplied with the monitor speakers.*

OMNI IN Vol

Adjust the volume of the incoming audio signals to the OMNI (SYNC) IN jacks. The volume can be set in a range of 000 to 127.

OMNI OUT

Selects the desired data to be output from the OMNI (SYNC) OUT jacks.

Output: Select this when you output the same audio signals as the ones for the monitor speakers[*1].

Output+PianoTG[*2]:
Select this when you output the ensemble part and the digital piano sound. Note that the digital piano sound is also output in the acoustic mode.

PianoTG[*2]: Select this when you output only the digital piano sound.

SYNC: Select this when you output the SMPTE signal used for video synchronization playback.

OFF: Select this when you cancel the data transmission from the OMNI (SYNC) OUT jacks.

[*1] *Only for models supplied with the monitor speakers.*

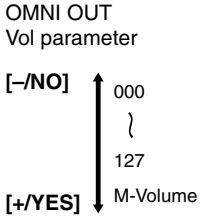
[*2] *Only for models equipped with the Silent Piano™ function*

OMNI OUT Vol

Adjust the volume of the outgoing audio signals to the OMNI (SYNC) OUT jacks. The volume can be set in a range of 000 to 127, or to "M-Volume."

When you set to "M-Volume", the OMNI OUT volume works with the main volume.

Note:
"M-Volume" is the next increment on the OMNI OUT Vol setting above 127.



ANALOG MIDI IN Vol

Adjust the volume of the incoming audio signals to the ANALOG MIDI IN jacks. The volume can be set in a range of 000 to 127.

A-MIDI IN Offset

For some display devices, the video images may be displayed a little bit later than the piano playing when playing back the video synchronized software that contains the analog MIDI signal. To eliminate this delay, you can adjust the offset time that leads the actual playback of the piano. A delay is applied to the incoming analog MIDI signal. The offset time can be set in a range of –500 ms to 0 ms. Decrease this value to delay the piano playing, and increase to advance the piano playing.

SYNC IN Offset

Adjusts the length of the offset time that leads the actual playback of the entire recording. The offset time can be set in a range of –500ms to +500ms. Decrease this value to delay the piano playing, and increase to advance the piano playing.

SYNC OUT Level

Adjusts the output level of the SMPTE signal. For normal use, the adjustment of this option is not required. If noises (synchronized signal) are output from the OUTPUT jacks during video synchronized playback, turn down the level and re-record.

OUTPUT Offset

For some speakers or digital amplifiers, the audio from the Disklavier may be output a little bit later than the acoustic piano playing. To eliminate this delay, you can adjust the offset time for the sound output. This setting is applied to the outgoing audio signal from the OUTPUT jacks and OMNI (SYNC) OUT jacks. Decrease this value to advance the sound output. The offset time can be set in a range of –100 ms to 0 ms. Decrease this value to delay the piano playing, and increase to advance the piano playing.

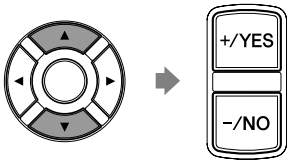
1 Press [SETUP] on the remote control.

The setup menu screen appears.

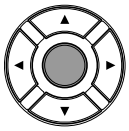
2 Select “AudioI/O” with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The audio I/O setting screen appears.

3 **Select a desired option with the cursor buttons ([▲] [▼]), then press [+/YES] and [–/NO] to change setting.**

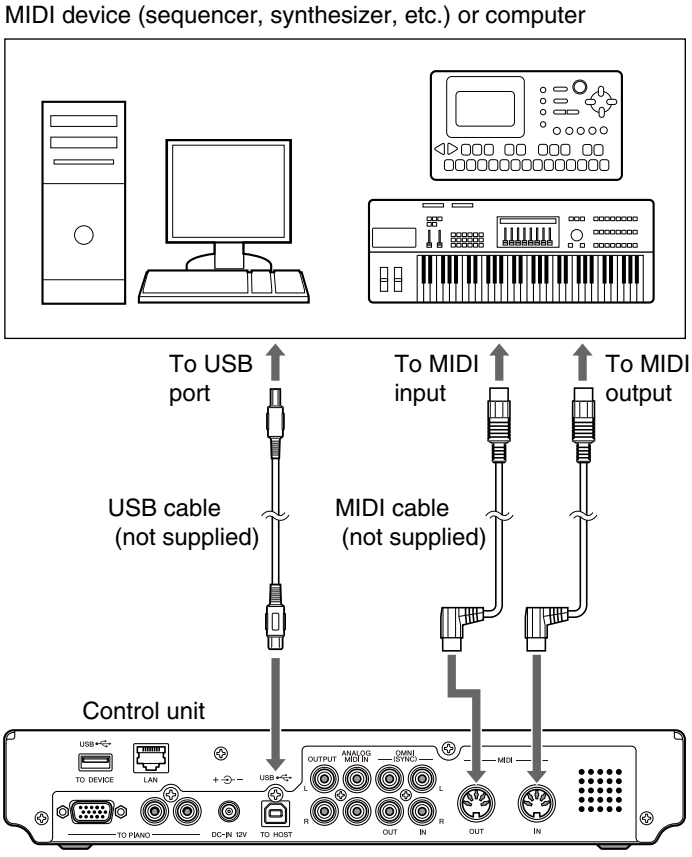


4 **Press [ENTER] to complete the operation.**



Hooking Up MIDI Devices

MIDI (an acronym for Musical Instrument Digital Interface) allows electronic device (synthesizers, etc.) to interact and work in synchronization with other MIDI compatible device. The Disklavier enables you to enjoy a variety of MIDI features by connecting a MIDI device or computer to the Disklavier's control unit.



Note:
When you use the USB connection, it is required to install the USB driver to the connected device. In such a case, visit the following website and download the driver.
http://download.yamaha.com/usb_midi/

Note:
Be sure to use the commercially available MIDI cable with the L-shaped connector on the control unit end.

Setting the Disklavier for MIDI Data Reception

[SETUP] "MIDI"

The Disklavier can play back the MIDI data being received from the connected MIDI device as well as the software loaded or stored in the Disklavier itself. The following options should be set up in advance.

MIDI IN Port

Selects the terminal/port used for the data reception.

MIDI: Select this when the MIDI device is connected to MIDI IN terminal.

USB: Select this when the MIDI device is connected to USB port.

Piano Rcv Ch

The MIDI data consists of multi channels that are respectively assigned to a certain instrument's part. This option assigns the desired channel(s) to the piano part(s) that is (are) played back on the Disklavier's keyboard.

01 thru 16: Select the desired channel to which you assign the piano part.

1+2: Select this when the "01" and "02" channels are assigned to the piano parts.

Prg: Select the smallest number channel assigned to the piano group voice (see page 131) to be played on the Disklavier.

Prg(All): Select all channels assigned to the piano group voice (see page 131) to be played on the Disklavier.

MIDI IN Delay

When the Disklavier receives two kinds of data (strong and weak note) at the same time, the weak note sounds a little bit later than the strong one due to the characteristics of the Disklavier's mechanism. To eliminate this delay in the sound reproduction so that the notes are sounded in accurate timing at 500 milliseconds after the data reception, usually a delay is applied to the incoming MIDI data.

ON: Select this when you apply this delay to the incoming MIDI data.

OFF: Select this when you do not apply this delay.

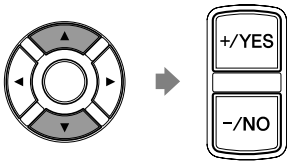
1 **Press [SETUP] on the remote control.**

The setup menu screen appears.

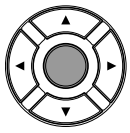
2 **Select "MIDI" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The MIDI setting screen appears.

3 **Select a desired option with the cursor buttons ([▲] [▼]), then press [+/YES] and [–/NO] to change setting.**



4 **Press [ENTER] to complete the operation.**



Setting the Disklavier for MIDI Data Transmission

[SETUP] "MIDI"

The Disklavier can transmit the information of piano playing/ensemble part playback on the Disklavier as the MIDI data to the connected MIDI device to reproduce the sound with its sound generator, etc. or to record the MIDI data. The following options should be set up in advance.

MIDI OUT Port

Selects the terminal/port used for the data transmission.

MIDI: Select this when the MIDI device is connected to MIDI OUT terminal.

USB: Select this when the MIDI device is connected to USB port.

MIDI OUT

Selects one of the following parts to be transmitted to the connected MIDI device.

ESBL Out: Select this when you transmit the ensemble part played back on the Disklavier.

KBD Out: Select this when you transmit the piano part played on the Disklavier.

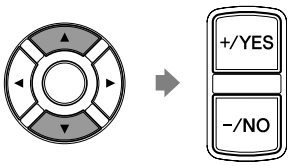
1 Press [SETUP] on the remote control.

The setup menu screen appears.

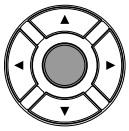
2 Select "MIDI" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The MIDI setting screen appears.

3 **Select a desired option with the cursor buttons ([▲] [▼]), then press [+/YES] and [–/NO] to change setting.**



4 **Press [ENTER] to complete the operation.**



Setting the Disklavier for Keyboard Playing Data Transmission

[SETUP] "MIDI"

Besides the MIDI OUT options, more detailed setups for the keyboard playing data transmission are available. The following options should be set up in advance.

KBD OUT CH

Assigns the piano part to the desired channels.

01 thru 16: Select the desired channel to which you assign the piano part.

Local

Selects whether you reproduce or not the piano part playing with the Disklavier's internal tone generator.

ON: Select this when you reproduce the piano part with the Disklavier's internal tone generator.

OFF: Select this when you reproduce the song (played on the Disklavier) on the external MIDI device. This option inactivates the internal tone generator to prevent both the internal and external tone generator sound at the same time.

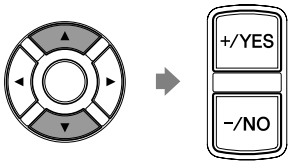
1 Press [SETUP] on the remote control.

The setup menu screen appears.

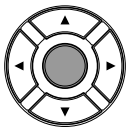
2 Select "MIDI" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The MIDI setting screen appears.

3 Select a desired option with the cursor buttons ([▲] [▼]), then press [+/YES] and [–/NO] to change setting.



4 Press [ENTER] to complete the operation.



Chapter 12

Other Settings

Tuning the Tone Generator (TG Master Tune)

[SETUP] "M–Tune"

The internal XG tone generator has already been tuned to match the acoustic piano (A3=440 Hz). However, you can re-tune the internal XG tone generator in accordance with the pitch of the acoustic piano by following the procedure below.

Note:
For models equipped with the Silent Piano™ function, be sure to switch the Disklavier to the acoustic mode before tuning.

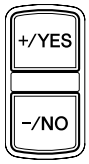
1 Press [SETUP] on the remote control.

The setup menu screen appears.

2 Select "M-Tune" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The TG Master Tune setting screen appears.

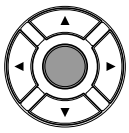
3 Playing the keyboard, press [+/YES] and [–/NO] to tune the pitch of the internal XG tone generator.



The same note will sound simultaneously on the XG tone generator's digital piano and on the acoustic piano as soon as you play the keyboard.

The pitch of the internal XG tone generator can be adjusted in a range of –50 cent to +50 cent.

4 **Press [ENTER] to complete the operation.**



Note:
To reset to the default factory pitch settings, see Chapter 12 "Other Settings – Resetting the Disklavier" on page 126.

Assigning Frequently-used Functions to the Number Keypad on the Remote Control

[SETUP] "Shortcut"

You can assign the number keypad of the remote control ([1] thru [9] and [0]) a series of procedures for often used functions.

■ Assigning Functions

1 **Press [SETUP] on the remote control.**

The setup menu screen appears.

2 **Select "Shortcut" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

Note:
The "Reverb" option appears only on models equipped with the Silent Piano™ function.

The shortcut setting screen appears.

3 **Press [▲] and [▼] to select the desired number.**

4 Press [+/YES] and [–/NO] to select the desired function.

The following functions are available:

Option	Description
PLAY	Starts playback of songs in the selected album or playlist.
RPT	Starts repeat playback of a song or songs in the selected album or playlist.
RND	Starts playback of songs in the selected album or playlist at random.
RADIO	Starts playback of the selected DisklavierRadio channel.
BLNC	Adjusts the volume balance among the different sound sources (tone generator or audio).
POWER	Turns on and off the Disklavier.
QUIET	Activates and inactivates the quiet mode*.

* *Only for grand pianos.*

When functions other than “POWER” and “QUIET” are selected, the detailed setting parameter appears.

5 Press [►] to move the cursor to the detailed setting parameter, then press [+/YES] and [–/NO] to select the desired setting.

You can set two sets of parameter depending on the function you have selected.

When “PLAY” is selected:

Option 1	Option 2	Description
Mem01 - Mem99	---	Starts playback from the first song in the album selected for option 1.
	001 - 999	Starts playback from the song selected for option 2 in the album selected for option 1.
Lst01 - Lst99	---	Starts playback from the first song in the playlist selected for option 1.
	001 - 999	Starts playback from the song selected for option 2 in the playlist selected for option 1.

When "RPT" is selected:

Option 1	Option 2	Description
Mem01 - Mem99	---	Starts repeat playback of all songs in the album selected for option 1 from the first song.
	001 - 999	Starts repeat playback of the song selected for option 2 in the album selected for option 1.
Lst01 - Lst99	---	Starts repeat playback of all songs in the playlist selected for option 1 from the first song.
	001 - 999	Starts repeat playback of the song selected for option 2 in the playlist selected for option 1.

When "RND" is selected:

Option	Description
Mem01 - Mem99	Starts playback of songs in the selected album at random.
Lst01 - Lst99	Starts playback of songs in the selected playlist at random.

When "RADIO" is selected:

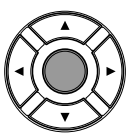
Option	Description
CH01 - CH99	Starts playback of the selected DisklavierRadio channel.

When "BLNC" is selected:

Option 1	Option 2	Description
TG	UP	Raises the volume of the tone generator.
	DOWN	Lowers the volume of the tone generator.
AUDIO	UP	Raises the volume of the audio.
	DOWN	Lowers the volume of the audio.

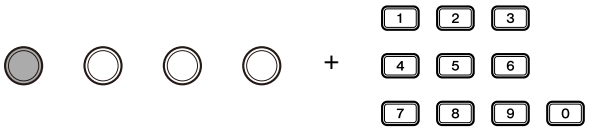
When "POWER" or "QUIET" is selected:
Details settings are not required.

6 Press [ENTER] to complete the operation.



■ Using the Shortcut

Holding the green button on the remote control, press the corresponding number button on the number keypad to execute the assigned function.



Setting the Passcode to Prevent Unauthorized Access

[SETUP] "Passcode"

You can enter the 4-digit passcode to prevent unauthorized access from the commercially available external remote controller, or you can also set the MAC address of the external remote controller to allow it to access your Disklavier without entering the passcode.

Note:
These settings are not required for the use of the remote control of this unit. In case of using an external remote controller, refer to the user's guide for that remote controller.

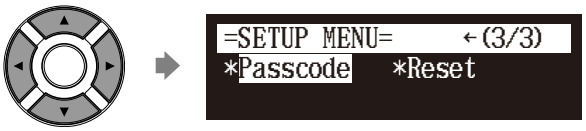
Note:
If changes are inappropriately made for these settings, the external remote controller may not function properly. In such cases, enter "####" to reset the passcode setting.

■ Setting the Passcode

1 Press [SETUP] on the remote control.

The setup menu screen appears.

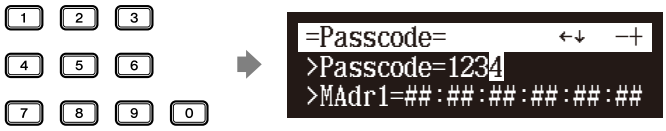
2 Select "Passcode" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].



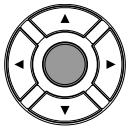
The passcode setting screen appears.

3 Press [◄] and [►] to move the cursor left and right.

4 **Enter the 4-digit code with the number keypad.**



5 **Press [ENTER] to complete the operation.**



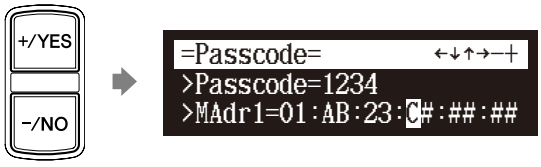
■ Setting the MAC Address

If you feel inconvenient to enter the passcode each time you access from the external remote controller, you can set the MAC address of the external remote controller. This will allow the external remote controller with the registered MAC address to access your Disklavier without entering the passcode.

1 **With the passcode properly set, press [▼] to select "MAdr1."**

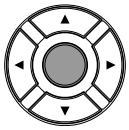
2 **Press [◄] and [►] to move the cursor left and right.**

3 **Enter the address with [+/YES] and [–/NO].**



You can set up to three addresses.

4 **Press [ENTER] to complete the operation.**



Note:
You can also use [+/YES] and [–/NO] on the remote control, or the dial on the control unit to enter the code.

Note:
You can also use the dial on the control unit to enter the address.

English

Adjusting the Brightness of the Display

[SETUP] "Display"

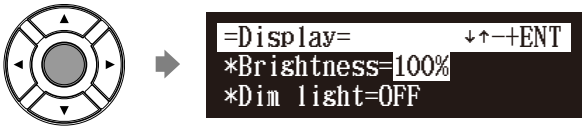
You can adjust the brightness of the display. You can also set the display to dim after the elapse of a certain time if there is no operation.

1 Press [SYSTEM] on the remote control.

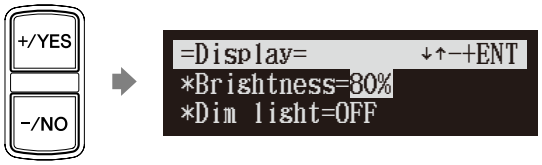
The system menu screen appears.

2 Select "Display" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The display setting screen appears.

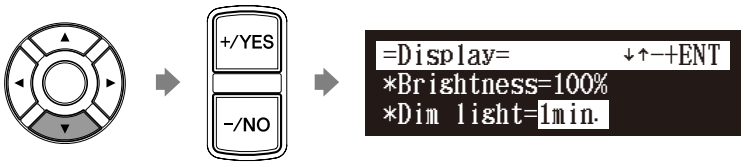


3 Press [+/YES] and [–/NO] to change the brightness.



The following brightness settings are available: 40%, 60%, 80%, 100%.

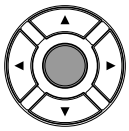
4 **To set the time for the display to dim, press [▼] to move the cursor to the dim light parameter, then press [+/YES] and [–/NO].**



The following time settings are available: OFF, 1min, 2min, 3min, 5min, 10min, 15min, 30min, 45min, 60min.

If there is no operation for the time set above, the display dims to half the brightness of its original setting.

5 **Press [ENTER] to complete the operation.**



Note:
The brightness of the display will return to its original setting when you press any buttons, insert media, or eject media.

Switching the Languages for the Screen

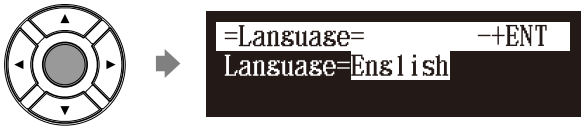
[SYSTEM] "Language"

1 **Press [SYSTEM] on the remote control.**

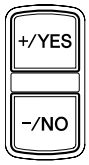
The system menu screen appears.

2 **Select "Language" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The language setting screen appears.

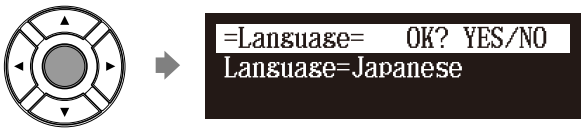


3 **Press [+/YES] and [–/NO] to select the language.**



4 **Press [ENTER].**

"OK?" flashes in the first line of the screen.



5 **Press [+/YES] to set the language, and return to the system menu screen.**

Resetting the Disklavier

[SETUP] "Reset"

If you want to return your Disklavier to its initial factory settings, follow the procedure below.

1 **Press [SETUP] on the remote control.**

The setup menu screen appears.

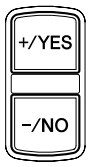
2 **Select "Reset" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].**

The reset screen appears.

Important:
If you reset your Disklavier, depending upon the option you select, you may lose all parameters or all data in the internal memory, or both of these. For normal use, you do not have to reset. If you must reset your Disklavier, Yamaha strongly recommends that you backup your songs in the internal memory. However, you cannot backup your various parameter settings.

☞
To make a backup copy of the songs which are in the internal memory, see Chapter 9 "Media Management – Making Backups of Songs" on page 98.

3 **Press [+/YES] and [–/NO] to select the option that you want to reset.**



Option	Description
Parameter	Reset all parameters, excluding the clock setting and the Internet setting.
Memory	Reset the internal memory.
Factory Init.	Reset the Disklavier to its initial factory setting.
DeleteCookies	Delete the contents of all saved cookies.

4 **Press [ENTER].**

"OK?" flashes in the first line of the screen.

5 **Press [+/YES] to reset, [–/NO] to cancel.**

After a while, the completion message appears.
Press any button to return to the setup menu screen.

Diagnosing the Disklavier (Maintenance Mode)

[SYSTEM] "Maintenance"

The piano diagnostics may be required as the occasion demands. In such a case, follow the instructions of your Yamaha dealer and perform the following procedure.

1 Press [SYSTEM] on the remote control.

The system menu screen appears.

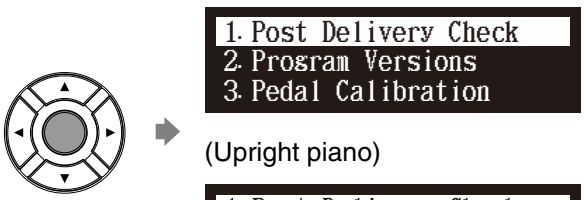
2 Select "Maintenance" with the cursor buttons ([◄] [►] [▲] [▼]), then press [ENTER].

The maintenance screen appears.

3 Press [ENTER].

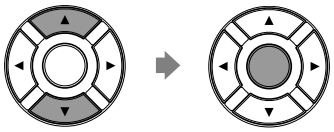
The maintenance options appears.

(Grand piano)



(Upright piano)

4 **Select a desired option with the cursor buttons ([▲] [▼]), then press [ENTER].**



The selected option is executed.

