Chapter 10
Advanced Ensemble Song Playback

This chapter describes functions that will help you to better enjoy playing back Ensemble songs. These include tuning the tone generator, playing the piano parts on the tone generator, displaying Ensemble voices, and selecting tracks for the piano parts.

Tuning the Tone Generator (TG Master Tune)

The TG Master Tune function allows you to tune the internal XG tone generator to match the Disklavier's acoustic piano. This is helpful when playing Ensemble songs.

Tuning settings are saved even when the Disklavier is turned off. Each time the Disklavier is turned on, the tuning settings are sent automatically to the internal tone generator, so you need only perform this fine tuning operation once.

This function can also be used to tune a MIDI device connected to the MIDI OUT connector.
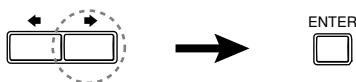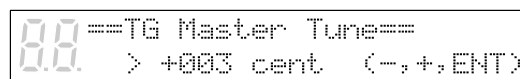
1 **Press [FUNC.].**

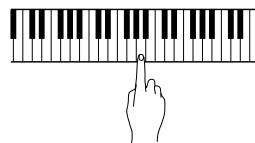The FUNC. indicator lights and the Function menu appears.
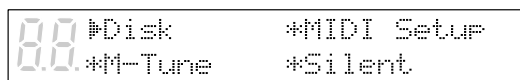
2 **Press [➡] until the ▶ cursor is next to the M-Tune option, then press [ENTER].**

The following display appears, and a note (the A below middle C) is sounded from the internal XG tone generator.

3 **Play the same note on the Disklavier keyboard.**

4 **Use the [–/NO] and [+/YES] buttons to tune the pitch of the digital piano (internal XG tone generator).**
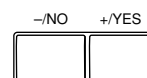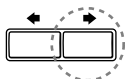

The tone generator can be tuned from –050 to +050 in 1 cent increments (100 cents equals 1 semitone).

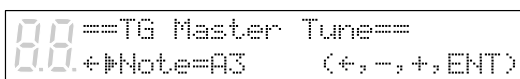**5** **Press [ENTER] to return to the normal display.**

Changing the Tuning Note

TG Master Tune sounds the A key below Middle C by default, but you can change it to a different A key.
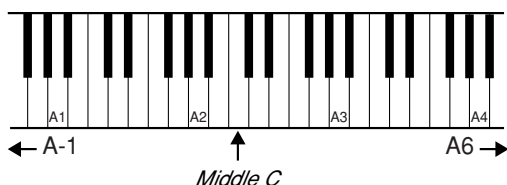
1 **From the TG Master Tune display, press [➡].**

The following display appears.

```
    ===TG Master Tune===
88  ⬅▶Note=A3    (⬅,-,+,ENT)
```

2 **Use the [–/NO] and [+/YES] buttons to select a different key.**

⬅ A-1   A1   A2   A3   A4   A6 ➡

Middle C

Playing the Piano Parts on the Tone Generator

Normally, piano parts are played back by the piano. You can, however, change this so that the piano parts are also played by the internal XG tone generator or a MIDI instrument connected to the MIDI OUT connector.

You can use this to double up the Disklavier piano parts with a different voice, say strings or vibes. This technique is sometimes referred to as voice layering or unison.

1 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

```
    ▶Disk      *MIDI Setup
88  *M-Tune    *Silent
```
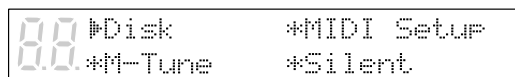
2 **Press [➡] until the ▶ cursor is next to the MIDI Setup option, then press [ENTER].**

The MIDI Setup menu display appears.
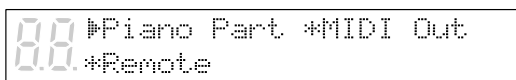
```
    ▶Piano Part *MIDI Out
88  *Remote
```

3 **With the ▶ cursor next to the Piano Part option, press [ENTER].**

The following display appears.

```
    ▶Piano Rcv Ch=01        ⬦
88  >Delay In(500ms)=ON
```
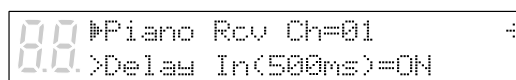
4 **Press [➡] until the ▸ cursor is next to the Piano Part ESBL Out parameter.**

```
88  ←Import File L=01 R=##
     PianoPart ESBL Out▸OFF
```
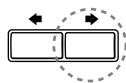
5 **Use the [–/NO] and [+/YES] buttons to set the option to ON.**

```
–/NO    +/YES
```

```
88  ←Import File L=01 R=##
     PianoPart ESBL Out▸ON
```

The piano parts are now played by the internal XG tone generator with the corresponding MIDI data sent to the MIDI OUT connector.

Displaying Ensemble Voices

When an Ensemble song starts playing back, MIDI Program Change messages are sent to the internal XG tone generator. These Program Change messages tell the tone generator which voices to select for each ensemble track.

During playback, you can display the voice assignments of each track and make changes.