5 **Press [STOP] to complete the operation.**

Note:
Do not execute these options with no instructions from the service personnel.

Updating the Disklavier

Shut down the Disklavier → **[PLAY/PAUSE] and [ON/OFF]**

You can update the Disklavier firmware using update program (saved on the CD-ROM or USB flash memory, or downloaded via Internet).

You can download the update program from the following website:
http://download.yamaha.com/

1 **Make sure that Disklavier is shut down.**

2 **Holding [PLAY/PAUSE] on the control unit, press [ON/OFF].**

The current version information of each module appears one after the other.

3 **Make sure that the update program is prepared, then press [ENTER] on the control unit.**

The starting screen appears.

4 **Press [ENTER] on the control unit again.**

After a while, the update confirmation message of each module appears.

Note:
For this operation you have to insert the CD-ROM or USB flash memory in which the update program is saved or download update program via Internet, and shut down the Disklavier.

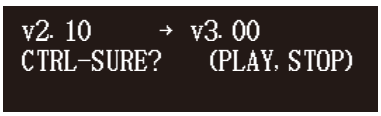
Note:
Depending on the version or specification of the Disklavier, the actual indications for the version and module names may differ from ones depicted here.

5 Press [PLAY/PAUSE] to start the update.

The update process of the first module takes approximately 3 minutes.

When the update of the first module completes, the following confirmation message appears.

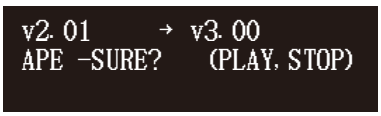
Confirmation message of the second module



Press [PLAY/PAUSE] to start the update of the second module. The update process of the second module takes approximately 3 minutes.

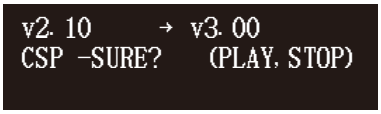
A total of four modules needs to be updated. Repeat this step to complete the update.

Confirmation message of the third module



The update process of the third module takes approximately 2 minutes.

Confirmation message of the fourth module



The update process of the fourth module takes approximately 2 minutes.

The closing screen appears when the update for all modules completes.

6 Restart the Disklavier.

Important:
DO NOT turn off this unit during update.

Important:
Be sure to update all the modules.

Chapter 13

Internal Tone Generator Voices

The following table lists the basic voices for the internal GM/XG and TG3 tone generator.

Internal GM/XG Tone Generator Basic Voice List

Voice #	Display Name
01	**Piano**
001	GrandPno
002	GrndPnoK
003	MelloGrP
004	PianoStr
005	Dream
006	BritePno
007	BritPnoK
008	E.Grand
009	ElGrPnoK
010	Det.CP80
011	ElGrPno1
012	ElGrPno2
013	HnkyTonk
014	HnkyTnkK
015	E.Piano1
016	El.Pno1K
017	MelloEP1
018	Chor.EP1
019	HardEl.P
020	VX El.P1
021	60sEl.P
022	E.Piano2
023	El.Pno2K
024	Chor.EP2
025	DX Hard
026	DXLegend
027	DX Phase
028	DX+Analg
029	DXKotoEP
030	VX El.P2
031	Harpsi.
032	Harpsi.K
033	Harpsi.2
034	Harpsi.3
035	Clavi.
036	Clavi.K
037	ClaviWah
038	PulseClv
039	PierceCl
02	**ChromaticPerc**
040	Celesta
041	Glocken
042	MusicBox

Voice #	Display Name
043	Orgel
044	Vibes
045	VibesK
046	HardVibe
047	Marimba
048	MarimbaK
049	SineMrmb
050	Balafon2
051	Log Drum
052	Xylophon
053	TubulBel
054	ChrchBel
055	Carillon
056	Dulcimer
057	Dulcimr2
058	Cimbalom
059	Santur
03	**Organ**
060	DrawOrgn
061	DetDrwOr
062	60sDrOr1
063	60sDrOr2
064	70sDrOr1
065	DrawOrg2
066	60sDrOr3
067	EvenBar
068	16+2”2/3
069	Organ Ba
070	70sDrOr2
071	CheezOrg
072	DrawOrg3
073	PercOrgn
074	70sPcOr1
075	DetPrcOr
076	LiteOrg
077	PercOrg2
078	RockOrgn
079	RotaryOr
080	SloRotar
081	FstRotar
082	ChrchOrg
083	ChurOrg3
084	ChurOrg2
085	NotreDam

Voice #	Display Name
086	OrgFlute
087	TrmOrgFl
088	ReedOrgn
089	Puff Org
090	Acordion
091	Accordlt
092	Harmnica
093	Harmo 2
094	TangoAcd
095	TngoAcd2
04	**Guitar**
096	NylonGtr
097	NylonGt2
098	NylonGt3
099	VelGtHrm
100	Ukulele
101	SteelGtr
102	SteelGt2
103	12StrGtr
104	Nyln&Stl
105	Stl&Body
106	Mandolin
107	Jazz Gtr
108	MelloGtr
109	JazzAmp
110	CleanGtr
111	ChorusGt
112	Mute.Gtr
113	FunkGtr1
114	MuteStlG
115	FunkGtr2
116	Jazz Man
117	Ovrdrive
118	Gt.Pinch
119	Dist.Gtr
120	FeedbkGt
121	FeedbGt2
122	GtrHarmo
123	GtFeedbk
124	GtrHrmo2
05	**Bass**
125	Aco.Bass
126	JazzRthm
127	VXUprght

Internal Tone Generator Voices

Voice #	Display Name
128	FngrBass
129	FingrDrk
130	FlangeBa
131	Ba&DstEG
132	FngrSlap
133	FngBass2
134	ModAlem
135	PickBass
136	MutePkBa
137	Fretless
138	Fretles2
139	Fretles3
140	Fretles4
141	SynFretl
142	Smooth
143	SlapBas1
144	ResoSlap
145	PunchThm
146	SlapBas2
147	VeloSlap
148	SynBass1
149	SynBa1Dk
150	FastResB
151	AcidBass
152	Clv Bass
153	TeknoBa
154	Oscar
155	SqrBass
156	RubberBa
157	Hammer
158	SynBass2
159	MelloSB1
160	Seq Bass
161	ClkSynBa
162	SynBa2Dk
163	SmthBa 2
164	ModulrBa
165	DX Bass
166	X WireBa
06	**Strings**
167	Violin
168	SlowVln
169	Viola
170	Cello
171	Contrabs
172	Trem.Str
173	SlwTrStr
174	Susp Str
175	Pizz.Str
176	Harp
177	YangChin

Voice #	Display Name
178	Timpani
07	**Ensemble**
179	Strings1
180	S.Strngs
181	SlowStr
182	ArcoStr
183	60sStrng
184	Orchestr
185	Orchstr2
186	TremOrch
187	VeloStr
188	Strings2
189	S.SlwStr
190	LegatoSt
191	Warm Str
192	Kingdom
193	70s Str
194	Str Ens3
195	Syn.Str1
196	ResoStr
197	Syn Str4
198	SS Str
199	Syn.Str2
200	ChoirAah
201	S.Choir
202	Ch.Aahs2
203	MelChoir
204	ChoirStr
205	VoiceOoh
206	SynVoice
207	SynVox2
208	Choral
209	AnaVoice
210	Orch.Hit
211	OrchHit2
212	Impact
08	**Brass**
213	Trumpet
214	Trumpet2
215	BriteTrp
216	WarmTrp
217	Trombone
218	Trmbone2
219	Tuba
220	Tuba 2
221	Mute.Trp
222	Fr.Horn
223	FrHrSolo
224	FrHorn2
225	HornOrch
226	BrasSect

Voice #	Display Name
227	Tp&TbSec
228	BrssSec2
229	HiBrass
230	MelloBrs
231	SynBras1
232	QuackBr
233	RezSynBr
234	PolyBrss
235	SynBras3
236	JumpBrss
237	AnaVelBr
238	AnaBrss1
239	SynBras2
240	Soft Brs
241	SynBras4
242	ChorBrss
243	VelBras2
244	AnaBrss2
09	**Reed**
245	SprnoSax
246	Alto Sax
247	Sax Sect
248	HyprAlto
249	TenorSax
250	BrthTnSx
251	SoftTenr
252	TnrSax 2
253	Bari.Sax
254	Oboe
255	Eng.Horn
256	Bassoon
257	Clarinet
10	**Pipe**
258	Piccolo
259	Flute
260	Recorder
261	PanFlute
262	Bottle
263	Shakhchi
264	Whistle
265	Ocarina
11	**Synth Lead**
266	SquareLd
267	Square 2
268	LMSquare
269	Hollow
270	Shmoog
271	Mellow
272	SoloSine
273	SineLead
274	Saw.Lead

Voice #	Display Name
275	Saw 2
276	ThickSaw
277	DynaSaw
278	DigiSaw
279	Big Lead
280	HeavySyn
281	WaspySyn
282	PulseSaw
283	Dr. Lead
284	VeloLead
285	Seq Ana
286	CaliopLd
287	Pure Pad
288	Chiff Ld
289	Rubby
290	CharanLd
291	DistLead
292	WireLead
293	Voice Ld
294	SynthAah
295	VoxLead
296	Fifth Ld
297	Big Five
298	Bass &Ld
299	Big&Low
300	Fat&Prky
301	SoftWurl
12	**Synth Pad**
302	NewAgePd
303	Fantasy2
304	Warm Pad
305	ThickPad
306	Soft Pad
307	SinePad
308	Horn Pad
309	RotarStr
310	PolySyPd
311	PolyPd80
312	ClickPad
313	Ana Pad
314	SquarPad
315	ChoirPad
316	Heaven2
317	Itopia
318	CC Pad
319	BowedPad
320	Glacier
321	GlassPad
322	MetalPad
323	Tine Pad
324	Pan Pad

Voice #	Display Name
325	Halo Pad
326	SweepPad
327	Shwimmer
328	Converge
329	PolarPad
330	Celstial
13	**Synth Effects**
331	Rain
332	ClaviPad
333	HrmoRain
334	AfrcnWnd
335	Caribean
336	SoundTrk
337	Prologue
338	Ancestrl
339	Crystal
340	SynDrCmp
341	Popcorn
342	TinyBell
343	RndGlock
344	GlockChi
345	ClearBel
346	ChorBell
347	SynMalet
348	SftCryst
349	LoudGlok
350	XmasBell
351	VibeBell
352	DigiBell
353	AirBells
354	BellHarp
355	Gamelmba
356	Atmosphr
357	WarmAtms
358	HollwRls
359	NylonEP
360	NylnHarp
361	Harp Vox
362	AtmosPad
363	Planet
364	Bright
365	FantaBel
366	Smokey
367	Goblins
368	GobSyn
369	50sSciFi
370	Ring Pad
371	Ritual
372	ToHeaven
373	Night
374	Glisten

Voice #	Display Name
375	BelChoir
376	Echoes
377	EchoPad2
378	Echo Pan
379	EchoBell
380	Big Pan
381	SynPiano
382	Creation
383	Stardust
384	Reso Pan
385	Sci-Fi
386	Starz
14	**Ethnic**
387	Sitar
388	DetSitar
389	Sitar 2
390	Tambra
391	Tamboura
392	Banjo
393	MuteBnjo
394	Rabab
395	Gopichnt
396	Oud
397	Shamisen
398	Koto
399	T.Koto
400	Kanoon
401	Kalimba
402	Bagpipe
403	Fiddle
404	Shanai
405	Shanai2
406	Pungi
407	Hichriki
15	**Percussive**
408	TnklBell
409	Bonang
410	Gender
411	Gamelan
412	S.Gamlan
413	Rama Cym
414	AsianBel
415	Agogo
416	SteelDrm
417	GlasPerc
418	ThaiBell
419	WoodBlok
420	Castanet
421	TaikoDrm
422	Gr.Cassa
423	MelodTom

Voice #	Display Name
424	Mel Tom2
425	Real Tom
426	Rock Tom
427	Syn.Drum
428	Ana Tom
429	ElecPerc
430	RevCymbl
16 Sound Effects	
431	FretNoiz
432	BrthNoiz
433	Seashore
434	Tweet
435	Telphone
436	Helicptr
437	Applause
438	Gunshot
18 SFX Voice	
450	CuttngNz
451	CttngNz2
452	Str Slap
453	Fl.KClik
454	Rain
455	Thunder
456	Wind
457	Stream
458	Bubble

Voice #	Display Name
459	Feed
460	Dog
461	Horse
462	Bird 2
463	Ghost
464	Maou
465	Tel.Dial
466	DoorSqek
467	DoorSlam
468	Scratch
469	Scratch2
470	WindChm
471	Telphon2
472	CarEngin
473	Car Stop
474	Car Pass
475	CarCrash
476	Siren
477	Train
478	Jetplane
479	Starship
480	Burst
481	Coaster
482	SbMarine
483	Laughing
484	Scream

Voice #	Display Name
485	Punch
486	Heart
487	FootStep
488	MchinGun
489	LaserGun
490	Xplosion
491	FireWork

Internal GM/XG Tone Generator Drum Voice List

Voice #	Display Name
17 Drum Kit	
439	StandKit
440	Stnd2Kit
441	Room Kit
442	Rock Kit
443	ElectKit
444	AnalgKit
445	Jazz Kit
446	BrushKit
447	ClascKit
448	SFX Kit1
449	SFX Kit2

Internal TG3 Tone Generator Basic Voice List

Voice #	Display Name
01 Piano	
001	GrandPno
002	BritePno
003	E.Grand
004	HnkyTonk
005	E.Piano1
006	E.Piano2
007	Harpsi.
008	Clavi.
02 ChromaticPerc	
009	Celesta
010	Glocken
011	MusicBox
012	Vibes
013	Marimba
014	Xylophon
015	TubulBel

Voice #	Display Name
016	Dulcimer
03 Organ	
017	DrawOrgn
018	PercOrgn
019	RockOrgn
020	ChrchOrg
021	ReedOrgn
022	Acordion
023	Harmnica
024	TangoAcd
04 Guitar	
025	NylonGtr
026	SteelGtr
027	Jazz Gtr
028	CleanGtr
029	Mute.Gtr
030	Ovrdrive

Voice #	Display Name
031	Dist.Gtr
032	GtrHarmo
05 Bass	
033	Aco.Bass
034	FngrBass
035	PickBass
036	Fretless
037	SlapBas1
038	SlapBas2
039	SynBass1
040	SynBass2
06 Strings	
041	Violin
042	Viola
043	Cello
044	Contrabs
045	Trem.Str

Voice #	Display Name
046	Pizz.Str
047	Harp
048	Timpani
07 Ensemble	
049	Strings1
050	Strings2
051	Syn.Str1
052	Syn.Str2
053	ChoirAah
054	VoiceOoh
055	SynVoice
056	Orch.Hit
08 Brass	
057	Trumpet
058	Trombone
059	Tuba
060	Mute.Trp
061	Fr.Horn
062	BrasSect
063	SynBras1
064	SynBras2
09 Reed	
065	SprnoSax
066	Alto Sax
067	TenorSax
068	Bari.Sax
069	Oboe
070	Eng.Horn
071	Bassoon
072	Clarinet
10 Pipe	
073	Piccolo
074	Flute
075	Recorder
076	PanFlute
077	Bottle
078	Shakhchi
079	Whistle
080	Ocarina
11 Synth Lead	
081	SquareLd
082	Saw.Lead
083	CaliopLd
084	Chiff Ld
085	CharanLd
086	Voice Ld
087	Fifth Ld
088	Bass &Ld
12 Synth Pad	
089	NewAgePd
090	Warm Pad
091	PolySyPd
092	ChoirPad
093	BowedPad
094	MetalPad
095	Halo Pad
096	SweepPad
13 Synth Effects	
097	Rain
098	SoundTrk
099	Crystal
100	Atmosphr
101	Bright
102	Goblins
103	Echoes
104	Sci-Fi
14 Ethnic	
105	Sitar
106	Banjo
107	Shamisen
108	Koto
109	Kalimba
110	Bagpipe
111	Fiddle
112	Shanai
15 Percussive	
113	TnklBell
114	Agogo
115	SteelDrm
116	WoodBlok
117	TaikoDrm
118	MelodTom
119	Syn.Drum
120	RevCymbl
16 Sound Effects	
121	FretNoiz
122	BrthNoiz
123	Seashore
124	Tweet
125	Telphone
126	Helicptr
127	Applause
128	Gunshot

Internal TG3 Tone Generator Drum Voice List

Voice #	Display Name
17 Drum Kit	
129	StandKit

Chapter 14

Troubleshooting

If you are having difficulty operating the Disklavier, see if any of the symptoms listed below apply to your problem and follow the recommended remedy.

Power

Symptom	Remedy
The Diskalvier does not turn on.	Make sure that the main switch on the power supply unit is turned on.
	Make sure that the AC power cable is securely connected to a suitable AC wall outlet.
	If the Disklavier still cannot be turned on, disconnect it from the AC wall outlet, and consult your Disklavier dealer.

Control Unit

Symptom	Remedy
The control unit does not appear to work correctly.	Turn off the control unit, wait 5 seconds, then turn it back on. If the problem continues, consult your Disklavier dealer.
The control unit becomes hot.	Although the chassis of the control unit may become hot while the Disklavier is turned on (also in the standby mode), this is not a malfunction.

Remote Control

Symptom	Remedy
You cannot control the Disklavier using the remote control.	Make sure that you are pointing the remote control at the control unit's remote control sensor.
	Make sure that you are within the remote control's specified operating range (approx. 5 m).
	Make sure that the remote control's batteries have been installed correctly.
	Check the condition of the remote control's batteries.

Monitor Speakers*

Symptom	Remedy
No sound is heard from the monitor speakers.	Make sure that the POWER switches on both monitor speakers are turned on.
	Make sure that the monitor speakers are connected to the OUTPUT jacks on the control unit with the supplied speaker cords.
	Make sure that the overall volume is adequately turned up.
	Make sure that the volume of the internal tone generator, audio and voice are adequately turned up.
	Certain model does not come with the monitor speakers. In such a case, prepare active speakers equivalent to the monitor speakers.

* *Only for models supplied with the monitor speakers.*

Playback

Symptom	Remedy
None of the playback functions can be used.	Insert a medium that contains songs into the Disklavier.
The Disklavier does not read a song file.	The maximum number of the readable files in an album is 999.
	Make sure that the name of the SMF song has an extension as ".MID" or ".mid" and the E-SEQ song has ".FIL" or ".fil."
Songs are played back at the wrong tempo or in the wrong key.	Reset the tempo or transposition changes. Once the tempo or transposition have been changed, they will affect playback of all songs on an album, until another medium or album is selected, the recording standby mode is engaged, the Disklavier is turned off, or they are reset.
Songs are not played back in the normal song order.	Make sure that the random repeat mode is off.
The playback order differs from the order on another device.	The playback order depends on the recording software or other factors. Naming the file starting from numbers such as 01, 02, etc. may solve the problem.
When selecting a song using the remote control's number keypad, but the last song on the album is selected.	If a song number higher than the last song number on the album is specified, the last song will be selected.
When specifying a search time using the remote control's number keypad, but the end of the song is selected.	If a time value higher than the total length of the song is specified, the end of the song will be selected.
Some notes drop out during playback.	When a piano song is played back at a low volume, complex note trills and faint pianissimo passages sometimes drop out. In such case, increase the Disklavier's volume level.
PianoSmart™ playback cannot be performed.	Make sure that an appropriate SmartPianoSoft song, which is paired with the song on commercial CDs, is selected.
The pedals do not operate during playback.	Make sure that the pedal part is not canceled.

Tone Generator

Symptom	Remedy
The ensemble parts cannot be heard during ensemble song playback.	Make sure that the TG balance is set to an appropriate level and readjust it.
The pitch of the Disklavier and the internal tone generator do not match.	Use the TG Master Tune function to tune the internal tone generator.

Recording

Symptom	Remedy
You cannot re-record.	Re-recording is not possible on protected songs such as PianoSoft and PianoSoft·Plus songs.

Media

Symptom	Remedy
The Disklavier does not read a CD-R/RW disc.	The audio CD should be formatted in CD-DA, and the data CD in ISO 9660 Level1. The Disklavier may not read a CD-R/RW disc other than this format.

Connection with External Devices

Symptom	Remedy
The Disklavier cannot send or receive MIDI data with other MIDI instruments.	Make sure that the MIDI cables or USB cable are connected properly.
A MIDI loop was accidentally created when you connected a computer to the MIDI OUT terminal on your Disklavier, so that song data is sent back and forth between the computer and the Disklavier.	Configure the setting for the MIDI OUT terminal to “KBD OUT.”

Video Synchronized Recording/Playback

Symptom	Remedy
Synchronized songs are not played back.	Make sure that the audio channels of the DVD recorder are correctly connected to the Disklavier.
	Make sure that the input and output of the DVD recorder are correctly connected to the Disklavier.
	Make sure that the “OMNI IN” option on the Disklavier is set to “AutoDetect.”
	Make sure that the “OMNI OUT” option on the Disklavier is set to “SYNC.”
Noises are heard during recording.	Turn down the volume of the TV connected to the DVD recorder.
	Disconnect the left side connector of the RCA cord from the OMNI OUT (L) jack on the Disklavier. This will not affect the functionality of video synchronized recording.
Noises are heard during playback.	The level of the synchronized signal (SMPTE) from the Disklavier may be too high. Turn down the level with the “SYNC OUT Level” option and re-record.
The piano playback is not synchronized with the video picture.	The video picture may be delayed on the projection device. Adjust the offset time with the “SYNC IN Offset” to match the piano playing and the video picture.
The beginning of the piano performance is dropped out when you play back the synchronized song.	It may take some time until the Disklavier recognizes the synchronized signal and the piano begins to play back. Select the synchronized song in advance, and then start playback on the DVD recorder. Note that you should wait for a while before playing the piano after recording begins on the DVD recorder.

Chapter 15

Error Messages

While operating your Disklavier, an error message may appear in the display. If an error message appears, refer to the table below for an explanation of the message.

Media Selection / Playback

Error Messages	Situation	Remedy
NO MEDIA!	You selected the medium that has not been inserted.	Insert the medium or select another medium.
DIFFERENT CD!	Your CD is not paired with the selected SmartPianoSoft song.	Insert appropriate CD that is paired with the SmartPianoSoft song.