1 **Play back an Ensemble song, and press [➡] until the following display appears.**

```
88  ▸05 001<GrandPno>Vol=100
    ← 00x_o ooooo ooo__ _   →
```
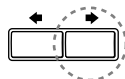
2 **Use the [–/NO] and [+/YES] buttons to select the track whose voice you want to display.**

```
–/NO    +/YES
```
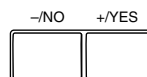
3 **To change the voice, press [➡] until the ▸ cursor is next to the voice number, then use the [–/NO] and [+/YES] buttons to select a voice.**

```
–/NO    +/YES
```

```
88  05▸001<GrandPno>Vol=100
    ← 00x_o ooooo ooo__ _   →
```
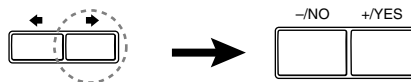
☛ See the Chapter 22 "Internal XG Tone Generator Voice & Drum Kit List" for a listing of basic voices.

Selecting Tracks for the Piano Parts

Normally, the piano plays tracks 1 and 2 which are the left- and right-hand piano parts. However, you can temporarily change this so that the piano plays different tracks. For example, a vibraphone part on track 5, or a marimba part on track 7 can be played by the piano.

These assignments remain active throughout the song. However, when another PianoSoft or Disklavier song is played back, the piano will play tracks 1 and 2 as normal (L=01 and R=02).

The rhythm track (track 10) can also be played on the piano. However, since this is a percussion part, the results are odd, to say the least.

1 **Play back an Ensemble song, then press [➡].**
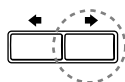
A display similar to the following appears.
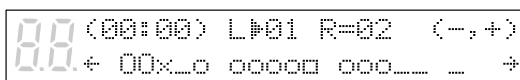
From the above display we can see that the Disklavier is currently set to play tracks 1 and 2. That is, "L=01" (track 1), and "R=02" (track 2).

2 **Press [➡] to select the part whose track you want to change.**
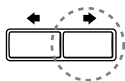
3 **Use the [–/NO] and [+/YES] buttons to choose a different track.**

You can choose from the following options.

Option	Description
##	The piano does not play.
01 - 16	The piano plays the specified track.
Prg	The piano plays the smallest track that contains a piano group voice.
Prg(all)	The piano plays all tracks that contain a piano group voice.

The number of the chosen track appears next to L= or R=, and the ⬚ symbol moves across the display, to indicate which track the Disklavier will play.

Chapter 11
Using the AUX Connectors

You can connect the Disklavier to external audio devices, such as speakers, a tape recorder or a CD player.

AUX OUT

You can output sound through external devices connected to the AUX OUT connectors on the Amplifier mounted to the underside of the piano. For example, this allows you to hook up the Disklavier to your home audio system and bring Ensemble music through remote speakers to other rooms or even outdoors.

Amplifier

AUX OUT   LINE IN   LINE IN
                 AUX OUT
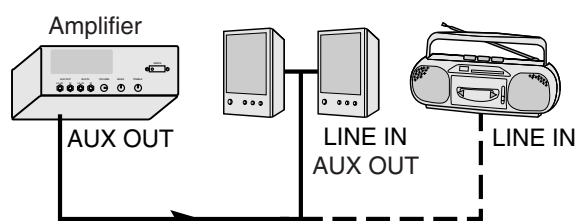
1 **With the Disklavier turned off, use an audio cable (optional) to connect the Disklavier's AUX OUT connectors to the appropriate connectors (LINE IN or AUX IN) on the external device you want to connect to.**

2 **Turn the VOLUME knob on the Silent Control Box all the way down.**

VOLUME

You can also adjust the volume using the Volume knob on the Amplifier.

Note: Volume level is also affected by the settings of the external device.

3 **Turn on the Control Unit first, then turn on the external device.**

Turning on the Disklavier first will prevent any unwanted pops or loud noises which could damage your speakers or tape recorder.

AUX IN

You can also connect an external device such as a CD player or tape recorder to the Disklavier and play along with your favorite recording.

Amplifier
AUX IN   HEADPHONE OUT   HEADPHONE OUT
(LINE OUT)
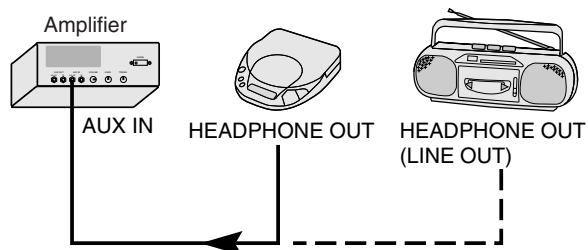
1 **With the Disklavier turned off, use an audio cable (optional) to connect the HEADPHONE jack or LINE OUT jack on the external device to which you want to connect to the AUX IN connectors on the Amplifier.**

2 **Turn on the external device, then turn on the Disklavier.**

3 **Gradually turn up the volume on the external device until a desirable volume is obtained.**

Note: The volume of the Amplifier is linked with the AUX IN connectors. Make sure the VOLUME knob on the Amplifier is set to an appropriately audible level. If it is turned fully counterclockwise, no sound may be produced even when you adjust the volume on the external device.