File Operation

Error Messages	Situation	Remedy
CANNOT EXECUTE. NOT ENOUGH DISK SPACE	You tried to copy a song to the medium that has no disk space.	Try another medium or delete songs on the media to make disk space.
CANNOT EXECUTE. NO DESTINATION MEDIUM	You selected the destination medium that has not been inserted when copying the album.	Insert the destination medium and select it.
DISK WRITE PROTECTED!	You tried to copy songs or albums to the medium with the protection tab set to “protected”.	Set the protection tab of the medium to “unprotected”.
CANNOT EXECUTE. PROTECTED FILE	You tried to copy the protected song file to the removable medium such as a USB flash memory.	You cannot copy the protected file to the removable medium.
Deleted all songs in this album	You tried to delete the album with sub folders on the external medium.	
CANNOT EXECUTE TO CREATE MORE THAN 99 ALBUMS	You tried to create a new album on the medium that already contains 99 albums.	No more than 99 albums can be created on the medium.
CANNOT EXECUTE TO CREATE MORE THAN 999 SONGS	You tried to create a new song in the album that already contains 999 songs.	No more than 999 songs can be created in the album.
CANNOT EXECUTE. SAME TITLE EXISTS	You tried to rename an album as same as the album that already exists.	Enter the different title to an album.
	You tried to rename a playlist as same as the playlist that already exists.	Enter the different title to a playlist.

Recording

Error Messages	Situation	Remedy
SELECT REC TRACK	You tried to start re-recording with no part selected.	Select the part to record before starting re-recording.

Timer Play

Error Messages	Situation	Remedy
SAME TIME EVENT EXISTS! CHANGE THE TIME	You tried to set two different programs with the same time for timer playback.	You cannot set two different program with the same time.

Chapter 16

Glossary

This glossary provides basic definitions of terms used frequently in Disklavier manuals.

Continuous Pedal

See *"Incremental Pedal."*

Cookie

A computer data file that stores certain information for use when revisiting a website. In the case of the Disklavier, cookies are used to store ID and password for the IDC service.

DHCP

This is a standard or protocol by which IP addresses and other low-level network configuration information can be dynamically and automatically assigned each time a connection is made to the Internet.

DNS

A system that translates names of computers connected to a network to their corresponding IP addresses.

Ensemble Song

A song which contains piano parts and accompanying instrumental voices. An ensemble song contains the same left- and right-hand parts as an L/R song, and in addition, up to 13 accompanying instrument tracks. These extra tracks are played by the internal XG tone generator. The accompanying tracks may be used for acoustic bass, drums, strings, vibes, etc.

E-SEQ Song Format

A song file format developed by Yamaha for saving songs.

Floppy Disk

The magnetic storage medium that the Disklavier uses to save songs. With the optional USB floppy drive, you can use the 3.5 inch 2DD and 2HD floppy disks commonly used for computers.

Gateway

A system which links different networks or systems, and makes possible data transfer and conversion despite differing communications standards.

General MIDI (GM)

An addition to the MIDI standard that simplifies the transfer of MIDI song files between instruments of different manufacturers. A MIDI song recorded using a GM compatible tone generator should play back correctly when used with any GM compatible tone generator. The standard specifies that a GM compatible tone generator must support 24-note polyphony, 16 parts, and 128 standard voices.

Half Pedal

See *"Incremental Pedal."*

Headphone Mode

A mode of the Silent Piano™ function in which sound is output through connected stereo headphones so that you can listen to songs or play the piano without disturbing people around you.

Incremental Pedal

Piano pedals are not always completely up or down and may be held somewhere in-between. Using incremental pedal data (also called continuous or half pedal data) the Disklavier precisely records the up and down movement of the piano pedals.

Internet

A huge network made up of networks, the Internet allows high-speed data transfer among computers, mobile phones and other devices.

IP Address

A string of numbers assigned to each computer connected to a network, and indicating the device's location on the network.

LAN

Short for Local Area Network, this is a data-transfer network that connects a group of computers at a single location (such as an office or home) by means of a special cable.

L/R Song

In a L/R song, the left-hand piano part is stored on track 1 (L) and the right-hand piano part is stored on track 2 (R). During playback you can cancel either part, and then play that part yourself. When recording an L/R song, you can record the two parts simultaneously or separately.

MIDI
An acronym for Musical Instrument Digital Interface. MIDI allows electronic musical instruments to communicate with each other.

Modem
A device which connects and allows data transfer between a conventional telephone line and a computer. It converts the digital signals from the computer to analog audio for sending over the phone line, and vice versa.

Piano Parts
Refer to the left- and right-hand piano parts of a song. The left-hand piano part is recorded onto track 1 and the right-hand piano part is recorded onto track 2.

PianoSoft™
The PianoSoft Disk Collection is a library of prerecorded song disks made by Yamaha specifically for use with the Disklavier.

PianoSoft·Plus™
PianoSoft·Plus disks contain Ensemble songs that can be played on the Disklavier.

Polyphony
The maximum number of voices (or sounds) that can be produced at a time from MIDI instruments.

Provider
A communications business that offers Internet connection services. In order to connect to the Internet, it is necessary to contract to a provider.

Proxy
A proxy server is a server that all computers on a local network have to go through before accessing information on the Internet. It intercepts all or designated requests to the real server to see if it can fulfill the requests itself. If not, it forwards the request to the real server. Proxy servers are used to improve performance and speed, and to filter requests, usually for security and to prevent unauthorized access to an internal network.

Quiet Mode
A mode of the Silent Piano™ function in which sound is output through the monitor speakers, enabling you to freely adjust the volume of the piano.

Router
A device for connecting multiple computer networks. For example, a router is necessary when connecting several computers in a house or office, to allow all of them access the Internet and share data. A router is usually connected between a modem and a computer, although some modems have a built-in router.

Sequencer
A sequencer can be used with the Disklavier to play back and record MIDI data.

Server
A hardware system or computer used as a central point for a network, providing access to files and services.

Silent Piano™ Function
Yamaha's innovative function that keeps the hammers from striking the strings, effectively silencing the acoustic piano. Sound information is sent to the digital piano tone generator, and output through the monitor speakers (quiet mode) or stereo headphones (headphone mode).

SmartPianoSoft™
Software made by Yamaha containing MIDI signals for playing back along with standard audio CDs.

SMF
Abbreviation for Standard MIDI File.

SMF Song Format
A song file format supported by MIDI sequencers and music software.

Song
Normally, a short piece of music with lyrics. However, for clarity in Disklavier manuals, the term is used to refer to any piece of music of any genre.

Standard MIDI File
A file of MIDI data that can be read and used by a number of different MIDI devices and computers.

Subnet Mask
A setting used to divide a large-scale network into several smaller networks.

TG Master Tune
The function that allows you to tune the internal XG tone generator, and if connected, an external tone generator simultaneously so that their tunings match that of the Disklavier.

Tone Generator
An electronic device that can generate tones or instrument voices.

Transpose
Changing the key of a song. For example, a song in the key of C is transposed to the key of D when it is moved up two semitones.

USB
An interface for connecting an external device with plug and play. The Disklavier supplies with 2 TO DEVICE terminal with USB 1.1 standard and 1 TO HOST terminal. You can use as the external memory media if connected a USB flash memory or a USB hard disk to TO DEVICE terminal. Also the Disklavier enables you to enjoy a variety of MIDI features by connecting a computer to TO HOST terminal.

Voice
The sounds produced by a tone generator expressing various instruments.

Web Page
Refers to each individual page that makes up a website.

Website
This refers to the group of web pages that are opened together. For example, the collection of web pages whose addresses begin with *"http://www.yamaha.com/"* is referred to as the Yamaha site.

XG
Yamaha XG is an extension of the GM (General MIDI) format. Its greater polyphony, more voices, and use of effects enhances the compatibility between MIDI devices. When a song in the Yamaha XG format is played on another XG-compatible tone generator or synthesizer, it plays and sounds as the original composer/creator intended.

Chapter 17

Specifications

General Specifications

		Upright Piano	Grand Piano	Grand Piano (C6/C7/S)[*1]
Sensor System	Key Sensors	Noncontact optical fiber/grayscale shutter sensing system for 88 keys (senses the key position, keying velocity, and key releasing velocity)		
	Hammer Sensors	—	Noncontact optical fiber shutter sensing system[*2]	Noncontact optical fiber/ grayscale shutter sensing system
	Pedal Sensors	Damper & soft pedals: Noncontact optical position-sensing system	Damper & shift pedals: Noncontact optical position-sensing system Sostenuto pedal: Optical ON/OFF detection sensing system[*2]	Damper & shift pedals: Noncontact digital optical position-sensing system Sostenuto pedal: Optical ON/OFF detection sensing system
Drive System	Keys	DSP servo drive system (servocontrolled solenoids)		
	Pedals	DSP servo drive system (servocontrolled solenoids)		
Data Storage	Internal Memory	128 MB		
Removable Media	Compact Disc	Audio CD (CD-DA), Data CD (ISO 9660 Level1-compliant)		
	USB Flash Memory	FAT16 or FAT32 format Yamaha does not assure the operation of the commercially available USB flash memories.		
	USB Hard Disk	FAT32 format Yamaha does not assure the operation of the commercially available USB hard disks.		
	Floppy Disk	3.5” 2DD (720 KB) or 2HD (1.44 MB) floppy disk[*3]		
File Format		Standard MIDI File (SMF) format 0, Standard MIDI File (SMF) format 1, E-SEQ format		
Song Format		PianoSoft (Solo), PianoSoft•Plus, PianoSoft•PlusAudio, SmartPianoSoft, SmartKey (CueTIME)		
Control Unit	Drive	CD (read only)		
	Dimensions (W × H × D)	292 × 49 × 216 mm (11-1/2” × 1-15/16” × 8-1/2”)		
	Weight	2.7 kg (5.95 lb)		
Monitor Speaker[*4]	Rated Power Output	20 W × 2 with tone and volume controls		
	Drivers	10 cm (3-15/16”) woofer × 2, 2.2 cm (7/8”) tweeter × 2		
	Dimensions (W × H × D)	144 × 236 × 167 mm (5-11/16” × 9-5/16” × 6-9/16”)		
	Weight	4.4 kg (9.70 lb)		
Connectors	MIDI	MIDI IN, MIDI OUT		
	Audio	OUTPUT, ANALOG MIDI IN, OMNI IN, OMNI OUT, PHONES × 2[*5]		
	Others	LAN, USB (1 × TO HOST, 2 × TO DEVICE)		
Pitch Control		Set at A=440 Hz, tunable –50 to +50 cents in 1 cent increment		
Piano Tone[*5]	Type	Advanced Wave Memory 2 (AWM2)		
	Polyphony	32 notes (max.)		
	Voice	Piano (digital stereo sampling)		
	Reverb Type	Room, Hall1, Hall2 (depth controllable)		
Ensemble Tone	Type	Advanced Wave Memory 2 (AWM2)		
	Polyphony	32 notes (max.)		
	Ensemble Parts	16 parts		
	Voice Module Modes	XG, GM		
	Normal Voices	676 voices (480 voices can be used for playing)		
	Drum Voices	21 kits (11 kits can be used for playing)		
Power Source		Local AC current, 100 to 240 V, 50/60 Hz		

Supplied Accessories	Control unit (1), control unit suspension bracket (1)[*6], screw for control unit suspension bracket installation (4 × 10) (4)[*6], screw for control unit suspension (5 × 12) (3)[*6], screw for USB floppy disk drive installation (3 × 6) (4)[*6], monitor speaker (2)[*4], monitor speaker installation kit (1)[*4], speaker cord (2)[*4], remote control (1), battery for remote control (2), stereo headphone (1)[*5], sample PianoSoft CD software (1), operation manual (1), PianoSoft CD song list (1), music book "50 greats for the Piano" (1)
Optional Accessories	USB floppy disk drive (UD-FD01)

Function & Controls

Playback Functions	Media Select	Internal memory, CD, USB media (including floppy disk)
	Song Select	Cursor buttons (control unit), cursor buttons/numeric section (remote control)
	Basic Functions	Play, stop, pause
	Song Search	Reverse/forward w/ sound (MIDI songs), reverse/forward w/o sound (audio songs), directly by time or measure.
	Repeat	ALL (all songs in current album), RPT (current song), RND (all songs in current album in random order), A-B
	Part Cancel	L (left), R (right), pedal
	Timer Playback	See page 36.
	Video Synchronization	See page 40.
	SmartKey™ Playback	See page 41.
	PianoSmart™ Playback	See page 41.
Playback Controls	Volume	11 levels (–10 to 0)
	Tempo	–50 to 50% in 1% increment
	Transposition	–24 to +24 semitones (2 octaves) in 1 semitone increment
	Balance (TG, Audio)	10 to 127
Recording Functions	Piano Part Recording	L/R overwrite, split
	Metronome Mode Recording	See page 56.
	Tempo Changing	See page 63.
	Video Synchronization	See page 65.
	Audio CD Synchronization	See page 69.
Piano Playing Functions	XG Voices	Approx. 500 voices
Metronome	Range	30 to 400 beats per minute
	Time Signatures	1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4, 9/4
	Volume	Controllable
Utility Functions	Song	Copy, delete, rename, sort, add to playlist, type convert, time format convert, strip XP
	Album	Copy, delete, create, rename, sort, add to playlist
	Playlist	Create, delete, rename
	Backup/Restore	See pages 98 and 99.
	Floppy Disk[*3]	Format
Network Functions	DisklavierRadio	See pages 26 and 103.
	FromToPC Folder	See pages 92 to 96.
	Network Update	See page 105.
Update		Firmware update with media (CD-ROM or USB flash memory) or via the Internet

Specifications are subject to change without prior notice.

Note: [*1] Not available in some areas.
[*2] Not equipped on some models.
[*3] Possible for optional floppy disk drive (UD-FD01).
[*4] Only for models supplied with the monitor speakers.
[*5] Only for models equipped with the Silent Piano™ function.
[*6] Only for grand pianos.

disklavier™ E3

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Version 2, June 1991

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libupnp

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ntp

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jpg “Clone me,” says Dolly sheepishly

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unzip

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MIDI Data Format

If you are familiar with MIDI, or are using a computer to control your music software with computer-generated MIDI messages, the data provided in this section can help you to control your Disklavier. Messages include those that can be received by the piano part and/or those that can be received by an ESBL part. Messages that can be transmitted as well as received are shown as “transmitted.”

1. CHANNEL MESSAGES

1.1 Key On / Key Off

(Piano Part, ESBL Part) (transmitted)

Piano Part reception note range = A-1~C7 : C3=60
ESBL part reception note range = C-2~G8
Velocity range = 1~127 (Only the Key On velocity is received)

1.2 Control Change

1.2.1 Bank Select

(ESBL Part) (transmitted)

Cntrl#	Parameter	Data Range
0	Bank Select MSB	0: Normal, 63: User voice, 64: SFX, 126: SFX kit, 127: Drum
32	Bank Select LSB	0...127

You can select the Voice banks with MSB and LSB numbers. MSB and LSB functions differently depending on the play mode. In XG mode, MSB numbers select Voice type (Normal Voice or Drum Voice), and LSB number select Voice banks.
In TG300B mode, LSB is fixed, and MSB numbers select Voice banks.
(See Normal Voice List Drum Voice List.)
A new bank selection will not become effective until the next Program Change message is received.

1.2.2 Modulation

(ESBL Part)

Cntrl#	Parameter	Data Range
1	Modulation	0...127

1.2.3 Portamento Time

(ESBL Part)

Cntrl#	Parameter	Data Range
5	Portamento Time	0...127

When the parameter 1.2.9 Portamento = ON, values will adjust the speed of pitch change.
A setting of 0 - minimum portamento time, and 127 - maximum portamento time.

1.2.4 Data Entry

(ESBL Part)

Messages which set the value for the parameter specified by RPN/NRPN.

Cntrl#	Parameter	Data Range
6	Data Entry MSB	0...127
38	Data Entry LSB	0...127

Parameter value is determined by combining MSB and LSB.

1.2.5 Main Volume

(Piano Part, ESBL Part) (transmitted)

Cntrl#	Parameter	Data Range
7	Main Volume	0...127

1.2.6 Pan

(ESBL Part)

Cntrl#	Parameter	Data Range
10	Pan	0...127

1.2.7 Expression

(Piano Part, ESBL Part)

Cntrl#	Parameter	Data Range
11	Expression	0...127

1.2.8 Hold1

(Piano Part, ESBL Part) (transmitted)

Cntrl#	Parameter	Data Range
64	Hold1	0...127 (0-63:off, 64-127:on)

1.2.9 Portamento

(ESBL Part)

Cntrl#	Parameter	Data Range
65	Portamento	0...127 (0-63:off, 64-127:on)

1.2.10 Sostenuto

(Piano Part, ESBL Part) (transmitted)

Cntrl#	Parameter	Data Range
66	Sostenuto	0...127 (0-63:off, 64-127:on)

1.2.11 Soft Pedal

(Piano Part, ESBL Part) (transmitted)

Cntrl#	Parameter	Data Range
67	Soft Pedal	0...127 (0-63:off, 64-127:on)

1.2.12 Harmonic Content

(ESBL Part)

Messages which adjust the resonance set for each Voice.

Cntrl#	Parameter	Data Range
71	Harmonic Content	0...127 (0:-64, 64:+0, 127:+63)

Higher values will result in a more characteristic, resonant sound.

Depending on the Voice, the effective range may be narrower than the range available for adjustment.

1.2.13 Release Time

(ESBL Part)

Messages which adjust the envelope release time set for each Voice.

Cntrl#	Parameter	Data Range
72	Release Time	0...127 (0:-64, 64:+0, 127:+63)

1.2.14 Attack Time

(ESBL Part)

Messages which adjust the envelope attack time set for each Voice.

Cntrl#	Parameter	Data Range
73	Attack Time	0...127 (0:-64, 64:+0, 127:+63)

1.2.15 Brightness

(ESBL Part)

Messages which adjust the filter cutoff frequency set for each Voice.

Cntrl#	Parameter	Data Range
74	Brightness	0...127 (0:-64, 64:+0, 127:+63)

1.2.16 Portamento Control

(ESBL Part)

Messages which apply a portamento between the currently-sounding note and the subsequent note.

Cntrl#	Parameter	Data Range
84	Portamento Control	0...127

1.2.17 Effect1 Depth (Reverb Send Level)

(ESBL Part)

Cntrl#	Parameter	Data Range
91	Effect1 Depth	0...127

1.2.18 Effect3 Depth (Chorus Send Level)
(ESBL Part)

Cntrl#	Parameter	Data Range
93	Effect3 Depth	0...127

1.2.19 Effect4 Depth (Variation Effect Send Level)
(ESBL Part)

Cntrl#	Parameter	Data Range
94	Effect4 Depth	0...127

1.2.20 Data Increment / Decrement (for RPN)
(ESBL Part)

Cntrl#	Parameter	Data Range
96	RPN Increment	0...127
97	RPN Decrement	0...127

1.2.21 NRPN (Non-Registered Parameter Number)
(ESBL Part)

Cntrl#	Parameter	Data Range
98	NRPN LSB	0...127
99	NRPN MSB	0...127

First send the NRPN MSB and NRPN LSB to specify the parameter which is to be controlled. Then use Data Entry to set the value of the specified parameter.

* Note that once the NRPN has been set for a channel subsequent data entry will be recognized as the same NRPN's value change. Therefore, after you use the NRPN, you should set a Null (7FH, 7FH) value to avoid an unexpected result.

The following NRPN number can be received.

NRPN MSB	NRPN LSB	Data entry MSB	PARAMETER NAME and VALUE RANGE
$01	$08	$mm	Vibrato Rate mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$09	$mm	Vibrato Depth mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$0A	$mm	Vibrato Delay mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$20	$mm	Filter Cutoff Frequency mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$21	$mm	Filter Resonance mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$63	$mm	EG Attack Time mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$64	$mm	EG Decay Time mm : $00 - $40 - $7F (-64 - 0 - +63)
$01	$66	$mm	EG Release Time mm : $00 - $40 - $7F (-64 - 0 - +63)
$14	$rr	$mm	Drum Filter Cutoff Frequency mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number
$15	$rr	$mm	Drum Filter Resonance mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number
$16	$rr	$mm	Drum EG Attack mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number
$17	$rr	$mm	Drum EG Decay Rate mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number Applies to both Decay1 and 2.
$18	$rr	$mm	Drum Instrument Pitch Coarse mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number
$19	$rr	$mm	Drum Instrument Pitch Fine mm : $00 - $40 - $7F (-64 - 0 - +63) rr : drum instrument note number
$1A	$rr	$mm	Drum Instrument Level mm : $00 - $7F (0 - max) rr : drum instrument note number
$1C	$rr	$mm	Drum Instrument Pan mm : $00 - $40 - $7F (random, left - center - right) rr : drum instrument note number
$1D	$rr	$mm	Drum Instrument Reverb Send Level mm : $00 - $7F (0 -max) rr : drum instrument note number
$1E	$rr	$mm	Drum Instrument Chorus Send Level mm : $00 - $7F (0 - max) rr : drum instrument note number
$1F	$rr	$mm	Drum Instrument Variation Send Level mm : $00 - $7F (0 - max) rr : drum instrument note number

MSB 14H- 1FH (for Drum) is valid only if the Multi Part parameter PART MODE = DRUMS 1 or DRUMS2 for that channel. (If PART MODE = DRUM, no values will be changed.)

1.2.22 RPN (Registered Parameter Number)
(ESBL Part)

Cntrl#	Parameter	Data Range
100	RPN LSB	0...127
101	RPN MSB	0...127

The following RPN numbers can be received.

RPN MSB	RPN LSB	Data entry MSB	Data entry LSB	PARAMETER NAME and VALUE RANGE
00H	00H	mmH	—	Pitch Bend Sensitivity mm:00-18H (0-24 chromatic steps) Assignable in chromatic steps up to 2 octaves Default : 02H LSB value is ignored.
00H	01H	mmH	11H	Fine Tuning mm: 00H-40H-7FH (-64-0-+63)
00H	02H	mmH	—	Coarse Tuning mm: 28H - 40H - 58H (-24 - +24 chromatic steps) LSB value is ignored.
7FH	7FH	—	—	RPN null Cancels RPN and NRPN numbers

1.2.23 Channel Mode Messages

The following Channel Mode Messages can be received.