With many external devices, volume cannot be adjusted for sound that is output from the LINE OUT jack. In this case, use the headphone jack on the external device instead of the LINE OUT jack.

<For models with *Silent* system>
You may also need to adjust the volume of the digital piano using the VOLUME knob on the Silent Control Box.

Chapter 12
Storing and Managing Songs on Disks

The Disklavier can play back songs stored on floppy disks, such as PianoSoft and PianoSoft·Plus song disks, or songs copied to its Memory Disks.

The first section of this chapter describes Memory Disks and how to specify a disk for playback. The following sections describe how to copy songs and other song file management utilities common to both floppy disks and Memory Disks.

Memory Disks

Memory Disks use the Disklavier flash memory to store songs. Each Memory Disk has a memory capacity of 1 MB.

Since the Memory Disks have a total of 16 Mbytes of memory, you can copy to the Memory Disks PianoSoft songs or your favorite recordings stored on floppy disks and create your own library of Disklavier songs. This is especially ideal when you want to program your Disklavier to automatically play back many songs continuously as in Chain Play and Timer Play.

☛ See Chapter 13 "Chain Play – Playing Back Memory Disks in a Group" and Chapter 14 "Timer Play" for details.

The Memory Disks are formatted in the SMF (Standard MIDI File) disk format, giving you the most versatility, as both SMF and E-SEQ songs can be stored. They can, however, be re-formatted as E-SEQ type disks.

☛ See "Converting Disk Type" on page 63.

You can also re-format Memory Disks when you want to erase all data in a Memory Disk or when you want to convert an SMF type disk to an E-SEQ type disk.

☛ See "Formatting Disks" on page 61.

Specifying a Disk

In effect, the Disklavier has 17 disks (1 floppy disk and 16 Memory Disks) for storing song data. Therefore, before you can play back songs, you must specify which disk you want to play back.

The 16 Memory Disks are numbered from 0 to 9 and A to F, and the floppy disk is named "Fd." The number or name of the selected disk appears in the display.

Press [DRIVE] as many times as necessary until the desired disk number appears on the left side of the display.
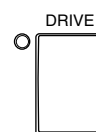
DRIVE

Each press of the [DRIVE] button toggles the floppy disk and Memory Disks (0 to 9 and A to F).

Note: "Fd" appears only when a floppy disk is in the disk drive.

```
 ╔═════════════════════════════╗
 A Piano Favorites
 ╚═════════════════════════════╝
 [————] 12x45xx890AbCdEF
                       ↑
                    Flashes
```
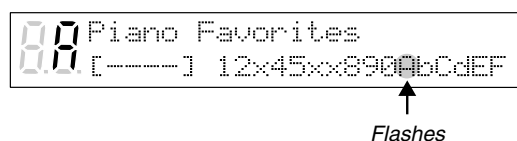
The disk you specify also flashes in the bottom row of the display.

Note: "x" indicates Memory Disks that are unformatted or contain no songs.

Copying Songs

You can copy songs stored on a disk to another one song at a time or all songs at once.

Songs stored on a floppy disk can be copied to the same floppy disk, to another floppy disk or to a Memory Disk.
Songs stored on a Memory Disk can be copied to another Memory Disk or to a floppy disk.

Note: Copy-protected songs, such as PianoSoft songs, cannot be copied to a floppy disk, but can be copied to a Memory Disk.
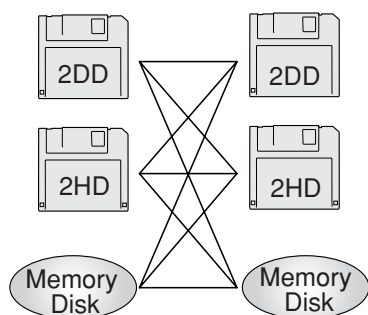
1 Specify a disk.

2 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

```
⏹⏹ ▶Disk      *MIDI Setup
⏹⏹ *M-Tune    *Silent
```

3 With the ▶ cursor next to the Disk option, press [ENTER].

The Disk menu appears.

```
⏹⏹ ▶Format    *SongDelete
⏹⏹ *SongCopy  *SongSort   →
```

4 Press [➡] to position the ▶ cursor next to the Song Copy option, then press [ENTER].

A display similar to the following appears.

```
⏹⏹ [Song Copy]→Memory[1]
⏹⏹ ▶ 01 PIANO001.FIL  (ENT)
```

When the source disk is a floppy disk, the parameter next to the arrow shows "Memory [X]"; when the source disk is a Memory Disk, the parameter shows "Other Disk."

5a TO COPY ALL SONGS
Press [–/NO] until the following display appears.

```
⏹⏹ [Song Copy] →Other Disk
⏹⏹ ▶ ALL Songs       (ENT)
```

Press [➡] then use the [–/NO] and [+/YES] buttons to select the destination disk.

```
⏹⏹ [Song Copy] ▶Other Disk
⏹⏹ > ALL Songs       (ENT)
```

5b TO COPY ONE SONG
Use the [–/NO] and [+/YES] buttons to select the song you want to copy.
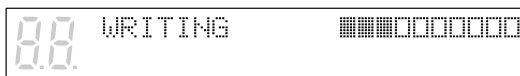
```
⏹⏹ [Song Copy]→Memory[1]
⏹⏹ ▶ 02 PIANO002.FIL  (ENT)
```

Then press [➡] and use the [–/NO] and [+/YES] buttons to select the destination disk: Same Disk, Memory [0] - [F], or Other Disk.