2nd byte	3rd byte	
120	0	All Sound Off
121	0	Reset All Controllers
123	0	All Note Off
124	0	Omni Off
125	0	Omni On
126	0 ~ 16	Mono
127	0	Poly

1.2.23.1 All Sound Off
(Piano Part, ESBL Part) (transmitted)

ESBL part;
Terminates all sounds currently sounding on the specified channel. However, the status of channel messages such as Note On and Hold On is maintained.

Piano Part;
The status of channel messages is not maintained.

1.2.23.2 Reset All Controllers
(ESBL Part)

The values of the following controllers will be reset to the defaults.

CONTROLLER	VALUE
Pitch Bend Change	±O (center)
Channel Aftertouch	0 (off)
Polyphonic Aftertouch	0 (off)
Modulation	0 (off)
Expression	127 (max)
Hold l	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)

Portamento Control	cancels the Portamento Source Key Number that was received
RPN	number not specified; internal data will not change
NRPN	number not specified; internal data will not change

1.2.23.3 All Note Off

(Piano Part, ESBL Part) (transmitted)

Terminates all notes currently on for the specified channel. However, if Hold 1 or Sostenuto is on, notes will continue sounding until these are turned off.

1.2.23.4 Omni Off

(Piano Part, ESBL Part)

Performs the same function as when an All Notes Off message is received.

1.2.23.5 Omni On

(Piano Part, ESBL Part)
Performs the same function as when an All Notes Off message is received.

1.2.23.6 Mono

(Piano Part, ESBL Part)

Performs the same function as when an All Sounds on message is received, and if the 3rd byte (mono number) is in the range of 0 - 16, sets the corresponding channel to Mono Mode (Mode 4 : m = 1).

1.2.23.7 Poly

(Piano Part, ESBL Part)

Performs the same function as when an All Sounds Off message is received. and sets the corresponding channel to Poly Mode (Mode 3).

1.2.24 Local Control

(Piano Part, ESBL Part)

0;Off Disklavier keyboard does not play the internal voices.
127;On

1.3 Program Change

(ESBL Part) (transmitted)

Messages for Voice selection.
With a combination of Bank Select, you can select not only basic Voice numbers, but also variation Voice bank numbers.

1.4 Pitch Bend

(ESBL Part)

When Multi Part Parameter Rcv PITCH BEND CHANGE=OFF, pitch bend for that part is not received.

1.5 Channel Aftertouch

(ESBL Part)

1.6 Polyphonic Aftertouch

(ESBL Part) (PianoPart) (transmitted)

Applying further pressure on the key does not output “key aftertouch” information. Instead, key position is transmitted as additional information.

2. SYSTEM EXCLUSIVE MESSAGES

2.1 Parameter Change

The Disklavier receives the following parameter change messages.

[UNIVERSAL REALTIME MESSAGE]
1) Master Volume

[UNIVERSAL NON REALTIME MESSAGE]
1) General MIDI Mode On

[XG NATIVE]
1) XG System on
2) XG System Data parameter change
3) Multi Effect1 Data parameter change
4) Multi Part Data parameter change
5) Drums Setup Data parameter change

[OTHER]
1) Master tuning
2) TG300 System Data Parameter change
3) TG300 Multi Effect Data parameter change
4) TG300 Multi Part Data parameter change

2.1.2 Universal Realtime Messages

2.1.2.1 Master Volume

(Piano Part, ESBL Part)

11110000	F0	= Exclusive status
01111111	7F	= Universal Real Time
01111111	7F	= ID of target device
00000100	04	= Sub-ID #1=Device Control Message
00000001	01	= Sub-ID #2=Master Volume
0sssssss	*SS	= Volume LSB
0ttttttt	TT	= Volume MSB
11110111	F7	= End of Exclusive
or		
11110000	F0	= Exclusive status
01111111	7F	= Universal Real Time
0xxxnnnn	XN	= Device Number, xxx = don’t care
00000100	04	= Sub-ID #1=Device Control Message
00000001	01	= Sub-ID #2=Master Volume
0sssssss	SS	= Volume LSB
0ttttttt	TT	= Volume MSB
11110111	F7	= End of Exclusive

When received, the Volume MSB will be effective for the System Parameter MASTER VOLUME.
* “SS” is the hexadecimal expression of Osssssss; same as for “tt”, “aa”, etc.

2.1.3 Universal Non-Realtime Messages

2.1.3.1 General MIDI Mode On

(ESBL Part)

11110000	F0	= Exclusive status
01111110	7E	= Universal Non-Real Time
01111111	7F	= ID of target device
00001001	09	= Sub-ID #1=General MIDI Message
00000001	01	= Sub-ID #2=General MIDI On
11110111	F7	= End of Exclusive
or		
11110000	F0	= Exclusive status
01111110	7E	= Universal Non-Real Time
0xxxnnnn	XN	= Device Number, xxx = don’t care
00001001	09	= Sub-ID #1=General MIDI Message
00000001	01	= Sub-ID #2=General MIDI On
11110111	F7	= End of Exclusive

When General MIDI Mode On is received. the play mode will be changed to XG mode.
When this happens, the ESBL part will receive the MIDI messages which compatible with GM System Level 1, and consequently will not receive NRPN and Bank Select messages. Since approximately 50ms is required to execute this messag, be sure to leave an appropriate interval before the subsequent message.

2.1.4 XG Native Parameter Change

(ESBL Part)

With the Parameter Change messages as listed below, you can change the characteristic of a Voice, such as by Effect Type or effect parameter, transpose, tuning, and others.

11110000	F0	Exclusive status
01000011	43	YAMAHA ID
0001nnnn	1n	Device Number
01001100	4C	XG Model ID
0aaaaaaa	aaaaaaa	Address High
0aaaaaaa	aaaaaaa	Address Mid
0aaaaaaa	aaaaaaa	Address Low
0ddddddd	ddddddd	Data
|	|	
11110111	F7	End of Exclusive

* Any number is OK since the device number for the Disklavier is fixed to “All.”

For parameters with data size of 2 or 4, transmit the appropriate number of data bytes.
When sending the parameter change messages consecutively, be sure to leave an appropriate interval (if the time base is 480. ca 5 unit) between the messages.

2.1.4.1 XG System On

(ESBL Part)

11110000	F0	Exclusive status
01000011	43	YAMAHA ID
0001nnnn	1N	Device Number
01001100	4C	XG Model ID
0aaaaaaa	00	Address High
0aaaaaaa	00	Address Mid
0aaaaaaa	7E	Address Low
00000000	00	Data
11110111	F7	End of Exclusive

When this data is received. the Disklavier will switch to XG mode and all the parameters will be initialized accordingly, and XG-compatible messages such as NRPN and Bank Select messages can be received.
Since approximately 50ms is required to execute this message, be sure to leave an appropriate interval before the subsequent message

2.1.4.2 XG System Data parameter change

(ESBL Part)

See tables <1-1> and <1-2>.

2.1.4.3 Multi Effect1 Data parameter change

(ESBL Part)

See tables <1-1> and <1-3>.

2.1.4.4 Multi Part Data parameter change

(ESBL Part)

See tables <1-1> and <1-4>.

2.1.4.5 Drums Setup Data parameter change

(ESBL Part)

See tables <1-1> and <1-5>.

If a Drum Setup Reset parameter change message is received, the Drum Setup parameter values will be initialized.
Selecting a Drum Set will cause the Drum Setup parameter values to be initialized.

2.1.5 Other parameter changes

2.1.5.1 Master Tuning

(ESBL Part)

11110000	F0	Exclusive status
01000011	43	YAMAHA ID
0001nnnn	1n	Device Number
00100111	27	Model ID
00110000	30	Sub ID2
00000000	00	
00000000	00	
0mmmmmmm	mm	Master Tune MSB
0lllllll	ll	Master Tune LSB
0ccccccc	cc	
11110111	F7	End of Exclusive

This message simultaneously changes the pitch of all channels.

2.2 Bulk Dump

(ESBL Part)

The Disklavier receives the following bulk dump data.

[XG NATIVE]
1) XG System Data
2) Multi Effect1 Data
3) Multi Part Data
4) Drums Setup Data

[QS300 NATIVE]
1) QS300 User Normal Voice Data

2.2.1 XG Native Bulk Dump

11110000	F0	Exclusive status
01000011	43	YAMAHA ID
0000nnnn	0n	Device Number
01001100	4C	XG Model ID
0bbbbbbb	bbbbbbb	ByteCount
0bbbbbbb	bbbbbbb	ByteCount
0aaaaaaa	aaaaaaa	Address High
0aaaaaaa	aaaaaaa	Address Mid
0aaaaaaa	aaaaaaa	Address Low
0ddddddd	dd	Data
|	|	
|	|	
0ccccccc	ccccccc	Checksum
11110111	F7	End of Exclusive

For the Address and Byte Count, refer to the supplementary tables.
The Checksum is the value that results in a value of 0 for the lower 7 bits when the Start Address, Byte Count, plus the Checksum itself are added.

2.2.1.1 XG System Data bulk dump

(ESBL Part)

See tables <1-1> and <1-2>.

2.2.1.2 Multi Effect1 Data bulk dump

(ESBL Part)

See tables <1-1> and <1-3>.

2.2.1.3 Multi Part Data bulk dump

(ESBL Part)

See tables <1-1> and <1-4>.

2.2.1.4 Drums Setup Data bulk dump

(ESBL Part)

See tables <1-1> and <1-5>.

2.2.2 QS300 Native Bulk Dump

11110000	F0	Exclusive status
01000011	43	YAMAHA ID
0000nnnn	0n	Device Number
01001101	4B	QS300 Model ID
0bbbbbbb	bbbbbbb	ByteCount
0bbbbbbb	bbbbbbb	ByteCount
0aaaaaaa	aaaaaaa	Address High
0aaaaaaa	aaaaaaa	Address Mid
0aaaaaaa	aaaaaaa	Address Low
0ddddddd	dd	Data
|	|	
|	|	
0ccccccc	ccccccc	Checksum
11110111	F7	End of Exclusive

2.2.2.1 QS300 User Normal Voice Data bulk damp

(ESBL Part)

See tables <2-1> and <2-2>.

3. SYSTEM REALTIME MESSAGES

3.1 Active Sensing

a) Transmission
Transmitted.

b) Reception
Once FE has been received. if no MIDI data is subsequently received for longer than an interval of approximately 300msec. the Disklavier will perform the same function as when ALL SOUNDS OFF. ALL NOTES OFF, and RESET ALL CONTROLLERS messages are received, and will then return to a status in which FE is not monitored.

<Table 1-1>

Parameter Bass Address
Model ID = 4C [XG]

	Parameter Change Address			
	(H)	(M)	(L)	Description
XG SYSTEM	00	00	00	System
	00	00	7D	Drum setup Reset
	00	00	7E	XG System On
	00	00	7F	All Parameter Reset
EFFECT1	02	01	00	Effect1 (Reverb, Chorus, Variation)
MULTI PART	08	00	00	Multi Part 1
				:
	08	0F	00	Multi Part 16
DRUM	30	18	00	Drum Setup 1
	30	18	00	Drum Setup 2

------->

Address			Parameter
3n	0B	00	note number 13
3n	0C	00	note number 14
	:		:
3n	5B	00	note number 91

n: Drum setup number (0, 1)

<Table 1-2>

MIDI Parameter Change table (SYSTEM) [XG]

Address (H)			Size (H)	Data (H)	Parameter	Description (H)	Default value
00	00	00	4	0000-07FF	MASTER TUNE	-102.4 - +102.3 [cent] 1st bit3-0→bit15-12 2nd bit3-0→bit11-8 3rd bit3-0→bit7-4 4th bit3-0→bit3-0	00 04 00 00 -400
		04	1	00 - 7F	MASTER VOLUME	0 - 127	7F
		05	1	00 - 7F	not used		
		06	1	28 - 58	TRANSPOSE	-24 - +24 [semitones]	40
		7D		n	DRUM SETUP RESET	n=Drum setup number	
		7E		00	XG SYSTEM ON	00=XG system ON (receive only)	
		7F		00	ALL PARAMETER RESET	00=ON (receive only)	
TOTAL SIZE				07			

<Table 1-3>

MIDI Parameter Change table (EFFECT 1) [XG]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
02	01	00	2	00-7F	REVERB TYPE MSB	see Effect Type List	01(=HALL1)
				00-7F	REVERB TYPE LSB	00 : basic type	00
		02	1	00-7F	REVERB PARAMETER 1	see Effect Parameter List	Depends on reverb type
		03	1	00-7F	REVERB PARAMETER 2	”	”
		04	1	00-7F	REVERB PARAMETER 3	”	”
		05	1	00-7F	REVERB PARAMETER 4	”	”
		06	1	00-7F	REVERB PARAMETER 5	”	”
		07	1	00-7F	REVERB PARAMETER 6	”	”
		08	1	00-7F	REVERB PARAMETER 7	”	”
		09	1	00-7F	REVERB PARAMETER 8	”	”
		0A	1	00-7F	REVERB PARAMETER 9	”	”
		0B	1	00-7F	REVERB PARAMETER 10	”	”
		0C	1	00-7F	REVERB RETURN	-∞dB...0dB...+6dB(0...64...127)	40
		0D	1	01-7F	REVERB PAN	L63...C...R63(1...64...127)	40

TOTAL SIZE			0E				
02	01	10	1	00-7F	REVERB PARAMETER 11	see Effect Parameter List	Depends on reverb type
		11	1	00-7F	REVERB PARAMETER 12	”	”
		12	1	00-7F	REVERB PARAMETER 13	”	”
		13	1	00-7F	REVERB PARAMETER 14	”	”
		14	1	00-7F	REVERB PARAMETER 15	”	”
		15	1	00-7F	REVERB PARAMETER 16	”	”
TOTAL SIZE			6				
02	01	20	2	00-7F	CHORUS TYPE MSB	see Effect Type List	41 (=CHORUS1)
				00-7F	CHORUS TYPE LSB	00 : basic type	00
		22	1	00-7F	CHORUS PARAMETER 1	see Effect Parameter List	Depends on chorus Type
		23	1	00-7F	CHORUS PARAMETER 2	”	”
		24	1	00-7F	CHORUS PARAMETER 3	”	”
		25	1	00-7F	CHORUS PARAMETER 4	”	”
		26	1	00-7F	CHORUS PARAMETER 5	”	”
		27	1	00-7F	CHORUS PARAMETER 6	”	”
		28	1	00-7F	CHORUS PARAMETER 7	”	”
		29	1	00-7F	CHORUS PARAMETER 8	”	”
		2A	1	00-7F	CHORUS PARAMETER 9	”	”
		2B	1	00-7F	CHORUS PARAMETER 10	”	”
		2C	1	00-7F	CHORUS RETURN	-∞dB...0dB...+6dB(0...64...127)	40
		2D	1	01-7F	CHORUS PAN	L63...C...R63(1...64...127)	40
		2E	1	00-7F	SEND CHORUS TO REVERB	-∞dB...0dB... +6dB(0...64...127)	00
TOTAL SIZE			0F				
02	01	30	1	00-7F	CHORUS PARAMETER 11	see Effect Parameter List	Depends on chorus Type
		31	1	00-7F	CHORUS PARAMETER 12	”	”
		32	1	00-7F	CHORUS PARAMETER 13	”	”
		33	1	00-7F	CHORUS PARAMETER 14	”	”
		34	1	00-7F	CHORUS PARAMETER 15	”	”
		35	1	00-7F	CHORUS PARAMETER 16	”	”
TOTAL SIZE			6				
02	01	40	2	00-7F	VARIATION TYPE MSB	see Effect Type List	05 (=DELAY L, C, R)
				00-7F	VARIATION TYPE LSB	00 : basic type	00
		42	2	00-7F	VARIATION PARAMETER 1 MSB	see Effect Parameter List	Depends on variation type
				00-7F	VARIATION PARAMETER 1 LSB	”	”
		44	2	00-7F	VARIATION PARAMETER 2 MSB	”	”
				00-7F	VARIATION PARAMETER 2 LSB	”	”
		46	2	00-7F	VARIATION PARAMETER 3 MSB	”	”
				00-7F	VARIATION PARAMETER 3 LSB	”	”
		48	2	00-7F	VARIATION PARAMETER 4 MSB	”	”
				00-7F	VARIATION PARAMETER 4 LSB	”	”
		4A	2	00-7F	VARIATION PARAMETER 5 MSB	”	”
				00-7F	VARIATION PARAMETER 5 LSB	”	”
		4C	2	00-7F	VARIATION PARAMETER 6 MSB	”	”
				00-7F	VARIATION PARAMETER 6 LSB	”	”
		4E	2	00-7F	VARIATION PARAMETER 7 MSB	”	”
				00-7F	VARIATION PARAMETER 7 LSB	”	”
		50	2	00-7F	VARIATION PARAMETER 8 MSB	”	”
				00-7F	VARIATION PARAMETER 8 LSB	”	”
		52	2	00-7F	VARIATION PARAMETER 9 MSB	”	”
				00-7F	VARIATION PARAMETER 9 LSB	”	”
		54	2	00-7F	VARIATION PARAMETER 10 MSB	”	”
				00-7F	VARIATION PARAMETER 10 LSB	”	”
		56	1	00-7F	VARIATION RETURN	-∞ dB...0dB...+6dB(0...64...127)	40
		57	1	01-7F	VARIATION PAN	L63...C...R63(1...64...127)	40
		58	1	00-7F	SEND VARIATION TO REVERB	-∞ dB...0dB...+6dB(0...64...127)	00
		59	1	00-7F	SEND VARIATION TO CHORUS	-∞ dB...0dB...+6dB(0...64...127)	00
		5A	1	00-01	VARIATION CONNECTION	0:INSERTION, 1:SYSTEM	00
		5B	1	00-0F,7F	VARIATION PART	Part1...16(0...15) 0FF (127)	7F
		5C	1	00-7F	MW VARIATION CONTROL DEPTH	-64 - +63	40
		5D	1	00-7F	BEND VARIATION CONTROL DEPTH	-64 - +63	40
		5E	1	00-7F	CAT VARIATION CONTROL DEPTH	-64 - +63	40
		5F	1	00-7F	AC1 VARIATION CONTROL DEPTH	-64 - +63	40
		60	1	00-7F	AC2 VARIATION CONTROL DEPTH	-64 - +63	40
TOTAL SIZE			21				
02	01	70	1	00-7F	VARIATION PARAMETER 11	see Effect Parameter List	Depends on variation type
		71	1	00-7F	VARIATION PARAMETER 12	”	”
		72	1	00-7F	VARIATION PARAMETER 13	”	”
		73	1	00-7F	VARIATION PARAMETER 14	”	”
		74	1	00-7F	VARIATION PARAMETER 15	”	”
		75	1	00-7F	VARIATION PARAMETER 16	”	”
TOTAL SIZE			6				

<Table 1-4>

MIDI Parameter Change table (MULTI PART) [XG]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
08	nn	00	1	00 - 20	ELEMENT RESERVE	0 - 32	part10=0, other =2
	nn	01	1	00 - 7F	BANK SELECT MSB	0 - 127	part10=7F, other=0
	nn	02	1	00 - 7F	BANK SELECT LSB	0 - 127	00
	nn	03	1	00 - 7F	PROGRAM NUMBER	1 - 128	00
	nn	04	1	00 - 0F, 7F	Rcv CHANNEL	1 - 16,OFF	part no.
	nn	05	1	00 - 01	MONO/POLY MODE	0:MONO 1:POLY	01
	nn	06	1	00 - 02	SAME NOTE NUMBER KEY ON ASSIGN	0:SINGLE 1:MULTI 2:INST (for DRUM)	1 (all part) part10=2, other=0
	nn	07	1	00 - 03	PART MODE	0:NORMAL 1:DRUM 2-3:DRUMS1 - 2	00 (other than Part10) 02 (Part10)
	nn	08	1	28 - 58	NOTE SHIFT	-24 - +24 [semitones]	40
	nn	09	2	00 - FF	DETUNE	-12.8 - +12.7 [Hz]	08 00
	nn	0A				1st bit3-0→bit7-4 2nd bit3-0→bit3-0	(80)
	nn	0B	1	00 - 7F	VOLUME	0 - 127	64
	nn	0C	1	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40
	nn	0D	1	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40
	nn	0E	1	00 - 7F	PAN	0/random, 1/L63-64/C-127/R63	40
	nn	0F	1	00 - 7F	NOTE LIMIT LOW	C-2 - G8	00
	nn	10	1	00 - 7F	NOTE LIMIT HIGH	C-2 - G8	7F
	nn	11	1	00 - 7F	DRY LEVEL	0 - 127	7F
	nn	12	1	00 - 7F	CHORUS SEND	0 - 127	00
	nn	13	1	00 - 7F	REVERB SEND	0 - 127	40
	nn	14	1	00 - 7F	VARIATION SEND	0 - 127	00
	nn	15	1	00 - 7F	VIBRATO RATE	-64 - +63	40
	nn	16	1	00 - 7F	VIBRATO DEPTH	-64 - +63	40 (drum part ignores)
	nn	17	1	00 - 7F	VIBRATO DELAY	-64 - +63	40 (drum part ignores)
	nn	18	1	00 - 7F	FILTER CUTOFF FREQUENCY	-64 - +63	40
	nn	19	1	00 - 7F	FILTER RESONANCE	-64 - +63	40
	nn	1A	1	00 - 7F	EG ATTACK TIME	-64 - +63	40
	nn	1B	1	00 - 7F	EG DECAY TIME	-64 - +63	40
	nn	1C	1	00 - 7F	EG RELEASE TIME	-61 - +63	40
	nn	1D	1	28 - 58	MW PITCH CONTROL	-24 -+24 [semitones]	40
	nn	1E	1	00 - 7F	MW FILTER CONTROL	-9600 - +9450 [cent]	40
	nn	1F	1	00 - 7F	MW AMPLITUDE CONTROL	-64 - +63	40
	nn	20	1	00 - 7F	MW LFO PMOD DEPTH	0 - 127	0A
	nn	21	1	00 - 7F	MW LFO FMOD DEPTH	0 - 127	00
	nn	22	1	00 - 7F	MW LFO AMOD DEPTH	0 - 127	00
	nn	23	1	28 - 58	BEND PITCH CONTROL	-24 - +24 [semitones]	42
	nn	24	1	00 - 7F	BEND FILTER CONTROL	-9600 - +9450 [cent]	40
	nn	25	1	00 - 7F	BEND AMPLITUDE CONTROL	-64 - +63	40
	nn	26	1	00 - 7F	BEND LFO PMOD DEPTH	+100 - +100 [%]	40
	nn	27	1	00 - 7F	BEND LFO FMOD DEPTH	+100 - +100 [%]	40
	nn	28	1	00 - 7F	BEND LFO AMOD DEPTH	+100 - +100 [%]	40
TOTAL SIZE			29				
	nn	30	1	00 - 01	Rcv PITCH BEND	0/OFF, 1/ON	01
	nn	31	1	00 - 01	Rcv CH AFTER TOUCH (CAT)	0/OFF, 1/ON	01
	nn	32	1	00 - 01	Rcv PROGRAM CHANGE	0/OFF, 1/ON	01
	nn	33	1	00 - 01	Rcv CONTROL CHANGE	0/OFF, 1/ON	01
	nn	34	1	00 - 01	Rcv POLY AFTER TOUCH (PAT)	0/OFF, 1/ON	01
	nn	35	1	00 - 01	Rcv NOTE MESSAGE	0/OFF, 1/ON	01
	nn	36	1	00 - 01	Rcv RPN	0/OFF, 1/ON	01
	nn	37	1	00 - 01	Rcv NRPN	0/OFF, 1/ON	XG=01, GM=00
	nn	38	1	00 - 01	Rcv MODULATION	0/OFF, 1/ON	01
	nn	39	1	00 - 01	Rcv VOLUME	0/OFF, 1/ON	01
	nn	3A	1	00 - 01	Rcv PAN	0/OFF, 1/ON	01
	nn	3B	1	00 - 01	Rcv EXPRESSION	0/OFF, 1/ON	01
	nn	3C	1	00 - 01	Rcv HOLD1	0/OFF, 1/ON	01
	nn	3D	1	00 - 01	Rcv PORTAMENTO	0/OFF, 1/ON	01
	nn	3E	1	00 - 01	Rcv SOSTENUTO	0/OFF, 1/ON	01
	nn	3F	1	00 - 01	Rcv SOFT PEDAL	0/OFF, 1/ON	01
	nn	40	1	00 - 01	Rcv BANK SELECT	0/OFF,1/ON	XG=01, GM=00
	nn	41	1	00 - 7F	SCALE TUNING C	-64 - +63 [cent]	40