6 **Press [ENTER].**
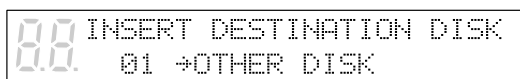
If the destination disk is Same Disk (for floppy disks only) or a Memory Disk, the following display appears.

```
██ WRITING      ▓▓▓▒□□□□□□
██
```

The song number indicator counts down from 99 and a bar graph on the display marks the progress. When the song number indicator reaches 00 and the squares on the bar graph are completely filled, the copy process is complete.
If the destination disk is Other Disk, the following display appears.
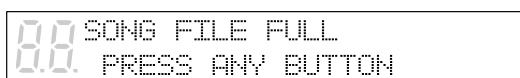
```
██ INSERT DESTINATION DISK
██   01 →OTHER DISK
```

Insert a formatted floppy disk in the disk drive. Song copy begins.

Note: Make sure that the destination disk is formatted and its erasure protection tab is set to "unprotected." See "Formatting Disks" and "Floppy Disk Accidental Erasure Protection" on page 61. If the destination disk has not been formatted in the Disklavier, the message "UNFORMATTED DISK" appears. In this case, cancel the song copy process and format the disk.

The copy process may take several seconds depending on the size of the song files.
If the song files you want to copy are too large, if you are copying too many songs, or if the destination disk becomes full, the following display appears and song copy is canceled.
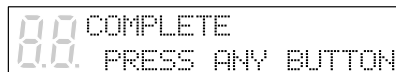
```
██ SONG FILE FULL
██   PRESS ANY BUTTON
```

7 **When the copy process is complete, the following display appears.**
Press any button to return to the normal display.

```
██ COMPLETE
██   PRESS ANY BUTTON
```

Copying the Entire Contents of a Disk (Disk Copy)

You can copy the entire contents of a disk to another disk.

Note: The contents of the destination disk will be erased.

Note: You cannot copy a disk that contains copy-protected songs such as PianoSoft songs.

1 Specify a disk.

Note: If you are copying to a floppy disk, its erasure protection tab must be set to "unprotected". See "Floppy Disk Accidental Erasure Protection" on page 61.

2 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

```
88  ▶Disk      *MIDI Setup
    *M-Tune    *Silent
```

3 With the ▶ cursor next to the Disk option, press [ENTER].

The Disk menu appears.

```
88  ▶Format     *SongDelete
    *SongCopy   *SongSort   →
```

4 Press [➡] until the ▶ cursor is next to the Disk Copy option, then press [ENTER].

A display similar to the following appears.

```
88  [Disk Copy]       (-,+)
    2DD    →▶Mem      (ENT)
```

5 Use the [–/NO] and [+/YES] buttons to select the destination disk.

6 Press [ENTER].

Disk copy of the source disk begins.
If the destination disk is a floppy disk, the following display appears. Eject the source disk if the source disk is a floppy disk, then insert a formatted destination disk.

```
88  INSERT DESTINATION DISK
```

Note1: Make sure that the destination disk is formatted and its erasure protection tab is set to "unprotected". See "Formatting Disks" and "Floppy Disk Accidental Erasure Protection" on page 61. If the destination disk has not been formatted in the Disklavier, the message "UNFORMATTED DISK" appears. In this case, cancel the song copy process and format the disk.

Note2: If the destination disk differs from what was specified, the message "WRONG DESTINATION DISK. INSERT 2DD DISK" or similar appears. Insert the correct destination disk to continue, or press [STOP] to cancel disk copy.

Note3: If the destination disk contains songs, the message "DELETE SONGS ON DEST. SURE?" appears. Press [+/YES] if it is okay to erase the contents of the destination disk and continue, or [–/NO] to cancel disk copy.

Note4: When copying between the same medium (ex. from 2HD to 2HD), the contents are copied from track to track.

When copying between different media (ex. from 2DD to 2HD), the contents are copied from file to file.

The copy process may take several seconds depending on the size of the disk content. If the disk content is too large or if the destination disk becomes full, the following display appears and disk copy is canceled.

```
88 SONG FILE FULL
88  PRESS ANY BUTTON
```

7 **When the copy process is complete, the following display appears. Press any button to return to the normal display.**

```
88 COMPLETE
88  PRESS ANY BUTTON
```

Deleting Songs

You can delete songs stored on a disk one song at a time or all songs at once.

If you want to delete all songs on a disk, it may be quicker to re-format the disk. See "Formatting Disks" on page 61.

1 **Specify a disk.**

Note: If you are deleting songs from a floppy disk, be sure that the accidental erasure protection tab is set to "unprotected."

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

```
88 ▶Disk      *MIDI Setup
88 *M-Tune    *Silent
```

3 **With the ▶ cursor next to the Disk option, press [ENTER].**

The Disk menu appears.

```
88 ▶Format    *SongDelete
88 *SongCopy  *SongSort   →
```

4 **Press [➡] until the ▶ cursor is next to the Song Delete option, then press [ENTER].**

The following display appears.

```
88 [Song Delete]      (-,+)
88 ▶ 01 PIANO001.FIL  (ENT)
```

5a **TO DELETE ALL SONGS**
Press [–/NO] until the following display appears, then press [ENTER].

```
88 [Song Delete]      (-,+)
88 ▶ ALL Songs        (ENT)
```

The following display appears.

```
00 [Song Delete]        SURE?
00 ▶ ALL Songs          (Y/N)
```

5b TO DELETE ONE SONG
Use the [–/NO] and [+/YES] buttons to select the song that you want to delete.

```
00 [Song Delete]        (-,+)
00 ▶ 01 PIANO001.FIL    (ENT)
```

Then press [ENTER].

A display similar to the following appears.

```
00 [Song Delete]        SURE?
00 ▶ 01 PIANO001.FIL    (Y/N)
```

6 Press [+/YES] to delete the song, [–/NO] if you do not want to delete the song.

Note: Once deleted, songs cannot be retrieved, so take care in selecting which songs to delete.

Note: You cannot delete copy-protected songs in a floppy disk. However, you can delete copy-protected songs in a Memory Disk.

When a song is deleted, subsequent songs are renumbered. For example, if you have six songs on a disk, and song No. 4 is deleted, song No. 5 becomes song No. 4 and song No. 6 becomes song No. 5, and so on.

Songs on a disk

| Song 1 | Song 2 | Song 3 | Song 4 | Song 5 | Song 6 |

Song No. 4 deleted

| Song 1 | Song 2 | Song 3 | Song 4 | Song 5 |
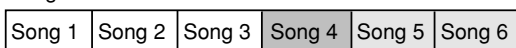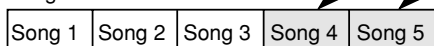
Rearranging the Song Order (Song Sort)

You can rearrange the order of songs on a disk.

1 Specify a disk.

2 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

```
00 ▶Disk        *MIDI Setup
00 *M-Tune      *Silent
```

3 With the ▶ cursor next to the Disk option, press [ENTER].

The Disk menu appears.

```
00 ▶Format      *SongDelete
00 *SongCopy    *SongSort   →
```

4 Press [➡] until the ▶ cursor is next to the Song Sort option, then press [ENTER].

The following display appears.

```
00 [Song Sort]          (-,+)
00 ▶SONG 02→No 01 (←,→,ENT)
```

5 Use the [–/NO] and [+/YES] buttons to select the song that you want to move.

6 When you have selected a song, press [➡], then use the [–/NO] and [+/YES] buttons to select the destination.

```
00 [Song Sort]          (-,+)
00  SONG 03▶No 05 (←,→,ENT)
```

In this example, song No. 3 is being moved to song No. 5.

7 Press [ENTER].

The following display appears.

```
 □□   CONTINUE Song Sort?
 □.□.      03→   05  (YES,NO)
```

Note: At this point of the procedure, the Disklavier has not saved the sorted song data to disk — it is asking if you want to sort some more songs before saving the sorted song data and exiting the song sort function.

Press [+/YES] if you want to sort more songs.

8 Press [–/NO] to save all the song sort data.

During the sorting process, the selected song is changed to its new song number and all the other songs on the disk are rearranged. For example, the example below shows a disk that contains six songs. If you make song No.6 the first song on the disk (No.1), songs 1 to 5 are renumbered as songs 2 to 6.

Songs on a disk

Song 1	Song 2	Song 3	Song 4	Song 5	Song 6

Song 1	Song 2	Song 3	Song 4	Song 5	Song 6
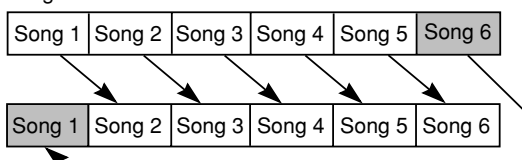
Song No. 6 moved to No. 1

Note: You cannot sort copy-protected songs such as PianoSoft songs on a pre-recorded disk.

9 When sorting is complete, the following display appears. Press any button to return to the normal display.

```
 □□ COMPLETE
 □.□.  PRESS ANY BUTTON
```

Changing the Counter Display

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

1 Specify a disk.

2 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

```
 □□ ▶Disk      *MIDI Setup
 □.□.*M-Tune    *Silent
```

3 With the ▶ cursor next to the Disk option, press [ENTER].

The Disk menu appears.

```
 □□ ▶Format     *SongDelete
 □.□.*SongCopy   *SongSort    →
```

4 Press [➡] until the ▶ cursor is next to the Counter option, then press [ENTER].
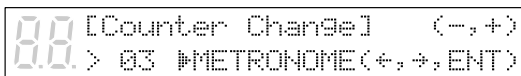
The following display appears.

```
 □□ [Counter Change]    (-,+)
 □.□. ▶ 01 →TIME        (←,→,ENT)
```

5 Use the [–/NO] and [+/YES] buttons to select the song whose time display you want to change.

6 **When you have selected a song, press [➡], then use the [–/NO] and [+/YES] buttons to select the time display.**

TIME: minutes and seconds display
METRONOME: measures and beats display
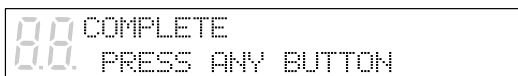
```
    [Counter Change]    (-,+)
    > 03  ▶METRONOME(←,→,ENT)
```

7 **Press [ENTER].**

Note: You cannot change the time display of copy-protected songs.