nn	42	1	00 - 7F	SCALE TUNING C#	-64 - +63 [cent]	40
nn	43	1	00 - 7F	SCALE TUNING D	-64 - +63 [cent]	40
nn	44	1	00 - 7F	SCALE TUNING D#	-64 - +63 [cent]	40
nn	45	1	00 - 7F	SCALE TUNING E	-64 - +63 [cent]	40
nn	46	1	00 - 7F	SCALE TUNING F	-64 - +63 [cent]	40
nn	47	1	00 - 7F	SCALE TUNING F#	-64 - +63 [cent]	40
nn	48	1	00 - 7F	SCALE TUNING G	-64 - +63 [cent]	40
nn	49	1	00 - 7F	SCALE TUNING G#	-64 - +63 [cent]	40
nn	4A	1	00 - 7F	SCALE TUNING A	-64 - +63 [cent]	40
nn	4B	1	00 - 7F	SCALE TUNING A#	-64 - +63 [cent]	40
nn	4C	1	00 - 7F	SCALE TUNING B	-64 - +63 [cent]	40
nn	4D	1	28 - 58	CAT PITCH CONTROL	-24 - +24 [semitones]	40
nn	4E	1	00 - 7F	CAT FILTER CONTROL	-9600 - +9450 [cent]	40
nn	4F	1	00 - 7F	CAT AMPLITUDE CONTROL	-64 - +63	40
nn	50	1	00 - 7F	CAT LFO PMOD DEPTH	0 - 127	00
nn	51	1	00 - 7F	CAT LFO FMOD DEPTH	0 - 127	00
nn	52	1	00 - 7F	CAT LFO AMOD DEPTH	0 - 127	00
nn	53	1	28 - 58	PAT PITCH CONTROL	-24 - +24 [semitones]	40
nn	54	1	00 - 7F	PAT FILTER CONTROL	-9600 - +9450 [cent]	40
nn	55	1	00 - 7F	PAT AMPLITUDE CONTROL	-64 - +63	40
nn	56	1	00 - 7F	PAT LFO PMOD DEPTH	0 - 127	00
nn	57	1	00 - 7F	PAT LFO FMOD DEPTH	0 - 127	00
nn	58	1	00 - 7F	PAT LFO AMOD DEPTH	0 - 127	00
nn	59	1	00 - 5F	AC1 CONTROLLER NUMBER	0 - 95	10
nn	5A	1	28 - 58	AC1 PITCH CONTROL	-24 - +24 [semitones]	40
nn	5B	1	00 - 7F	AC1 FILTER CONTROL	-9600 - +9450 [cent]	40
nn	5C	1	00 - 7F	AC1 AMPLITUDE CONTROL	-64 - +63	40
nn	5D	1	00 - 7F	AC1 LFO PMOD DEPTH	0 - 127	00
nn	5E	1	00 - 7F	AC1 LFO FMOD DEPTH	0 - 127	00
nn	5F	1	00 - 7F	AC1 LFO AMOD DEPTH	0 - 127	00
nn	60	1	00 - 5F	AC2 CONTROLLER NUMBER	0 - 95	11
nn	61	1	28 - 58	AC2 PITCH CONTROL	-24 - +24 [semitones]	40
nn	62	1	00 - 7F	AC2 FILTER CONTROL	-9600 - +9450 [cent]	40
nn	63	1	00 - 7F	AC2 AMPLITUDE CONTROL	-64 - +63	40
nn	64	1	00 - 7F	AC2 LFO PMOD DEPTH	0 - 127	00
nn	65	1	00 - 7F	AC2 LFO FMOD DEPTH	0 - 127	00
nn	66	1	00 - 7F	AC2 LFO AMOD DEPTH	0 - 127	00
nn	67	1	00 - 01	PORTAMENTO SWITCH	0/OFF, 1/ON	00
nn	68	1	00 - 7F	PORTAMENTO TIME	0 - 127	00
nn	69	1	00 - 7F	PITCH EG INITIAL LEVEL	-64 -+63	40
nn	6A	1	00 - 7F	PITCH EG ATTACK TIME	-64 - +63	40
nn	6B	1	00 - 7F	PITCH EG RELEASE LEVEL	-64 - +63	40
nn	6C	1	00 - 7F	PITCH EG RELEASE TIME	-64 - +63	40
nn	6D	1	01 - 7F	VELOCITY LIMIT LOW	1 - 127	01
nn	6E	1	01 - 7F	VELOCITY LIMIT HIGH	1 - 127	7F
TOTAL SIZE		3F				

nn = Part Number (0:1Part, 1:2Part, 2:3Part, ..., 15:16Part)
For the DRUM PART, the following parameters have no effect.

- SOFT PEDAL
- BANK SELECT LSB
- MONO/POLY
- SCALE TUNING
- PORTAMENTO
- PITCH EG INITIAL LEVEL
- PITCH EG ATTACK TIME
- PITCH EG RELEASE LEVEL
- PITCH EF RELEASE TIME
- POLY AFTER TOUCH

<Table 1-5>

MIDI Parameter Change table (DRUM SETUP) [XG]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default (H)
3n	rr	00	1	00 - 7F	PITCH COARSE	-64 - +63	40
3n	rr	01	1	00 - 7F	PITCH FINE	-64 - +63 [cent]	40
3n	rr	02	1	00 - 7F	LEVEL	0 - 127	Depends on the note
3n	rr	03	1	00 - 7F	ALTERNATE GROUP	0/OFF, 1 - 127	”
3n	rr	04	1	00 - 7F	PAN	0/random, 1/L63 - 64/C - 127/R63	”
3n	rr	05	1	00 - 7F	REVERB SEND	0 - 127	”
3n	rr	06	1	00 - 7F	CHORUS SEND	0 - 127	”
3n	rr	07	1	00 - 7F	VARIATION SEND	0 - 127	7F

3n	rr	08	1	00 - 01	KEY ASSIGN	0/SINGLE, 1/MULTI	00
3n	rr	09	1	00 - 01	Rcv NOTE OFF	0/OFF, 1/ON	Depends on the note
3n	rr	0A	1	00 - 01	Rcv NOTE ON	0/OFF, 1/ON	01
3n	rr	0B	1	00 - 7F	FILTER CUTOFF FREQUENCY	-64 - +63	40
3n	rr	0C	1	00 - 7F	FILTER RESONANCE	-64 - +63	40
3n	rr	0D	1	00 - 7F	EG ATTACK RATE	-64 - +63	40
3n	rr	0E	1	00 - 7F	EG DECAY1 RATE	-64 - +63	40
3n	rr	0F	1	00 - 7F	EG DECAY2 RATE	-64 - +63	40
TOTAL SIZE			10				

[Note]
n: Drum number (0 - 1)
rr: note number (0D - 5B)
When XG system on or GM mode on messages are received, all Drum Setup parameters are initialized.
The Drum Setup Reset message can be used to initialized each Drum Setup parameter.
Selecting a Drum Set will cause the Drum Setup parameter values to be initialized.

<Table 2-1>

Parameter Bass Address
Model ID = 4B [QS300]

Bulk Dump				
	Address			Description
	(H)	(M)	(L)	
USER NORMAL VOICE	11	00	00	User Normal Voice 1
				:
	00	1F	00	User Normal Voice 32

<Table 2-2>

MIDI Bulk Dump table (USER NORMAL VOICE) [QS300]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default (H)
						[Common]	
11	nn	00	17D	20-7E	Voice Name		
		:					
		07					
		08			not used		
		:			”		
		0A			”		
		0B		01-03	Element Switch	1:Element 1 on, 2:Element 2 on, 3:Element 1 and 2 on	
		0C		00-7F	Voice Level		
		0D			not used		
		:			”		
		3C			”		
						[Element 1]	
		3D		00-7F	Wave Number High	bit13-bit7	
		3E		00-7F	Wave Number Low	bit6-bit0	
		3F		00-7F	Note Limit Low		
		40		00-7F	Note Limit High		
		41		00-7F	Velocity Limit Low		
		42		00-7F	Velocity Limit High		
		43		00-01	Filter EG Velocity Curve		
		44		00-02	LFO Wave Select	0:saw, 1:tri, 2:S&H	
		45		00-01	LFO Phase Initialize	0:OFF, 1:ON	
		46		00-3F	LFO Speed		
		47		00-7F	LFO Delay		
		48		00-7F	LFO Fade Time		
		49		00-3F	LFO PMD Depth		
		4A		00-0F	LFO CMD Depth		
		4B		00-1F	LFO AMD Depth		
		4C		20-60	Note Shift		
		4D		0E -72	Detune		
		4E		00-05	Pitch Scaling	0:100%, 1:50%, 2:20%, 3:10%, 4:5%, 5:0%	
		4F		00-7F	Pitch Scaling Center Note		
		50		00-03	Pitch EG Depth	0:1/2oct, 1:1oct, 2:2oct, 3:4oct	
		51		39-47	Velocity PEG Level Sensitivity		
		52		39-47	Velocity PEG Rate Sensitivity		
		53		39-47	PEG Rate Scaling		
		54		00-7F	PEG Rate Scaling Center Note		
		55		00-3F	PEG Rate 1		
		56		00-3F	PEG Rate 2		
		57		00-3F	PEG Rate 3		

58	00-3F	PEG Rate 4	
59	00-7F	PEG Level 0	
5A	00-7F	PEG Level 1	
5B	00-7F	PEG Level 2	
5C	00-7F	PEG Level 3	
5D	00-7F	PEG Level 4	
5E	00-3F	Filter Resonance	
5F	00-07	Velocity Sensitivity	
60	00-7F	Cutoff Frequency	
61	00-7F	Cutoff Scaling Break Point 1	
62	00-7F	Cutoff Scaling Break Point 2	
63	00-7F	Cutoff Scaling Break Point 3	
64	00-7F	Cutoff Scaling Break Point 4	
65	00-7F	Cutoff Scaling Offset 1	
66	00-7F	Cutoff Scaling Offset 2	
67	00-7F	Cutoff Scaling Offset 3	
68	00-7F	Cutoff Scaling Offset 4	
69	39-47	Velocity FEG Level Sensitivity	
6A	39-47	Velocity FEG Rate Sensitivity	
6B	39-47	FEG Rate Scaling	
6C	00-7F	FEG Rate Scaling Center Note	
6D	00-3F	FEG Rate 1	
6E	00-3F	FEG Rate 2	
6F	00-3F	FEG Rate 3	
70	00-3F	FEG Rate 4	
71	00-7F	FEG Level 0	
72	00-7F	FEG Level 1	
73	00-7F	FEG Level 2	
74	00-7F	FEG Level 3	
75	00-7F	FEG Level 4	
76	00-7F	Element Level	
77	00-7F	Level Scaling Break Point 1	
78	00-7F	Level Scaling Break Point 2	
79	00-7F	Level Scaling Break Point 3	
7A	00-7F	Level Scaling Break Point 4	
7B	00-7F	Level Scaling Offset 1	
7C	00-7F	Level Scaling Offset 2	
7D	00-7F	Level Scaling Offset 3	
7E	00-7F	Level Scaling Offset 4	
7F	00-06	Velocity Curve	
80	00-0F	Pan	0 (Left)-14 (Right), 15:Scaling
81	39-47	AEG Rate Scaling	
82	00-7F	AEG Scaling Center Note	
83	00-0F	AEG Key on Delay	
84	00-7F	AEG Attack Rate	
85	00-7F	AEG Decay 1 Rate	
86	00-7F	AEG Decay 2 Rate	
87	00-7F	AEG Release Rate	
88	00-7F	AEG Decay 1 Level	
89	00-7F	AEG Decay 2 Level	
8A	00-7F	Address Offset High	bit13-bit7
8B	00-7F	Address Offset Low	bit6-bit0
8C	39-47	Resonance Sensitivity	
			[Element 2]
8D			same as [Element 1]
:			”
DC			”
			[Element 3]
DD			not used
:			”
12C			”
12D			[Element 4]
:			not used
17C			”
TOTAL SIZE	17D		”

nn=Voice Number (00-1F)

XG Normal Voice List

Bank Select MSB = 000, LSB = Bank Number

Voice names in bold typeface are voices that can be selected in the Disklavier.
The Disklavier can produce all the voices listed below, but can only display bank 0 voices.

Instrument Group	Program #	Bank #	Voice Name	Element
Piano	1	0	**GrandPno**	1
		1	GrndPnoK	1
		18	MelloGrP	1
		40	PianoStr	2
		41	Dream	2
	2	0	**BritePno**	1
		1	BritPnoK	1
	3	0	**E.Grand**	2
		1	ElGrPnoK	2
		32	Det.CP80	2
		40	ElGrPno1	2
		41	ElGrPno2	2
	4	0	**HnkyTonk**	2
		1	HnkyTnkK	2
	5	0	**E.Piano1**	2
		1	El.Pno1K	1
		18	MelloEP1	2
		32	Chor.EP1	2
		40	HardEl.P	2
		45	VX El.P1	2
		64	60sEl.P	1
	6	0	**E.Piano2**	2
		1	El.Pno2K	1
		32	Chor.EP2	2
		33	DX Hard	2
		34	DXLegend	2
		40	DX Phase	2
		41	DX+Analg	2
		42	DXKotoEP	2
		45	VX El.P2	2
	7	0	**Harpsi.**	1
		1	Harpsi.K	1
		25	Harpsi.2	2
		35	Harpsi.3	2
	8	0	**Clavi.**	2
		1	Clavi. K	1
		27	ClaviWah	2
		64	PulseClv	1
		65	PierceCl	2
Chromatic Percussion	9	0	**Celesta**	1
	10	0	**Glocken**	1
	11	0	**MusicBox**	2
		64	Orgel	2
	12	0	**Vibes**	1
		1	VibesK	1
		45	HardVibe	2
	13	0	**Marimba**	1
		1	MarimbaK	1
		64	SineMrmb	2
		97	Balafon2	2
		98	Log Drum	2
	14	0	**Xylophon**	1
	15	0	**TubulBel**	1
		96	ChrchBel	2
		97	Carillon	2
	16	0	**Dulcimer**	1
		35	Dulcimr2	2
		96	Cimbalom	2
		97	Santur	2

Instrument Group	Program #	Bank #	Voice Name	Element
Organ	17	0	**DrawOrgn**	1
		32	DetDrwOr	2
		33	60sDrOr1	2
		34	60sDrOr2	2
		35	70sDrOr1	2
		36	DrawOrg2	2
		37	60sDrOr3	2
		38	EvenBar	2
		40	16+2"2/3	2
		64	Organ Ba	1
		65	70sDrOr2	2
		66	CheezOrg	2
		67	DrawOrg3	2
	18	0	**PercOrgn**	1
		24	70sPcOr1	2
		32	DetPrcOr	2
		33	LiteOrg	2
		37	PercOrg2	2
	19	0	**RockOrgn**	2
		64	RotaryOr	2
		65	SloRotar	2
		66	FstRotar	2
	20	0	**ChrchOrg**	2
		32	ChurOrg3	2
		35	ChurOrg2	2
		40	NotreDam	2
		64	OrgFlute	2
		65	TrmOrgFl	2
	21	0	**ReedOrgn**	1
		40	Puff Org	2
	22	0	**Acordion**	2
		32	AccordIt	2
	23	0	**Harmnica**	1
		32	Harmo 2	2
	24	0	**TangoAcd**	2
		64	TngoAcd2	2
Guitar	25	0	**NylonGtr**	1
		16	NylonGt2	1
		25	NylonGt3	2
		43	VelGtHrm	2
		96	Ukulele	1
	26	0	**SteelGtr**	1
		16	SteelGt2	1
		35	12StrGtr	2
		40	Nyln&Stl	2
		41	Stl&Body	2
		96	Mandolin	2
	27	0	**Jazz Gtr**	1
		18	MelloGtr	1
		32	JazzAmp	2
	28	0	**CleanGtr**	1
		32	ChorusGt	2
	29	0	**Mute.Gtr**	1
		40	FunkGtr1	2
		41	MuteStlG	2
		43	FunkGtr2	2
		45	Jazz Man	1
	30	0	**Ovrdrive**	1
		43	Gt.Pinch	2
	31	0	**Dist.Gtr**	1
		40	FeedbkGt	2
		41	FeedbGt2	2
	32	0	**GtrHarmo**	1
		65	GtFeedbk	1
		66	GtrHrmo2	1

Instrument Group	Program #	Bank #	Voice Name	Element
Bass	33	0	**Aco.Bass**	1
		40	JazzRthm	2
		45	VXUprght	2
	34	0	**FngrBass**	1
		18	FingrDrk	2
		27	FlangeBa	2
		40	Ba&DstEG	2
		43	FngrSlap	2
		45	FngBass2	2
		65	ModAlem	2
	35	0	**PickBass**	1
		28	MutePkBa	1
	36	0	**Fretless**	1
		32	Fretles2	2
		33	Fretles3	2
		34	Fretles4	2
		96	SynFretl	2
		97	Smooth	2
	37	0	**SlapBas1**	1
		27	ResoSlap	1
		32	PunchThm	2
	38	0	**SlapBas2**	1
		43	VeloSlap	2
	39	0	**SynBass1**	1
		18	SynBa1Dk	1
		20	FastResB	1
		24	AcidBass	1
		35	Clv Bass	2
		40	TeknoBa	2
		64	Oscar	2
		65	SqrBass	1
		66	RubberBa	2
		96	Hammer	2
	40	0	**SynBass2**	2
		6	MelloSB1	1
		12	Seq Bass	2
		18	ClkSynBa	2
		19	SynBa2Dk	1
		32	SmthBa 2	2
		40	ModulrBa	2
		41	DX Bass	2
		64	X WireBa	2
Strings	41	0	**Violin**	1
		8	SlowVln	1
	42	0	**Viola**	1
	43	0	**Cello**	1
	44	0	**Contrabs**	1
	45	0	**Trem.Str**	1
		8	SlowTrStr	1
		40	Susp Str	2
	46	0	**Pizz.Str**	1
	47	0	**Harp**	1
		40	YangChin	2
	48	0	**Timpani**	1

Instrument Group	Program #	Bank #	Voice Name	Element
Ensemble	49	0	**Strings1**	1
		3	S.Strngs	2
		8	SlowStr	1
		24	ArcoStr	2
		35	60sStrng	2
		40	Orchestr	2
		41	Orchstr2	2
		42	TremOrch	2
		45	VeloStr	2
	50	0	**Strings2**	1
		3	S.SlwStr	2
		8	LegatoSt	2
		40	Warm Str	2
		41	Kingdom	2
		64	70s Str	1
		65	Str Ens3	1
	51	0	**Syn.Str1**	2
		27	ResoStr	2
		64	Syn Str4	2
		65	SS Str	2
	52	0	**Syn.Str2**	2
	53	0	ChoirAah	1
		3	S.Choir	2
		16	Ch.Aahs2	2
		32	MelChoir	2
		40	ChoirStr	2
	54	0	**VoiceOoh**	1
	55	0	**SynVoice**	1
		40	SynVox2	2
		41	Choral	2
		64	AnaVoice	1
	56	0	**Orch.Hit**	2
		35	OrchHit2	2
		64	Impact	2
Brass	57	0	**Trumpet**	1
		16	Trumpet2	1
		17	BriteTrp	2
		32	WarmTrp	2
	58	0	**Trombone**	1
		18	Trmbone2	2
	59	0	**Tuba**	1
		16	Tuba 2	1
	60	0	**Mute.Trp**	1
	61	0	**Fr.Horn**	2
		6	FrHrSolo	2
		32	FrHorn2	1
		37	HornOrch	2
	62	0	**BrasSect**	1
		35	Tp&TbSec	2
		40	BrssSec2	2
		41	HiBrass	2
		42	MelloBrs	2
	63	0	**SynBras1**	2
		12	QuackBr	2
		20	RezSynBr	2
		24	PolyBrss	2
		27	SynBras3	2
		32	JumpBrss	2
		45	AnaVelBr	2
		64	AnaBrss1	2
	64	0	**SynBras2**	1
		18	Soft Brs	2
		40	SynBras4	2
		41	ChorBrss	2
		45	VelBras2	2
		64	AnaBras2	2