8 **When the following display appears, press any button to return to the normal display.**

```
    COMPLETE
     PRESS ANY BUTTON
```

Chapter 13
Chain Play — Playing Back Memory Disks in a Group

The 16 Memory Disks of the Disklavier are numbered from 0 to 9 and A to F. You can specify and play back one disk, or specify several disks to be played back sequentially. To play several disks, what you actually do is form a group of Memory Disks. Grouping disks enables you to control multiple disks in group units. For example, you may have your favorite classical music on disks number 0, 5, 7, and A. By grouping these four disks under Grp1, all you need to do to play back all your classical songs is set playback to Grp1. You do not need to make settings for the next disk after each disk has finished.
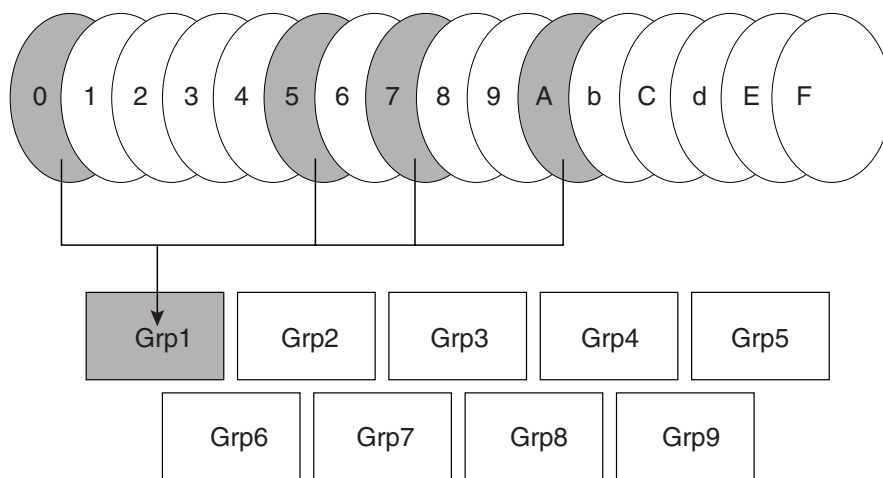
You can have up to 9 groups (1 to 9). Each group can contain a maximum of 16 Memory Disks freely combined to suit your needs. A disk can be part of more than one group, and the content of a group can be changed easily at any time.

Note: Floppy disks cannot be included in a group.

Registering a Group

1 Hold down [FUNC.] and press [STANDBY / ON].

The setup menu appears.

```
      ▶End         ⋇Auto Setup
0.0.  ⋇Chain Play ⋇Timer Play→
```

2 Press [➡] until the ▶ cursor is next to the Chain Play option, then press [ENTER].

A display similar to the following appears.

```
      M.Disk Chain Play
0.0.  ▶Grp1] 1234567890AbCdEF
```

3 Use the [–/NO] and [+/YES] buttons to select a group number.

4 **Use [◄] and [►] to move the cursor to a disk number, then use the [–/NO] and [+/YES] buttons to select or unselect it.**

```
┌─────────────────────────────┐
│ Aria Selections             │
│ [Grp1] 12x4_xx890AbCdEF     │
└─────────────────────────────┘
```
Flashes

- The position of the cursor is indicated by the flashing disk number.
- Pressing both [+/YES] and [–/NO] simultaneously selects all disks.
- "x" indicates disks that you included in the group but that contain no songs or are unformatted.
- "_" indicates disks that you did not include in the group.

5 **Press [ENTER].**

The group is set, and the display returns to the setup menu.

```
┌─────────────────────────────┐
│ ▶End          *Auto Setup   │
│ *Chain Play *Timer Play→    │
└─────────────────────────────┘
```
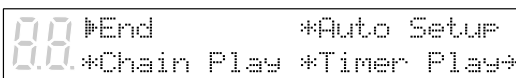
6 **With the cursor at the End option, press [ENTER] to restart the Control Unit.**

This is the same as turning off the Control Unit and then turning it back on.
The standard disk title display appears.

Chain-Playing Disks in a Group

One of the advantages of the group feature is its ability to automatically play back disks in a group consecutively without the need to make settings after each Memory Disk has finished playing. This is called Memory Disk Chain Play. Chain Play can also be set to start from any disk within the group.

Note: Chain Play is not valid for floppy disks.

Note: Prolonged playback may cause your piano to overheat. Insert sufficient breaks between continuous song playback.

1 **Register or select a group.**

☛ See "Registering a Group" on page 52.