Bank 0 : (GM)
Bank 1 : Key Scale Planning
Bank 3 : Stereo
Bank 6 : Single
Bank 8 : Slow
Bank 12 : Fast Decay
Bank 14 : Double Attack
Bank 16 : Bright
Bank 17 : Bright
Bank 18 : Dark
Bank 19 : Dark
Bank 20 : Resonant
Bank 24 : Attack
Bank 24 : Release
Bank 27 : Reso Sweep
Bank 28 : Muted
Bank 32 : Detune 1
Bank 33 : Detune 2
Bank 34 : Detune 3
Bank 35 : Octave 1
Bank 36 : Octave 2
Bank 37 : 5th 1
Bank 38 : 5th 2
Bank 39 : Bend
Bank 40 : Tutti
Bank 41 : Tutti
Bank 42 : Tutti
Bank 43 : Velo-Switch
Bank 45 : Velo-Xfade
Bank 64 : Other wave
Bank 65 : Other wave
Bank 66 : Other wave
Bank 67 : Other wave
Bank 68 : Other wave
Bank 69 : Other wave
Bank 70 : Other wave
Bank 71 : Other wave
Bank 72 : Other wave
Bank 96 : Other wave
Bank 97 : Other wave
Bank 98 : Other wave
Bank 99 : Other wave
Bank 100 : Other wave
Bank 101 : Other wave

Bank Select
MSB = 064, LSB = 000
SFX Voice

Instrument Group	Program #	Bank #	Voice Name	Element
Reed	65	0	**SprnoSax**	1
	66	0	**Alto Sax**	1
		40	Sax Sect	2
		43	HyprAlto	2
	67	0	**TenorSax**	1
		40	BrthTnSx	2
		41	SoftTenr	2
		64	TnrSax 2	1
	68	0	**Bari.Sax**	1
	69	0	**Oboe**	2
	70	0	**Eng.Horn**	1
	71	0	**Bassoon**	1
	72	0	**Clarinet**	1
Pipe	73	0	**Piccolo**	1
	74	0	**Flute**	1
	75	0	**Recorder**	1
	76	0	**PanFlute**	1
	77	0	**Bottle**	2
	78	0	**Shakhchi**	2
	79	0	**Whistle**	1
	80	0	**Ocarina**	1
Synth Lead	81	0	**SquareLd**	2
		6	Square 2	1
		8	LMSquare	2
		18	Hollow	1
		19	Shmoog	2
		64	Mellow	2
		65	SoloSine	2
		66	SineLead	1
	82	0	**Saw.Lead**	2
		6	Saw 2	1
		8	ThickSaw	2
		18	DynaSaw	1
		19	DigiSaw	2
		20	Big Lead	2
		24	HeavySyn	2
		25	WaspySyn	2
		40	PulseSaw	2
		41	Dr. Lead	2
		45	VeloLead	2
		96	Seq Ana	2
	83	0	**CaliopLd**	2
		65	Pure Pad	2
	84	0	**Chiff Ld**	2
		64	Rubby	2
	85	0	**CharanLd**	2
		64	DistLead	2
		65	WireLead	2
	86	0	**Voice Ld**	2
		24	SynthAah	2
		64	VoxLead	2
	87	0	**Fifth Ld**	2
		35	Big Five	2
	88	0	**Bass &Ld**	2
		16	Big&Low	2
		64	Fat&Prky	2
		65	SoftWurl	2
Synth Pad	89	0	**NewAgePd**	2
		64	Fantasy2	2
	90	0	**Warm Pad**	2
		16	ThickPad	2
		17	Soft Pad	2
		18	SinePad	2
		64	Horn Pad	2
		65	RotarStr	2
	91	0	**PolySyPd**	2
		64	PolyPd80	2
		65	ClickPad	2
		66	Ana Pad	2
		67	SquarPad	2

Instrument Group	Program #	Bank #	Voice Name	Element
Synth Pad	92	0	**ChoirPad**	2
		64	Heaven2	2
		66	Itopia	2
		67	CC Pad	2
	93	0	**BowedPad**	2
		64	Glacier	2
		65	GlassPad	2
	94	0	**MetalPad**	2
		64	Tine Pad	2
		65	Pan Pad	2
	95	0	**Halo Pad**	2
	96	0	**SweepPad**	2
		20	Shwimmer	2
		27	Converge	2
		64	PolarPad	2
		66	Celstial	2
Synth Effects	97	0	**Rain**	2
		45	ClaviPad	2
		64	HrmoRain	2
		65	AfrcnWnd	2
		66	Caribean	2
	98	0	**SoundTrk**	2
		27	Prologue	2
		64	Ancestrl	2
	99	0	**Crystal**	2
		12	SynDrCmp	2
		14	Popcorn	2
		18	TinyBell	2
		35	RndGlock	2
		40	GlockChi	2
		41	ClearBel	2
		42	ChorBell	2
		64	SynMalet	1
		65	SftCryst	2
		66	LoudGlok	2
		67	XmasBell	2
		68	VibeBell	2
		69	DigiBell	2
		70	AirBells	2
		71	BellHarp	2
		72	Gamelmba	2
	100	0	**Atmosphr**	2
		18	WarmAtms	2
		19	HollwRls	2
		40	NylonEP	2
		64	NylnHarp	2
		65	Harp Vox	2
		66	AtmosPad	2
		67	Planet	2
	101	0	**Bright**	2
		64	FantaBel	2
		96	Smokey	2
	102	0	**Goblins**	2
		64	GobSyn	2
		65	50sSciFi	2
		66	Ring Pad	2
		67	Ritual	2
		68	ToHeaven	2
		70	Night	2
		71	Glisten	2
		96	BelChoir	2
	103	0	**Echoes**	2
		8	EchoPad2	2
		14	Echo Pan	2
		64	EchoBell	2
		65	Big Pan	2
		66	SynPiano	2
		67	Creation	2
		68	Stardust	2
		69	Reso Pan	2
	104	0	**Sci-Fi**	2
		64	Starz	2

Instrument Group	Program #	Bank #	Voice Name	Element
Ethnic	105	0	**Sitar**	1
		32	DetSitar	2
		35	Sitar 2	2
		96	Tambra	2
		97	Tamboura	2
	106	0	**Banjo**	1
		28	MuteBnjo	1
		96	Rabab	2
		97	Gopichnt	2
		98	Oud	2
	107	0	**Shamisen**	1
	108	0	**Koto**	1
		96	T. Koto	2
		97	Kanoon	2
	109	0	**Kalimba**	1
	110	0	**Bagpipe**	2
	111	0	**Fiddle**	1
	112	0	**Shanai**	1
		64	Shanai2	1
		96	Pungi	1
		97	Hichriki	2
Percussive	113	0	**TnklBell**	2
		96	Bonang	2
		97	Gender	2
		98	Gamelan	2
		99	S.Gamlan	2
		100	Rama Cym	2
		101	AsianBel	2
	114	0	**Agogo**	2
	115	0	**SteelDrm**	2
		97	GlasPerc	2
		98	ThaiBell	2
	116	0	**WoodBlok**	1
		96	Castanet	1
	117	0	**TaikoDrm**	1
		96	Gr.Cassa	1
	118	0	**MelodTom**	2
		64	Mel Tom2	1
		65	Real Tom	2
		66	Rock Tom	2
	119	0	**Syn.Drum**	1
		64	Ana Tom	1
		65	ElecPerc	2
	120	0	**RevCymbl**	1
Sound Effects	121	0	**FretNoiz**	2
	122	0	**BrthNoiz**	2
	123	0	**Seashore**	2
	124	0	**Tweet**	2
	125	0	**Telphone**	1
	126	0	**Helicptr**	1
	127	0	**Applause**	1
	128	0	**Gunshot**	1

Program #	MSB=064 LSB=000	Element
1	CuttngNz	1
2	CttngNz2	2
3		
4	Str Slap	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17	Fl.KClik	1
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33	Rain	1
34	Thunder	1
35	Wind	1
36	Stream	2
37	Bubble	2
38	Feed	2
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49	Dog	1
50	Horse	1
51	Bird 2	1
52		
53		
54		
55	Ghost	2
56	Maou	2
57		
58		
59		
60		
61		
62		
63		
64		

Program #	MSB=064 LSB=000	Element
65	Tel.Dial	1
66	DoorSqek	1
67	Door Slam	1
68	Scratch	1
69	Scratch 2	2
70	WindChm	1
71	Telphon2	1
72		
73		
74		
75		
76		
77		
78		
79		
80		
81	CarEngin	1
82	Car Stop	1
83	Car Pass	1
84	CarCrash	1
85	Siren	2
86	Train	1
87	Jetplane	2
88	Starship	2
89	Burst	2
90	Coaster	2
91	SbMarine	2
92		
93		
94		
95		
96		
97	Laughing	1
98	Scream	1
99	Punch	1
100	Heart	1
101	FootStep	1
102		
103		
104		
105		
106		
107		
108		
109		
110		
111		
112		
113	MchinGun	1
114	LaserGun	2
115	Xplosion	2
116	FireWork	2
117		
118		
119		
120		
121		
122		
123		
124		
125		
126		
127		
128		

: No Sound

TG300B Normal Voice List

Bank Select MSB = Bank Number, LSB = ooo

Instrument Group	Program #	Bank #	Voice Name	Element
Piano	1	0	GrandPno	1
		8	GrndPnoK	1
		16	MelloGrP	1
		126	A-Piano1	2
		127	a.piano1	1
	2	0	BritePno	1
		8	BritPnoK	1
		126	A-Piano2	2
		127	a.piano2	1
	3	0	E.Grand	2
		1	ElGrPno1	2
		2	ElGrPno2	2
		8	ElGrPnoK	2
		126	A-Piano3	2
		127	a.piano3	1
	4	0	HnkyTonk	2
		8	HnkyTnkK	2
		126	A-Piano4	2
		127	e.piano1	1
	5	0	E.Piano1	2
		8	Chor.EP1	2
		16	VX El.P1	2
		24	60sEl.P	1
		25	HardEl.P	2
		26	MelloEP1	2
		32	El.Pno1K	1
		126	A-Piano5	1
		127	e.piano2	1
	6	0	E.Piano2	2
		8	Chor.EP2	2
		16	VX El.P2	2
		24	DX Hard	2
		32	El.Pno2K	1
		126	A-Piano6	1
		127	e.piano3	1
	7	0	Harpsi.	1
		8	Harpsi.3	2
		16	Harpsi.K	1
		24	Harpsi.2	2
		126	A-Piano7	1
		127	e.piano4	1
	8	0	Clavi.	2
		8	Clavi. K	1
		126	E-Piano1	2
		127	hnkytnk	2
Chromatic Percussion	9	0	Celesta	1
		126	E-Piano2	2
		127	e.organ1	2
	10	0	Glocken	1
		126	E-Piano3	2
		127	e.organ2	2
	11	0	MusicBox	2
		126	A-Guitr1	1
		127	e.organ3	1
	12	0	Vibes	1
		1	HardVibe	2
		8	VibesK	1
		126	A-Guitr2	2
		127	e.organ4	1
	13	0	Marimba	1
		8	MarimbaK	1
		17	Balafon2	2
		24	Log Drum	2
		126	A-Guitr3	2
		127	pipeorg1	2
	14	0	Xylophon	1
		126	E-Guitr1	2
		127	pipeorg2	2
	15	0	TubulBel	1
		8	ChrchBel	2
		9	Carillon	2
		126	E-Guitr2	1
		127	pipeorg3	2
	16	0	Dulcimer	1
		1	Dulcimr2	2
		8	Cimbalom	2
		126	Slap-1	2
		127	acordion	2

Instrument Group	Program #	Bank #	Voice Name	Element
Organ	17	0	DrawOrgn	1
		1	70sDrOr1	2
		8	DetDrwOr	2
		9	70sDrOr2	2
		16	60sDrOr1	2
		17	60sDrOr2	2
		18	60sDrOr3	2
		24	CheezOrg	2
		32	DrawOrg2	2
		33	EvenBar	2
		40	Organ Ba	1
		126	Slap-2	2
		127	harpsi1	1
	18	0	PercOrgn	1
		1	70sPcOr1	2
		8	DetPrcOr	2
		32	PercOrg2	2
		126	Slap-3	2
		127	harpsi2	2
	19	0	RockOrgn	2
		8	RotaryOr	2
		16	SloRotar	2
		24	FstRotar	2
		126	Slap-4	2
		127	harpsi3	1
	20	0	ChrchOrg	2
		8	ChurOrg2	2
		16	ChurOrg3	2
		24	OrgFlute	2
		32	TrmOrgFl	2
		126	Slap-5	2
		127	clavi1	1
	21	0	ReedOrgn	1
		126	Slap-6	2
		127	clavi2	1
	22	0	Acordion	2
		8	AccordIt	2
		126	Slap-7	2
		127	clavi3	1
	23	0	Harmnica	1
		1	Harmo 2	2
		126	Slap-8	2
		127	celesta1	1
	24	0	TangoAcd	2
		126	Finger-1	1
		127	celesta2	1
Guitar	25	0	NylonGtr	1
		8	Ukulele	1
		16	NylonGt3	2
		24	VelGtHrm	2
		32	NylonGt2	1
		40	LequintG	1
		126	Finger-2	2
		127	synbras1	2
	26	0	SteelGtr	1
		8	12StrGtr	2
		9	Nyln&Stl	2
		16	Mandolin	2
		32	SteelGt2	1
		126	Picked-1	1
		127	synbras2	2
	27	0	Jazz Gtr	1
		1	MelloGtr	1
		8	PdlSteel	1
		126	Picked-2	2
		127	synbras3	2
	28	0	CleanGtr	1
		8	ChorusGt	2
		126	FretlsBs	1
		127	synbras4	2

Instrument Group	Program #	Bank #	Voice Name	Element
Guitar	29	0	Mute.Gtr	1
		8	FunkGtr1	2
		16	FunkGtr2	2
		126	A-Bass	2
		127	synbass1	1
	30	0	Ovrdrive	1
		126	Choir-1	1
		127	synbass2	1
	31	0	Dist.Gtr	1
		8	FeedbkGt	2
		9	FeedbGt2	2
		126	Choir-2	1
		127	synbass3	2
	32	0	GtrHarmo	1
		8	GtFeedbk	1
		126	Choir-3	2
		127	synbass4	1
Bass	33	0	Aco.Bass	1
		126	Choir-4	2
		127	newagepd	2
	34	0	FngrBass	1
		1	FngBass2	2
		126	Strngs-1	2
		127	synharmo	2
	35	0	PickBass	1
		8	MutePkBa	1
		126	Strngs-2	2
		127	choir pd	2
	36	0	Fretless	1
		1	Fretles2	2
		2	Fretles3	2
		3	Fretles4	2
		4	SynFretl	2
		5	Smooth	2
		126	Strngs-3	2
		127	bowed pd	2
	37	0	SlapBas1	1
		8	ResoSlap	1
		126	Strngs-4	2
		127	soundtrk	2
	38	0	SlapBas2	1
		126	E-Organ1	2
		127	atmosphr	2
	39	0	SynBass1	1
		1	SynBa1Dk	1
		8	AcidBass	1
		9	FastResB	1
		10	TeknoBa	2
		16	ResoBass	1
		126	E-Organ2	2
		127	syn warm	2
	40	0	SynBass2	2
		1	ClkSynBa	2
		2	ModulrBa	2
		3	Seq Bass	2
		8	DX Bass	2
		9	X WireBa	2
		16	RubberBa	2
		17	SynBa2Dk	1
		18	MelloSB1	1
		19	SmthBa 2	2
		126	E-Organ3	2
		127	synfunny	1

Instrument Group	Program #	Bank #	Voice Name	Element
Strings	41	0	Violin	1
		8	SlowVln	1
		126	E-Organ4	2
		127	synecho1	2
	42	0	Viola	1
		126	E-Organ5	2
		127	rain	2
	43	0	Cello	1
		126	E-Organ6	2
		127	synoboe	2
	44	0	Contrabs	1
		126	E-Organ7	2
		127	synecho2	2
	45	0	Trem.Str	1
		8	SlowTrStr	1
		9	Susp Str	2
		126	E-Organ8	2
		127	synsolo	2
	46	0	Pizz.Str	1
		126	E-Organ9	2
		127	synrdorg	2
	47	0	Harp	1
		126	SoftTP-1	1
		127	synbell	1
	48	0	Timpani	1
		126	SoftTP-2	1
		127	squareld	2
Ensemble	49	0	Strings1	1
		1	Slow Str	1
		8	Orchestr	2
		9	Orchstr2	2
		10	TremOrch	2
		11	ChoirStr	2
		16	S.Strngs	2
		24	VeloStr	2
		126	TP/TRB-1	1
		127	strsect1	2
	50	0	Strings2	1
		1	70s Str	1
		8	LegatoSt	2
		9	Warm Str	2
		10	S.SlwStr	2
		126	TP/TRB-2	1
		127	strsect2	2
	51	0	Syn.Str1	2
		1	Syn Str4	2
		126	TP/TRB-3	1
		127	strsect3	2
	52	0	Syn.Str2	2
		126	TP/TRB-4	1
		127	pizz.str	1
	53	0	ChoirAah	1
		8	S.Choir	2
		9	MelChoir	2
		32	Ch.Aahs2	2
		126	TP/TRB-5	2
		127	violin 1	2
	54	0	VoiceOoh	1
		126	TP/TRB-6	2
		127	violin 2	1
	55	0	SynVoice	1
		8	SynVox2	2
		126	Sax-1	1
		127	cello 1	1
	56	0	Orch.Hit	2
		1	OrchHit2	2
		8	Impact	2
		16	LoFiRave	2
		126	Sax-2	1
		127	cello 2	1

Instrument Group	Program #	Bank #	Voice Name	Element
Brass	57	0	Trumpet	1
		1	Trumpet2	1
		24	BriteTrp	2
		25	WarmTrp	2
		126	Sax-3	1
		127	contrabs	1
	58	0	Trombone	1
		1	Trmbone2	2
		126	Sax-4	2
		127	harp 1	1
	59	0	Tuba	1
		1	Tuba 2	1
		126	Brass-1	1
		127	harp 2	1
	60	0	Mute.Trp	1
		126	Brass-2	1
		127	guitar 1	1
	61	0	Fr.Horn	2
		1	FrHorn2	2
		8	FrHrSolo	1
		16	HornOrch	2
		126	Brass-3	2
		127	guitar 2	1
	62	0	BrasSect	1
		8	BrssSec2	2
		126	Brass-4	2
		127	elecgtr1	2
	63	0	SynBras1	2
		1	PolyBrss	2
		8	SynBras3	2
		9	QuackBr	2
		16	AnaBrss1	2
		126	Brass-5	2
		127	elecgtr2	2
	64	0	SynBras2	1
		1	Soft Brs	2
		8	SynBras4	2
		16	AnaBrss2	2
		17	VelBras2	2
		126	Orch-Hit	1
		127	sitar	1
Reed	65	0	SprnoSax	1
		127	a.bass 1	1
	66	0	Alto Sax	1
		8	HyprAlto	2
		127	a.bass 2	1
	67	0	TnrSax 2	1
		8	BrthTnSx	2
		127	e.bass 1	1
	68	0	Bari.Sax	1
		127	e.bass 2	1
	69	0	Oboe	2
		127	slapbas1	1
	70	0	Eng.Horn	1
		127	slapbas2	1
	71	0	Bassoon	1
		127	fretles1	1
	72	0	Clarinet	1
		127	fretles2	1
Pipe	73	0	Piccolo	1
		127	flute1	1
	74	0	Flute	1
		127	flute2	1
	75	0	Recorder	1
		127	piccolo1	1
	76	0	PanFlute	1
		127	piccolo2	2
	77	0	Bottle	2
		127	recorder	1
	78	0	Shakhchi	2
		127	panpipes	2
	79	0	Whistle	1
		127	sax1	2
	80	0	Ocarina	1
		127	sax2	1

Instrument Group	Program #	Bank #	Voice Name	Element
Synth Lead	81	0	SquareLd	2
		1	Square 2	1
		2	Hollow	1
		3	Mellow	2
		4	SoloSine	2
		5	Shmoog	2
		6	LMSquare	2
		8	SineLead	1
		127	sax3	1
	82	0	Saw.Lead	2
		1	Saw 2	1
		2	PulseSaw	2
		3	ThickSaw	2
		4	Big Lead	2
		5	VeloLead	2
		6	HeavySyn	2
		7	DynaSaw	1
		8	Dr. Lead	2
		16	WaspySyn	2
		127	sax4	1
	83	0	CaliopLd	2
		2	Pure Pad	2
		127	clarint1	1
	84	0	Chiff Ld	2
		127	clarint2	1
	85	0	CharanLd	2
		8	DistLead	2
		127	oboe	1
	86	0	Voice Ld	2
		127	eng.horn	1
	87	0	Fifth Ld	2
		1	Big Five	2
		127	bassoon	1
	88	0	Bass &Ld	2
		1	Big&Low	2
		2	Fat&Prky	2
		127	harmnica	1
Synth Pad	89	0	NewAgePd	2
		1	Fantasy2	2
		127	trumpet1	1
	90	0	Warm Pad	2
		1	ThickPad	2
		2	Horn Pad	2
		3	RotarStr	2
		4	Soft Pad	2
		127	trumpet2	1
	91	0	PolySyPd	2
		1	PolyPd80	2
		127	trmbone1	2
	92	0	ChoirPad	2
		1	Heaven2	2
		127	trmbone2	2
	93	0	BowedPad	2
		127	fr.horn1	1
	94	0	MetalPad	2
		1	Tine Pad	2
		2	Pan Pad	2
		127	fr.horn2	2
	95	0	Halo Pad	2
		127	tuba	2
	96	0	SweepPad	2
		1	PolarPad	2
		8	Converge	2
		9	Shwimmer	2
		10	Celstial	2
		127	brssect1	1