2 **Press [DRIVE] and specify the disk from which you want to begin Memory Disk Chain Play.**

The disk you select flashes.

```
┌─────────────────────────────┐
│ Piano Favorites             │
│ [Grp1] 12x4_xx890AbCdEF     │
└─────────────────────────────┘
```
Flashes
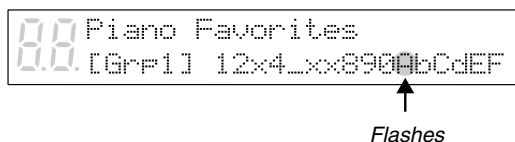
The group number you chose in step 1, and its contents, are shown on the bottom line of the display. If [- - - -] is shown instead of a group number, you have not chosen a group correctly.

- "x" indicates disks that are included in the group but that contain no songs or are unformatted.
- "_" indicates disks that are not included in the group.

You can set playback to start from any disk in the group that contain songs.

In the above display, "A" is selected. Therefore, playback begins from disk A and continues to the end of disk F, then stops.

Disks are played back from left to right in the display. The chain will not repeat unless the "All Repeat" setting is made (see Chapter 8 "Repeat Playback" for details). Disks represented by "x" and "_" are skipped.

3 **Press [PLAY/PAUSE] to begin Chain Play from the specified disk.**

You can also press [ENTER] or [STOP] to engage Standby mode.
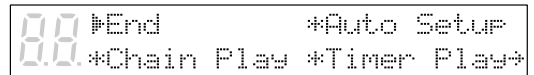
When playback of the last song on the selected disk finishes, the next disk in the group that contains songs is automatically played back.

Canceling Group Functions

You can choose to manage your disks in disk units instead of group units by setting Memory Disk Chain Play to OFF and selecting a target disk in the Memory Disk selection display. For example, if you want to play disk 7 only, you should set Memory Disk Chain Play to OFF, and select disk 7 using the [DRIVE] button.

1 **Hold down [FUNC.] and press [STANDBY / ON].**
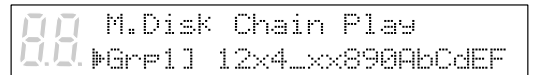
The setup menu appears.

```
88  ▶End         ∗Auto Setup
88  ∗Chain Play ∗Timer Play→
```
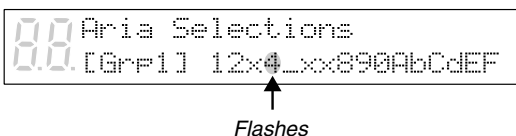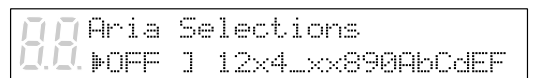
2 **Press [➡] to move the ▶ cursor to the Chain Play option, then press [ENTER].**

A display similar to the following appears.

```
88    M.Disk Chain Play
88  ▶Grp1] 12x4_xx890AbCdEF
```
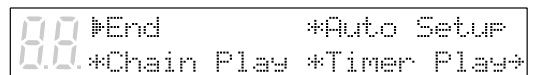
3 **Press [–/NO] or [+/YES] until OFF appears.**

```
88  Aria Selections
88  ▶OFF ] 12x4_xx890AbCdEF
```

4 **Press [ENTER].**

The group is switched off, and the display returns to the setup menu.

```
88  ▶End         ∗Auto Setup
88  ∗Chain Play ∗Timer Play→
```

5 **With the cursor at the End option, press [ENTER] to restart the Control Unit.**

This is the same as turning off the Control Unit and then turning it back on.

The standard disk title display appears.

```
88 Memory Disk
8.8.[----]  SMF Type Disk
```

The disk title display shows [- - - -] to indicate that no group is selected.

Chapter 14
Timer Play

You can program your Disklavier to play back groups of disks at various specified times. All you need to do is register up to a maximum of 99 timer settings, and your Disklavier will perform them unattended. This function is called Timer Play.

The "Timer Play Examples" section provides some examples of programmed playback.

Important: The Control Unit must be turned on in advance in order for Timer Play to function. Timer Play cannot turn on/off the Control Unit.

Note: Prolonged playback may cause your piano to overheat. Insert sufficient breaks between continuous song playback.

Creating a Program

This section takes you through the steps for creating a Timer Play program. Understanding the parameters of Timer Play will enable you to create music programs suited to your needs.

1 **Hold down [FUNC.] and press [STANDBY / ON].**

The setup menu appears.

```
 B.B. ▶End          ＊Auto Setup
 B.B. ＊Chain Play ＊Timer Play→
```
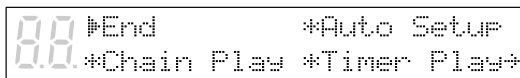
2 **Press [➡] until the ▶ cursor is next to the Timer Play option and press [ENTER].**

The following display appears.

```
        ①            ②
 B.B. Timer Play▶ON  ＊SORT
 B.B. 01:[08:00 >PLAY >Grp1]
        ③  ④  ⑤   ⑥      ⑦
```
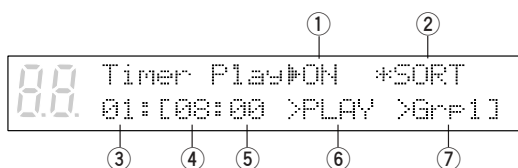
The five parameters on the lower row constitute a program. You can create up to 99 programs.