Instrument Group	Program #	Bank #	Voice Name	Element
Synth Effects	97	0	Rain	2
		1	HrmoRain	2
		2	AfrcnWnd	2
		8	ClaviPad	2
		127	brssect2	2
	98	0	SoundTrk	2
		1	Ancestrl	2
		2	Prologue	2
		127	vibe1	1
	99	0	Crystal	2
		1	SynMalet	1
		2	SftCryst	2
		3	RndGlock	2
		4	LoudGlok	2
		5	GlockChi	2
		6	ClearBel	2
		7	XmasBell	2
		8	VibeBell	2
		9	DigiBell	2
		16	ChorBell	2
		17	AirBells	2
		18	BellHarp	2
		19	Gamelmba	2
		127	vibe2	1
	100	0	Atmosphr	2
		1	WarmAtms	2
		2	NylnHarp	2
		3	Harp Vox	2
		4	HollwRls	2
		5	NylonEP	2
		6	AtmosPad	2
		127	symallet	1
	101	0	Bright	2
		127	maletwin	2
	102	0	Goblins	2
		1	GobSyn	2
		2	50sSciFi	2
		127	glocken	2
	103	0	Echoes	2
		1	EchoBell	2
		2	Echo Pan	2
		3	EchoPad2	2
		4	Big Pan	2
		6	SynPiano	2
		127	tubulbel	1
	104	0	Sci-Fi	2
		1	Starz	2
		127	xylophon	1
Ethnic	105	0	Sitar	1
		1	Sitar 2	2
		2	DetSitar	2
		8	Tambra	2
		16	Tamboura	2
		127	marimba	2
	106	0	Banjo	1
		1	MuteBnjo	1
		8	Rabab	2
		16	Gopichnt	2
		24	Oud	2
		127	koto	1
	107	0	Shamisen	1
		127	sho	2
	108	0	Koto	1
		8	T. Koto	2
		16	Kanoon	2
		127	shakhchi	2
	109	0	Kalimba	1
		127	whistle1	2
	110	0	Bagpipe	2
		127	whistle2	1
	111	0	Fiddle	1
		127	bottle	2
	112	0	Shanai	1
		1	Shanai2	1
		8	Pungi	1
		16	Hichriki	2
		127	breath	2

Instrument Group	Program #	Bank #	Voice Name	Element
Percussive	113	0	TnklBell	2
		8	Bonang	2
		9	Gender	2
		10	Gamelan	2
		11	S.Gamlan	2
		16	Rama Cym	2
		127	timpani	1
	114	0	Agogo	2
		127	melotom	1
	115	0	SteelDrm	2
		127	deepsnar	1
	116	0	WoodBlok	1
		8	Castanet	1
		127	e.perc1	1
	117	0	TaikoDrm	1
		8	Gr.Cassa	1
		127	e.perc2	1
	118	0	MelodTom	2
		1	Real Tom	2
		8	Mel Tom2	1
		9	Rock Tom	2
		127	taiko	1
	119	0	Syn.Drum	1
		8	Ana Tom	1
		9	ElecPerc	2
		127	taikorim	1
	120	0	RevCymbl	1
		127	cymbal	2
Sound Effects	121	0	FretNoiz	2
		1	CuttngNz	1
		2	Str Slap	1
		3	CttngNz2	2
		127	castanet	1
	122	0	BrthNoiz	2
		1	Fl.KClik	1
		127	triangle	1
	123	0	Seashore	2
		1	Rain	1
		2	Thunder	1
		3	Wind	1
		4	Stream	2
		5	Bubble	2
		127	orchehit	1
	124	0	Tweet	2
		1	Dog	1
		2	Horse	1
		3	Bird 2	1
		127	telphone	1
	125	0	Telphone	1
		1	Tel.Dial	1
		2	DoorSqek	1
		3	DoorSlam	1
		4	Scratch	1
		5	WindChm	1
		6	Scratch2	2
		127	bird	1
	126	0	Helicptr	1
		1	CarEngin	1
		2	Car Stop	1
		3	Car Pass	1
		4	CarCrash	1
		5	Siren	2
		6	Train	1
		7	Jetplane	2
		8	Starship	2
		9	Burst	2
		16	Coaster	2
		127	jam	1
	127	0	Applause	1
		1	Laughing	1
		2	Scream	1
		3	Punch	1
		4	Heart	1
		5	FootStep	1
		127	efctwatr	2
	128	0	Gunshot	1
		1	MchinGun	1
		2	LaserGun	2
		3	Xplosion	2
		127	efctjngl	2

XG Drum Voice List

Bank Select MSB = Bank Number, LSB = 000

Drum kit names in bold typeface are those that can be selected in the Disklavier.

Bank				127	127	127	127	127	127	127	127	127	126	126
Program #				1	2	9	17	25	26	33	41	49	1	2
Note#	Note	Key off	Alternate assign	**Standard Kit**	**Standard2 Kit**	**Room Kit**	**Rock Kit**	**Electro Kit**	**Analog Kit**	**Jazz Kit**	**Brush Kit**	**Classic Kit**	SFX 1	SFX 2
13	C# -1		3	Surdo Mute										
14	D -1		3	Surdo Open										
15	D# -1			Hi Q										
16	E -1			Whip Slap										
17	F -1		4	Scratch Push										
18	F# -1		4	Scratch Pull										
19	G -1			Finger Snap										
20	G# -1			Click Noise										
21	A -1			Metronome Click										
22	A# -1			Metronome Bell										
23	B -1			Seq Click L										
24	C 0			Seq Click H										
25	C# 0			Brush Tap										
26	D 0	O		Brush Swirl L										
27	D# 0			Brush Slap										
28	E 0	O		Brush Swirl H				Reverse Cymbal	Reverse Cymbal					
29	F 0	O		Snare Roll	Snare Roll 2									
30	F# 0			Castanet				Hi Q	Hi Q					
31	G 0			Snare L	Snare L 2		SD Rock M	Snare M	SD Rock H		Brush Slap L			
32	G# 0			Sticks										
33	A 0			Bass Drum L			Bass Drum M	Bass Drum H 4	Bass Drum M			Bass Drum L2		
34	A# 0			Open Rim Shot	Open Rim Shot 2									
35	B 0			Bass Drum M	Bass Drum M 2		Bass Drum H 3	BD Rock	BD Analog L			Gran Cassa		
36	C 1			Bass Drum H	Bass Drum H 2		BD Rock	BD Gate	BD Analog H	BD Jazz	BD Soft	Gran Cassa Mute	Guitar Cutting Noise	Dial Tone
37	C# 1			Side Stick					Analog Side Stick				Guitar Cutting Noise 2	Door Creaking
38	D 1			Snare M	Snare M 2	SD Room L	SD Rock	SD Rock L	Analog Snare L		Brush Slap M	Marching Sn M		Door Slam
39	D# 1			Hand Clap									String Slap	Scratch
40	E 1			Snare H	Snare H 2	SD Room H	SD Rock Rim	SD Rock H	Analog Snare H		Brush Tap H	Marching Sn H		Scratch 2
41	F 1			Floor Tom L		Room Tom 1	Rock Tom 1	E Tom 1	Analog Tom 1	Jazz Tom 1	Brush Tom 1	Jazz Tom 1		Windchime
42	F# 1		1	Hi-Hat Closed					Analog HH Closed 1					Telephone Ring2
43	G 1			Floor Tom H		Room Tom 2	Rock Tom 2	E Tom 2	Analog Tom 2	Jazz Tom 2	Brush Tom 2	Jazz Tom 2		
44	G# 1		1	Hi-Hat Pedal					Analog HH Closed 2					
45	A 1			Low Tom		Room Tom 3	Rock Tom 3	E Tom 3	Analog Tom 3	Jazz Tom 3	Brush Tom 3	Jazz Tom 3		
46	A# 1		1	Hi-Hat Open					Analog HH Open					
47	B 1			Mid Tom L		Room Tom 4	Rock Tom 4	E Tom 4	Analog Tom 4	Jazz Tom 4	Brush Tom 4	Jazz Tom 4		
48	C 2			Mid Tom H		Room Tom 5	Rock Tom 5	E Tom 5	Analog Tom 5	Jazz Tom 5	Brush Tom 5	Jazz Tom 5		
49	C# 2			Crash Cymbal 1					Analog Cymbal			Hand Cym.Open L		
50	D 2			High Tom		Room Tom 6	Rock Tom 6	E Tom 6	Analog Tom 6	Jazz Tom 6	Brush Tom 6	Jazz Tom 6		
51	D# 2			Ride Cymbal 1								Hand Cym.Closed L		
52	E 2			Chinese Cymbal									FL.Key Click	Engine Start
53	F 2			Ride Cymbal Cup										Tire Screech
54	F# 2			Tambourine										Car Passing
55	G 2			Splash Cymbal										Crash
56	G# 2			Cowbell					Analog Cowbell					Siren
57	A 2			Crash Cymbal 2								Hand Cym.Open H		Train
58	A# 2			Vibraslap										Jetplane
59	B 2			Ride Cymbal 2								Hand Cym.Closed H		Starship
60	C 3			Bongo H										Burst Noise
61	C# 3			Bongo L										Coaster
62	D 3			Conga H Mute					Analog Conga H					SbMarine
63	D# 3			Conga H Open					Analog Conga M					
64	E 3			Conga L					Analog Conga L					
65	F 3			Timbale H										
66	F# 3			Timbale L										
67	G 3			Agogo H										
68	G# 3			Agogo L									Rain	Laughing
69	A 3			Cabasa									Thunder	Screaming
70	A# 3			Maracas					Analog Maracas				Wind	Punch
71	B 3	O		Samba Whistle H									Stream	Heartbeat
72	C 4	O		Samba Whistle L									Bubble	Footsteps
73	C# 4			Guiro Short									Feed	
74	D 4	O		Guiro Long										
75	D# 4			Claves					Analog Claves					
76	E 4			Wood Block H										
77	F 4			Wood Block L										
78	F# 4			Cuica Mute				Scratch Push	Scratch Push					
79	G 4			Cuica Open				Scratch Pull	Scratch Pull					
80	G# 4		2	Triangle Mute										
81	A 4		2	Triangle Open										
82	A# 4			Shaker										
83	B 4			Jingle Bell										
84	C 5			Bell Tree									Dog	Machine Gun
85	C# 5												Horse Gallop	Laser Gun
86	D 5												Bird 2	Explosion
87	D# 5													FireWork
88	E 5													
89	F 5													
90	F# 5												Ghost	
91	G 5												Maou	

: Same as Standard kit

: No sound

TG300B Drum Voice List

Program #			1	9	17	25	26	33	41	49	57	128
Note#	Note	Alternate assign	Standard Kit	Room Kit	Power Kit	Electro Kit	Analog Kit	Jazz Kit	Brush Kit	Orchestra Kit	SFX Set	C/M Kit
25	C# 0		Snare Roll									
26	D 0		Finger Snap									
27	D# 0		Hi Q							Hi-Hat Closed		
28	E 0		Whip Slap							Hi-Hat Pedal		
29	F 0	7	Scratch Push							Hi-Hat Open		
30	F# 0	7	Scratch Pull							Ride Cymbal 1		
31	G 0		Sticks									
32	G# 0		Click Noise									
33	A 0		Metronome Click									
34	A# 0		Metronome Bell									
35	B 0		Bass Drum M							BD Jazz		
36	C 1		Bass Drum H		BD Power	BD Electronic	BD Analog H	BD Jazz	BD Soft	Gran Cassa		
37	C# 1		Side Stick				Analog Side Stick					
38	D 1		Snare M		SD Power	SD Electronic	Analog Snare L		Brush Tap	Concert SD		
39	D# 1		Hand Clap						Brush Slap	Castanet	High-Q	
40	E 1		Snare H			SD Power			Brush Swirl	Concert SD	Slap	SD Electro
41	F 1		Floor Tom L	Room Tom 1	Room Tom 1	E Tom 1	Analog Tom 1	Jazz Tom 1	Jazz Tom 1	Timpani F	Scratch Push	
42	F# 1	1	Hi-Hat Closed				Analog HH Closed 1			Timpani F#	Scratch Pull	
43	G 1		Floor Tom H	Room Tom 2	Room Tom 2	E Tom 2	Analog Tom 2	Jazz Tom 2	Jazz Tom 2	Timpani G	Sticks	
44	G# 1	1	Hi-Hat Pedal				Analog HH Closed 2			Timpani G#	Square Click	Hi-Hat Open 1
45	A 1		Low Tom	Room Tom 3	Room Tom 3	E Tom 3	Analog Tom 3	Jazz Tom 3	Jazz Tom 3	Timpani A	Metronome Click	
46	A# 1	1	Hi-Hat Open				Analog HH Open			Timpani A#	Metronome Bell	Hi-Hat Open 2
47	B 1		Mid Tom L	Room Tom 4	Room Tom 4	E Tom 4	Analog Tom 4	Jazz Tom 4	Jazz Tom 4	Timpani B	Guitar Fret Noise	
48	C 2		Mid Tom H	Room Tom 5	Room Tom 5	E Tom 5	Analog Tom 5	Jazz Tom 5	Jazz Tom 5	Timpani C	Guitar Cutting Down	
49	C# 2		Crash Cymbal 1				Analog Cymbal			Timpani C#	Guitar Cutting Up	
50	D 2		High Tom	Room Tom 6	Room Tom 6	E Tom 6	Analog Tom 6	Jazz Tom 6	Jazz Tom 6	Timpani D	Ac Bass Slap	
51	D# 2		Ride Cymbal 1							Timpani D#	FL.Key Click	
52	E 2		Chinese Cymbal			Reverse Cymbal				Timpani E	Laughing	
53	F 2		Ride Cymbal Cup							Timpani F	Screaming	
54	F# 2		Tambourine								Punch	
55	G 2		Splash Cymbal								Heartbeat	
56	G# 2		Cowbell				Analog Cowbell				Footsteps 1	
57	A 2		Crash Cymbal 2							Hand Cym.1	Footsteps 2	
58	A# 2		Vibraslap								Applause	
59	B 2		Ride Cymbal 2							Hand Cym.2	Door Creaking	
60	C 3		Bongo H								Door Slam	
61	C# 3		Bongo L								Scratch	
62	D 3		Conga H Mute				Analog Conga H				Windchime	
63	D# 3		Conga H Open				Analog Conga M				Engine Start	
64	E 3		Conga L				Analog Conga L				Tire Screech	
65	F 3		Timbale H								Car Passing	
66	F# 3		Timbale L								Crash	
67	G 3		Agogo H								Siren	
68	G# 3		Agogo L								Train	
69	A 3		Cabasa								Jetplane	
70	A# 3		Maracas				Analog Maracas				Helicopter	
71	B 3	2	Samba Whistle H								Starship	
72	C 4	2	Samba Whistle L								Gunshot	
73	C# 4	3	Guiro Short								Machine Gun	Vibraslap
74	D 4	3	Guiro Long								Laser Gun	
75	D# 4		Claves				Analog Claves				Explosion	
76	E 4		Wood Block H								Dog	Laughing
77	F 4		Wood Block L								Horse Gallop	Screaming
78	F# 4	4	Cuica Mute								Bird Tweet	Punch
79	G 4	4	Cuica Open								Rain	Heartbeat
80	G# 4	5	Triangle Mute								Thunder	Footsteps 1
81	A 4	5	Triangle Open								Wind	Footsteps 2
82	A# 4		Shaker								Seashore	Applause
83	B 4		Jingle Bell								Stream	Door Creaking
84	C 5		Bell Tree								Bubble	Door Slam
85	C# 5		Castanet									Scratch
86	D 5	6	Surdo Mute									Windchime
87	D# 5	6	Surdo Open									Engine Start
88	E 5									Applause		Tire Screech
89	F 5											Car Passing
90	F# 5											Crash
91	G 5											Siren
92	G# 5											Train
93	A 5											Jetplain
94	A# 5											Helicopter
95	B 5											Starship
96	C 6											Gunshot
97	C# 6											Machine Gun
98	D 6											Laser Gun
99	D# 6											Explosion
100	E 6											Dog
101	F 6											Horse Gallop
102	F# 6											Bird Tweet
103	G 6											Rain
104	G# 6											Thunder
105	A 6											Wind
106	A# 6											Seashore
107	B 6											Stream
108	C 7											Bubble

: Same as Standard kit

: No sound

Effect Type List

Exclusive		Effect Type	Description
MSB	LSB		
REVERB			
00	00	NO EFFECT	Effect turned off.
01	00	HALL1	Reverb simulating the resonance of a hall.
01	01	HALL2	Reverb simulating the resonance of a hall.
02	00	ROOM1	Reverb simulating the resonance of a room.
02	01	ROOM2	Reverb simulating the resonance of a room.
02	02	ROOM3	Reverb simulating the resonance of a room.
03	00	STAGE1	Reverb appropriate for a solo instrument.
03	01	STAGE2	Reverb appropriate for a solo instrument.
04	00	PLATE	Reverb simulating a metal plate reverb unit.
10	00	WHITE ROOM	A unique short reverb with a bit of initial delay.
11	00	TUNNEL	Simulation of a tunnel space expanding to left and right.
13	00	BASEMENT	A bit of initial delay followed by reverb with a unique resonance.
CHORUS			
00	00	NO EFFECT	Effect turned off.
41	00	CHORUS1	Conventional chorus program that adds natural spaciousness.
41	01	CHORUS2	Conventional chorus program that adds natural spaciousness.
41	02	CHORUS3	Conventional chorus program that adds natural spaciousness.
41	08	CHORUS4	Chorus with stereo input. The pan setting specified for the Part will also apply to the effect sound.
42	00	CELESTE1	A 3-phase LFO adds modulation and spaciousness to the sound.
42	01	CELESTE2	A 3-phase LFO adds modulation and spaciousness to the sound.
42	02	CELESTE3	A 3-phase LFO adds modulation and spaciousness to the sound.
42	08	CELESTE4	Celeste with stereo input. The pan setting specified for the Part will also apply to the effect sound.
43	00	FLANGER1	Adds a jet-airplane effect to the sound.
43	01	FLANGER2	Adds a jet-airplane effect to the sound.
43	08	FLANGER3	Adds a jet-airplane effect to the sound.
VARIATION			
00	00	NO EFFECT	Effect turned off.
01	00	HALL1	Reverb simulating the resonance of a hall.
01	01	HALL2	Reverb simulating the resonance of a hall.
02	00	ROOM1	Reverb simulating the resonance of a room.
02	01	ROOM2	Reverb simulating the resonance of a room.
02	02	ROOM3	Reverb simulating the resonance of a room.
03	00	STAGE1	Reverb appropriate for a solo instrument.
03	01	STAGE2	Reverb appropriate for a solo instrument.
04	00	PLATE	Reverb simulating a metal plate reverb unit.
05	00	DELAY L, C, R	A program that creates three delay sounds; L, R, and C (center).
06	00	DELAY L, R	A program that creates two delay sounds; L and R. Two feedback delays are provided.
07	00	ECHO	Two delays (L and R) and independent feedback delays for L and R.
08	00	CROSS DELAY	A program that crosses the feedback of two delays.
09	00	EARLY REF1	An effect that produces only the early reflection component of reverb.
09	01	EARLY REF2	An effect that produces only the early reflection component of reverb.
0A	00	GATE REVERB	A simulation of gated reverb.
0B	00	REVERSE GATE	A program that simulates gated reverb played backwards.
14	00	KARAOKE 1	A delay with feedback of the same types as used for karaoke reverb.
14	01	KARAOKE 2	A delay with feedback of the same types as used for karaoke reverb.
14	02	KARAOKE 3	A delay with feedback of the same types as used for karaoke reverb.
41	00	CHORUS1	Conventional chorus program that add natural spaciousness.
41	01	CHORUS2	Conventional chorus program that adds natural spaciousness.
41	02	CHORUS3	Conventional chorus program that adds natural spaciousness.
41	08	CHORUS4	Chorus with stereo input.
42	00	CELESTE1	A 3-phase LFO adds modulation and spaciousness to the sound.
42	01	CELESTE2	A 3-phase LFO adds modulation and spaciousness to the sound.
42	02	CELESTE3	A 3-phase LFO adds modulation and spaciousness to the sound.
42	08	CELESTE4	Celeste with stereo input.
43	00	FLANGER1	Adds a jet-airplane effect to the sound.
43	01	FLANGER2	Adds a jet-airplane effect to the sound.
43	08	FLANGER3	Adds a jet-airplane effect to the sound.
44	00	SYMPHONIC	A multi-phase version of CELESTE.
45	00	ROTARY SPEAKER	A simulation of a rotary speaker. You can use AC1 (assignable controller) etc. to control the speed of rotation.
46	00	TREMOLO	An effect that cyclically modulates the volume.
47	00	AUTO PAN	A program that cyclically moves that sound image to left and right, front and back.
48	00	PHASER1	Cyclically changes the phase to add modulation to the sound.
48	08	PHASER2	Phaser with stereo input.
49	00	DISTORTION	Adds a sharp-edged distortion to the sound.
4A	00	OVER DRIVE	Adds mild distortion to the sound.
4B	00	AMP SIMULATOR	A simulation of a guitar amp.
4C	00	3BAND EQ (MONO)	A mono EQ with adjustable LOW, MID, and HIGH equalizing.
4D	00	2BAND EQ (STEREO)	A stereo EQ with adjustable LOW and HIGH. Ideal for drum Parts.
4E	00	AUTO WAH (LFO)	Cyclically modulates the center frequency of a wah filter. With an AC1 etc. this can function as a pedal wah.
40	00	THRU	Bypass without applying any effect.

* MSB, LSB is represented in hexadecimal.
* LCB=0 is the basic effect type.

Effect Parameter List

No	Parameter	Range	Value	See Table	Control
HALL1, HALL2, ROOM 1, 2, 3, STAGE 1, 2, PLATE					
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0~63	0-63	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6					
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11	Rev Delay	0~63	0-63	table#5	
12	Density	0~3	0-3		
13	Er/Rev Balance	E63>R ~ E=R ~ E>R63	1-127		
14					
15	Feedback Level	-63~+63	1-127		
16					
WHITE ROOM, TUNNEL, BASEMENT					
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0~63	0-63	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6	Width	0.5~10.2m	0-37	table#11	
7	Height	0.5~20.2m	0-73	table#11	
8	Depth	0.5~30.2m	0-104	table#11	
9	Wall Vary	0~30	0-30		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11	Rev Delay	0~63	0-63	table#5	
12	Density	0~3	0-3		
13	Er/Rev Balance	E63>R~E=R~E>R63	1-127		
14					
15	Feedback Level	-63~+63	1-127		
16					
DELAY L, C, R					
1	Lch Delay	0.1~715.0ms	1-7150		
2	Rch Delay	0.1~715.0ms	1-7150		
3	Cch Delay	0.1~715.0ms	1-7150		
4	Feedback Delay	0.1~715.0ms	1-7150		
5	Feedback Level	-63~+63	1-127		
6	Cch Level	0~127	0-127		
7	High Damp	0.1~1.0	1-10		
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		
DELAY L, R					
1	Lch Delay	0.1~715.0ms	1-7150		
2	Rch Delay	0.1~715.0ms	1-7150		
3	Feedback Delay1	0.1~715.0ms	1-7150		
4	Feedback Delay2	0.1~715.0ms	1-7150		
5	Feedback Level	-63~+63	1-127		
6	High Damp	0.1~1.0	1-10		
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		

No	Parameter	Range	Value	See Table	Control
ECHO					
1	Lch Delay1	0.1~355.0ms	1-3350		
2	Lch Feedback Level	-63~+63	1-127		
3	Rch Delay1	0.1~355.0ms	1-3550		
4	Rch Feedback Level	-63~+63	1-127		
5	High Damp	0.1~1.0	1-10		
6	Lch Delay2	0.1~355.0ms	1-3550		
7	Rch Delay2	0.1~355.0ms	1-3550		
8	Delay2 Level	0~127	0-127		
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		
CROSS DELAY					
1	L->R Delay	0.1~355.0ms	1-3550		
2	R->L Delay	0.1~355.0ms	1-3550		
3	Feedback Level	-63~+63	1-127		
4	Input Select	L, R, L&R	0-2		
5	High Damp	0.1~1.0	1-10		
6					
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		
EARLY REF1, EARLY REF2					
1	Type	S-H, L-H, Rdm, Rvs, Plt, Spr	0-5		
2	Room Size	0.1~7.0	0-44	table#6	
3	Diffusion	0~10	0-10		
4	Initial Delay	0~63	0-63	table#5	
5	Feedback Level	-63~+63	1-127		
6	HPF Cutoff	Thru~8.0kHz	0-52		
7	LPF Cutoff	1.0k~Thru	34-60		
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11	Liveness	0~10	0-10		
12	Density	0~3	0-3		
13	High Damp	0.1~1.0	1-10		
14					
15					
16					
GATE REVERB, REVERSE GATE					
1	Type	TypeA, TypeB	0-1		
2	Room Size	0.1~7.0	0-44	table#6	
3	Diffusion	0~10	0-10		
4	Initial Delay	0~63	0-63	table#5	
5	Feedback Level	-63~+63	1-127		
6	HPF Cutoff	Thru~8.0kHz	0-52		
7	LPF Cutoff	1.0k~Thru	34-60		
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11	Liveness	0~10	0-10		
12	Density	0~3	0-3		
13	High Damp	0.1~1.0	1-10		
14					
15					
16					

• : Can be controlled by AC1 (Assignable Controller 1)
No.* : These numbers correspond to the Parameter Suffix numbers in <Table 1-3>
See Table** : Refer to “Effect Data Assign Table”

No	Parameter	Range	Value	See Table	Control
KARAOKE 1, 2, 3					
1	Delay Time	0~127	0-127	table#7	
2	Feedback Level	-63~+63	1-127		
3	HPF Cutoff	Thru~8.0kHz	0-52		
4	LPF Cutoff	1.0k~Thru	34-60		
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13					
14					
15					
16					
CHORUS 1, 2, 3, 4, CELESTE 1, 2, 3, 4					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO PM Depth	0~127	0-127		
3	Feedback Level	-63~+63	1-127		
4	Delay Offset	0~127	0-127	table#2	
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13					
14					
15	Input Mode	mono/stereo	0-1		
16					
FLANGER 1, 2, 3					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO Depth	0~127	0-127		
3	Feedback Level	-63~+63	1-127		
4	Delay Offset	0~63	0-63	table#2	
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13					
14	LFO Phase Difference	-180~+180deg	4-124		
15					
16					
SYMPHONIC					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO Depth	0~127	0-127		
3	Delay Offset	0~127	0-127	table#2	
4					
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11					
12					
13					
14					
15					
16					

No	Parameter	Range	Value	See Table	Control
ROTARY SPEAKER					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	•
2	LFO Depth	0~127	0-127		
3					
4					
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		
11					
12					
13					
14					
15					
16					
TREMOLO					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	•
2	AM Depth	0~127	0-127		
3	PM Depth	0~127	0-127		
4					
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10					
11					
12					
13					
14		-180~+180deg	4-124		
15	Input Mode	mono/stereo	0-1		
16					
AUTO PAN					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	•
2	L/R Depth	0~127	0-127		
3	F/R Depth	0~127	0-127		
4	PAN Direction	L<->R, L->R, L<-R, Lturn, Rturn, L/R	0-5		
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10					
11					
12					
13					
14					
15					
16					
PHASER1, PHASER2					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO Depth	0~127	0-127		
3	Phase Shift	0~127	0-127		
4	Feedback Level	-63~+63	1-127		
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		•
11	Stage	3~10	3-10		
12	Diffusion	Mono/Stereo	0-1		
13	LFO Phase Di	-180~+180deg	4-124		
14					
15					
16					

• : Can be controlled by AC1 (Assignable Controller 1)
No.* : These numbers correspond to the Parameter Suffix numbers in <Table 1-3>
See Table** : Refer to “Effect Data Assign Table”

No	Parameter	Range	Value	See Table	Control
DISTORTION, OVERDRIVE					
1	Drive	0~127	0-127		•
2	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
3	EQ Low Gain	-12~+12dB	52-76		
4	LPF Cutoff	1.0k~Thru	34-60	table#3	
5	Output Level	0~127	0-127		
6					
7	EQ Mid Frequency	500Hz~10.0kHz	28-54	table#3	
8	EQ Mid Gain	-12~+12dB	52-76		
9	EQ Mid Width	1.0~12.0	10-120		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		
11	Edge (Clip Curve)	0~127	0-127	mild ~sharp	
12					
13					
14					
15					
16					
GUITAR AMP SIMULATOR					
1	Drive	0~127	0-127		•
2	AMP Type	Off, Stack, Combo, Tube	0-3		
3	LPF Cutoff	1.0k~Thru	34-60	table#3	
4	Output Level	0~127	0-127		
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		
11	Edge (Clip Curve)	0~127	0-127	mild ~sharp	
12					
13					
14					
15					
16					
3-BAND EQ					
1	EQ Low Gain	-12~+12dB	52-76		
2	EQ Mid Frequency	500Hz~10.0kHz	28-54	table#3	
3	EQ Mid Gain	-12~+12dB	52-76		
4	EQ Mid Width	1.0~12.0	10-120		
5	EQ High Gain	-12~+12dB	52-76		
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
8					
9					
10					
11					
12					
13					
14					
15					
16					

No	Parameter	Range	Value	See Table	Control
2-BAND EQ					
1	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
2	EQ Low Gain	-12~+12dB	52-76		
3	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
4	EQ High Gain	-12~+12dB	52-76		
5					
6					
7					
8					
9					
10					
11	EQ Mid Frequency	100Hz~10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12~+12dB	52-76		
13	EQ Mid Width	1.0~12.0	10-120		
14					
15					
16					
AUTO WAH					
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO Depth	0~127	0-127		
3	Cutoff Frequency	0~127	0-127		•
4	Resonance	1.0~12.0	10-120		
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	-12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	-12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		
11					
12					
13					
14					
15					
16					

• : Can be controlled by AC1 (Assignable Controller 1)
No.* : These numbers correspond to the Parameter Suffix numbers in <Table 1-3>
See Table** : Refer to “Effect Data Assign Table”

Effect Data Assign Table

Table#1

LFO Frequency (Hz)

Data	Value	Data	Value	Data	Value
0	0.00	43	1.81	86	5.38
1	0.04	44	1.85	87	5.55
2	0.08	45	1.89	88	5.72
3	0.13	46	1.94	89	6.06
4	0.17	47	1.98	90	6.39
5	0.21	48	2.02	91	6.73
6	0.25	49	2.06	92	7.07
7	0.29	50	2.10	93	7.40
8	0.34	51	2.15	94	7.74
9	0.38	52	2.19	95	8.08
10	0.42	53	2.23	96	8.41
11	0.46	54	2.27	97	8.75
12	0.51	55	2.31	98	9.08
13	0.55	56	2.36	99	9.42
14	0.59	57	2.40	100	9.76
15	0.63	58	2.44	101	10.10
16	0.67	59	2.48	102	10.80
17	0.72	60	2.52	103	11.40
18	0.76	61	2.57	104	12.10
19	0.80	62	2.61	105	12.80
20	0.84	63	2.65	106	13.50
21	0.88	64	2.69	107	14.10
22	0.93	65	2.78	108	14.80
23	0.97	66	2.86	109	15.50
24	1.01	67	2.94	110	16.20
25	1.05	68	3.03	111	16.80
26	1.09	69	3.11	112	17.50
27	1.14	70	3.20	113	18.20
28	1.18	71	3.28	114	19.50
29	1.22	72	3.37	115	20.90
30	1.26	73	3.45	116	22.20
31	1.30	74	3.53	117	23.60
32	1.35	75	3.62	118	24.90
33	1.39	76	3.70	119	26.20
34	1.43	77	3.87	120	27.60
35	1.47	78	4.04	121	28.90
36	1.51	79	4.21	122	30.30
37	1.56	80	4.37	123	31.60
38	1.60	81	4.54	124	33.00
39	1.64	82	4.71	125	34.30
40	1.68	83	4.88	126	37.00
41	1.72	84	5.05	127	39.70
42	1.77	85	5.22		

Table#2

Modulation Delay Offset (ms)

Data	Value	Data	Value	Data	Value
0	0.0	43	4.3	86	8.6
1	0.1	44	4.4	87	8.7
2	0.2	45	4.5	88	8.8
3	0.3	46	4.6	89	8.9
4	0.4	47	4.7	90	9.0
5	0.5	48	4.8	91	9.1
6	0.6	49	4.9	92	9.2
7	0.7	50	5.0	93	9.3
8	0.8	51	5.1	94	9.4
9	0.9	52	5.2	95	9.5
10	1.0	53	5.3	96	9.6
11	1.1	54	5.4	97	9.7
12	1.2	55	5.5	98	9.8
13	1.3	56	5.6	99	9.9
14	1.4	57	5.7	100	10.0
15	1.5	58	5.8	101	11.1
16	1.6	59	5.9	102	12.2
17	1.7	60	6.0	103	13.3
18	1.8	61	6.1	104	14.4
19	1.9	62	6.2	105	15.5
20	2.0	63	6.3	106	17.1
21	2.1	64	6.4	107	18.6
22	2.2	65	6.5	108	20.2
23	2.3	66	6.6	109	21.8
24	2.4	67	6.7	110	23.3
25	2.5	68	6.8	111	24.9
26	2.6	69	6.9	112	26.5
27	2.7	70	7.0	113	28.0
28	2.8	71	7.1	114	29.6
29	2.9	72	7.2	115	31.2
30	3.0	73	7.3	116	32.8
31	3.1	74	7.4	117	34.3
32	3.2	75	7.5	118	35.9
33	3.3	76	7.6	119	37.5
34	3.4	77	7.7	120	39.0
35	3.5	78	7.8	121	40.6
36	3.6	79	7.9	122	42.2
37	3.7	80	8.0	123	43.7
38	3.8	81	8.1	124	45.3
39	3.9	82	8.2	125	46.9
40	4.0	83	8.3	126	48.4
41	4.1	84	8.4	127	50.0
42	4.2	85	8.5		

Table#3

EQ Frequency (Hz)

Data	Value	Data	Value
0	THRU(20)	43	2.8k
1	22	44	3.2k
2	25	45	3.6k
3	28	46	4.0k
4	32	47	4.5k
5	36	48	5.0k
6	40	49	5.6k
7	45	50	6.3k
8	50	51	7.0k
9	56	52	8.0k
10	63	53	9.0k
11	70	54	10.0k
12	80	55	11.0k
13	90	56	12.0k
14	100	57	14.0k
15	110	58	16.0k
16	125	59	18.0k
17	140	60	THRU(20.0k)
18	160		
19	180		
20	200		
21	225		
22	250		
23	280		
24	315		
25	355		
26	400		
27	450		
28	500		
29	560		
30	630		
31	700		
32	800		
33	900		
34	1.0k		
35	1.1k		
36	1.2k		
37	1.4k		
38	1.6k		
39	1.8k		
40	2.0k		
41	2.2k		
42	2.5k		

Table#4

Reverb Time (ms)

Data	Value	Data	Value
0	0.3	43	4.6
1	0.4	44	4.7
2	0.5	45	4.8
3	0.6	46	4.9
4	0.7	47	5.0
5	0.8	48	5.5
6	0.9	49	6.0
7	1.0	50	6.5
8	1.1	51	7.0
9	1.2	52	7.5
10	1.3	53	8.0
11	1.4	54	8.5
12	1.5	55	9.0
13	1.6	56	9.5
14	1.7	57	10.0
15	1.8	58	11.0
16	1.9	59	12.0
17	2.0	60	13.0
18	2.1	61	14.0
19	2.2	62	15.0
20	2.3	63	16.0
21	2.4	64	17.0
22	2.5	65	18.0
23	2.6	66	19.0
24	2.7	67	20.0
25	2.8	68	25.0
26	2.9	69	30.0
27	3.0		
28	3.1		
29	3.2		
30	3.3		
31	3.4		
32	3.5		
33	3.6		
34	3.7		
35	3.8		
36	3.9		
37	4.0		
38	4.1		
39	4.2		
40	4.3		
41	4.4		
42	4.5		

Table#5

Delay Time (ms)

Data	Value	Data	Value	Data	Value
0	0.1	43	67.8	86	135.5
1	1.7	44	69.4	87	137.0
2	3.2	45	70.9	88	138.6
3	4.8	46	72.5	89	140.2
4	6.4	47	74.1	90	141.8
5	8.0	48	75.7	91	143.3
6	9.5	49	77.2	92	144.9
7	11.1	50	78.8	93	146.5
8	12.7	51	80.4	94	148.1
9	14.3	52	81.9	95	149.6
10	15.8	53	83.5	96	151.2
11	17.4	54	85.1	97	152.8
12	19.0	55	86.7	98	154.4
13	20.6	56	88.2	99	155.9
14	22.1	57	89.8	100	157.5
15	23.7	58	91.4	101	159.1
16	25.3	59	93.0	102	160.6
17	26.9	60	94.5	103	162.2
18	28.4	61	96.1	104	163.8
19	30.0	62	97.7	105	165.4
20	31.6	63	99.3	106	166.9
21	33.2	64	100.8	107	168.5
22	34.7	65	102.4	108	170.1
23	36.3	66	104.0	109	171.7
24	37.9	67	105.6	110	173.2
25	39.5	68	107.1	111	174.8
26	41.0	69	108.7	112	176.4
27	42.6	70	110.3	113	178.0
28	44.2	71	111.9	114	179.5
29	45.7	72	113.4	115	181.1
30	47.3	73	115.0	116	182.7
31	48.9	74	116.6	117	184.3
32	50.5	75	118.2	118	185.8
33	52.0	76	119.7	119	187.4
34	53.6	77	121.3	120	189.0
35	55.2	78	122.9	121	190.6
36	56.8	79	124.4	122	192.1
37	58.3	80	126.0	123	193.7
38	59.9	81	127.6	124	195.3
39	61.5	82	129.2	125	196.9
40	63.1	83	130.7	126	198.4
41	64.6	84	132.3	127	200.0
42	66.2	85	133.9		

Table#6

Room Size (m)

Data	Value	Data	Value
0	0.1	43	6.8
1	0.3	44	7.0
2	0.4		
3	0.6		
4	0.7		
5	0.9		
6	1.0		
7	1.2		
8	1.4		
9	1.5		
10	1.7		
11	1.8		
12	2.0		
13	2.1		
14	2.3		
15	2.5		
16	2.6		
17	2.8		
18	2.9		
19	3.1		
20	3.2		
21	3.4		
22	3.5		
23	3.7		
24	3.9		
25	4.0		
26	4.2		
27	4.3		
28	4.5		
29	4.6		
30	4.8		
31	5.0		
32	5.1		
33	5.3		
34	5.4		
35	5.6		
36	5.7		
37	5.9		
38	6.1		
39	6.2		
40	6.4		
41	6.5		
42	6.7		

Table#7

Delay Time (ms)

Data	Value	Data	Value	Data	Value
0	0.1	43	135.5	86	270.9
1	3.2	44	138.6	87	274.0
2	6.4	45	141.8	88	277.2
3	9.5	46	144.9	89	280.3
4	12.7	47	148.1	90	283.5
5	15.8	48	151.2	91	286.6
6	19.0	49	154.4	92	289.8
7	22.1	50	157.5	93	292.9
8	25.3	51	160.7	94	296.1
9	28.4	52	163.8	95	299.2
10	31.6	53	167.0	96	302.4
11	34.7	54	170.1	97	305.5
12	37.9	55	173.3	98	308.7
13	41.0	56	176.4	99	311.8
14	44.2	57	179.6	100	315.0
15	47.3	58	182.7	101	318.1
16	50.5	59	185.9	102	321.3
17	53.6	60	189.0	103	324.4
18	56.8	61	192.2	104	327.6
19	59.9	62	195.3	105	330.7
20	63.1	63	198.5	106	333.9
21	66.2	64	201.6	107	337.0
22	69.4	65	204.8	108	340.2
23	72.5	66	207.9	109	343.3
24	75.7	67	211.1	110	346.5
25	78.8	68	214.2	111	349.6
26	82.0	69	217.4	112	352.8
27	85.1	70	220.5	113	355.9
28	88.3	71	223.7	114	359.1
29	91.4	72	226.8	115	362.2
30	94.6	73	230.0	116	365.4
31	97.7	74	233.1	117	368.5
32	100.9	75	236.3	118	371.7
33	104.0	76	239.4	119	374.8
34	107.2	77	242.6	120	378.0
35	110.3	78	245.7	121	381.1
36	113.5	79	248.9	122	384.3
37	116.6	80	252.0	123	387.4
38	119.8	81	255.2	124	390.6
39	122.9	82	258.3	125	393.7
40	126.1	83	261.5	126	396.9
41	129.2	84	264.6	127	400.0
42	132.4	85	267.7		

Table#8

Reverb Width; Depth; Height

Data	Value	Data	Value	Data	Value
0	0.5	43	11.8	86	24.2
1	0.8	44	12.1	87	24.5
2	1.0	45	12.3	88	24.9
3	1.3	46	12.6	89	25.2
4	1.5	47	12.9	90	25.5
5	1.8	48	13.1	91	25.8
6	2.0	49	13.4	92	26.1
7	2.3	50	13.7	93	26.5
8	2.6	51	14.0	94	26.8
9	2.8	52	14.2	95	27.1
10	3.1	53	14.5	96	27.5
11	3.3	54	14.8	97	27.8
12	3.6	55	15.1	98	28.1
13	3.9	56	15.4	99	28.5
14	4.1	57	15.6	100	28.8
15	4.4	58	15.9	101	29.2
16	4.6	59	16.2	102	29.5
17	4.9	60	16.5	103	29.9
18	5.2	61	16.8	104	30.2
19	5.4	62	17.1		
20	5.7	63	17.3		
21	5.9	64	17.6		
22	6.2	65	17.9		
23	6.5	66	18.2		
24	6.7	67	18.5		
25	7.0	68	18.8		
26	7.2	69	19.1		
27	7.5	70	19.4		
28	7.8	71	19.7		
29	8.0	72	20.0		
30	8.3	73	20.2		
31	8.6	74	20.5		
32	8.8	75	20.8		
33	9.1	76	21.1		
34	9.4	77	21.4		
35	9.6	78	21.7		
36	9.9	79	22.0		
37	10.2	80	22.4		
38	10.4	81	22.7		
39	10.7	82	23.0		
40	11.0	83	23.3		
41	11.2	84	23.6		
42	11.5	85	23.9		

Yamaha Disklavier
Model: E3

MIDI IMPLEMENTATION CHART

Date: 18-Mar-2011
Version: 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1-16	1-16	Memorized
Channel	Changed	1-16	1-16	
	Default	3	3	
Mode	Messages	×	3, 4 (m=1) *2, *3	
	Altered	**********	×	
Note		0-127	0-127	
Number	: True voice	**********	0-127	
Velocity	Note ON	○ 9nH, v=1-127	○ v=1-127	
	Note OFF	○ 8nH, v=0-127	○	
After	Key s	○ *5	○	
Touch	Ch s	×	○ *1, *2	
Pitch Bend		×	○ 0-24 semi *1, *2	
	0, 32	○	○ *1, *2	Bank Select
	7, 11	○	○ *1	
	1, 5, 10	×	○ *1, *2	
	6, 38	×	○ *2	Data Entry
	64	○	○	Hold1 (Sustain)
Control	65	×	○ *2	Portament
	66	○ *4	○ *2	Sostenuto
Change	67	○	○	Soft (Shift) Pedal
	71-74, 84	×	○ *2	
	91, 93, 94	×	○ *2	Effect Depth
	96-101	×	○ *1,*2	
Prog		○ 0-127	○ 0-127 *2	
Change	: True #	**********		
System Exclusive		○	○	
	: Song Pos	×	×	
Common	: Song Sel	×	×	
	: Tune	×	×	
System	: Clock	×	×	
Real Time	: Commands	×	×	
Aux	: All Sound OFF	○	○ (120, 126, 127)	
	: Reset All Cntrls	×	○ (121)	
	: Local ON/OFF	×	○	
	: All Notes OFF	○	○ (123-125)	
Messages	: Active Sense	○	○	
	: Reset	×	×	

Notes
*1 = Received (transmitted) if switch is on.
*2 = Only ESBL Part can be recognized.
*3 = m is always treated as 1 regardless of its value.
*4 = Transmit if this model has a Sostenuto Pedal.
*5 = Applying further pressure on the key does not output key aftertouch information. Instead, key position is transmitted as additional information.

Mode 1 : OMNI ON. POLY
Mode 2 : OMNI ON. MONO
Mode 3 : OMNI OFF. POLY
Mode 4 : OMNI OFF. MONO
○ : YES
× : NO

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