Item	Option	Description
1) Timer switch	ON, OFF	Enables Timer Play.
2) Sort		Pressing [ENTER] sorts the programs in chronological order.
3) Program number	01 - 99	Indicates the number of a program. Only program numbers with programs are displayed.
4) 5) Time	24-hour format	Indicates the time at which a function is to be performed. ##:## temporarily sets the same time as the previous program.
6) Function	- - - -, PLAY, STOP	The function to be performed at the specified time. - - - - omits the program.
7) Grp selection	####, Grp1 - 9	#### means no particular song is specified; the previous program's selection is valid. The difference between selecting the same group number as the previous program and selecting #### is that, in the former, playback begins at the beginning of the group, and in the latter, playback begins with the song that is selected when that program is enabled.

3 Use [◀] and [▶] to move the cursor sideways to each parameter and the [–/NO] and [+/YES] buttons to set a value.

4 Press [▶▶|] to enter the next program.

The next program appears with ##:## for the time parameter and - - - - for the function parameter. The cursor appears at the function parameter.

```
日日  01:[08:00  >PLAY  >Grp1]
日日  02:[##:##  ▶————————        ]
```

5 Press [◀] to go to the time parameter.

```
日日  01:[08:00  >PLAY  >Grp1]
日日  02:▶08:00  >————————        ]
```

##:## automatically changes to the time setting of the preceding program.

6 Use the [–/NO] and [+/YES] buttons to set a time.

```
日日  01:[08:00  >PLAY  >Grp1]
日日  02:▶09:00  >————————        ]
```

7 Press [▶] to go to the function parameter, and use the [–/NO] and [+/YES] buttons to select either PLAY or STOP.

```
日日  01:[08:00  >PLAY  >Grp1]
日日  02:[09:00  ▶PLAY  >####]
```

When PLAY is selected, #### automatically appears as the Grp parameter.

8 Press [▶] to go to the Grp parameter, and use the [–/NO] and [+/YES] buttons to set a group.

9 Repeat steps 4 to 8 to set as many programs as necessary.

Pressing [|◀◀] and [▶▶|] scrolls the display vertically through the programs.

10 Press [ENTER] after you set all parameters for the programs you need.

The programs are sorted in chronological order, and the display returns to the setup menu.
Each program is activated at the specified time.

Important: The Control Unit must be turned on in advance in order for Timer Play to function. Timer Play cannot turn on/off the Control Unit.

Error Check

When you set a program and go to the next program, the Disklavier automatically checks for other programs that are set to occur at the same time.

For example, in the following display, Grp7 and Grp1 are both set to start playback at 8:00.

```
日日 01:[08:00  >PLAY  >Grp7]
日日 02:[08:00  >PLAY  ▶Grp1]
```

When [▶▶|] is pressed to proceed to program 3, the following message appears.

```
日日 SAME TIME EVENT EXISTS!
日日   CHANGE THE TIME
```

In this case, press any key and set program 2 to a different time.

Timer Play Examples

With a little creativity, you can use Timer Play in a variety of ways. You can also set Timer Play in conjunction with Repeat playback.

This section gives you just a few simple ideas of how you can use Timer Play.

Note: Prolonged playback may cause your piano to overheat. Insert sufficient breaks between continuous song playback.

Example 1

Location: Hotel lobby

06:50	Turn on Control Unit (manually)
07:00	01:[07:00 > PLAY > Grp1]
12:00	02:[12:00 > PLAY > Grp2]
17:00	03:[17:00 > PLAY > Grp3]
21:00	04:[21:00 > STOP]
21:30	Turn off (manually)

Memory Disk 1 - 4 .... Grp1
Memory Disk 5 - A Grp2
Memory Disk b, d, F Grp3
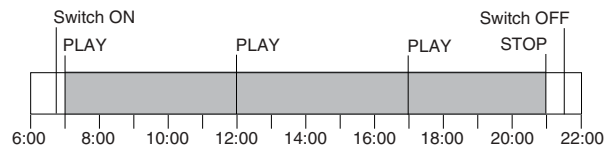
The Disklavier above is set to play at 7:00 a.m., 12:00 p.m. and 5:00 p.m., and set to stop at 9:00 p.m. At each of the specified time, it plays a group of songs until all the disks in the group are played back. The Disklavier will stop playing at 9:00 p.m. even if Grp3 is still playing.

Example 2

Location: Cocktail bar

Repeat = RND

16:50	Turn on Control Unit (manually)
17:00	01:[17:00 > PLAY > Grp1]
19:00	02:[19:00 > STOP]
19:30	03:[19:30 > PLAY > ####]
21:00	04:[21:00 > STOP]
21:30	05:[21:30 > PLAY > ####]
23:00	06:[23:00 > STOP]
23:05	Turn off (manually)

Memory Disks 1 - 6 .... Grp1
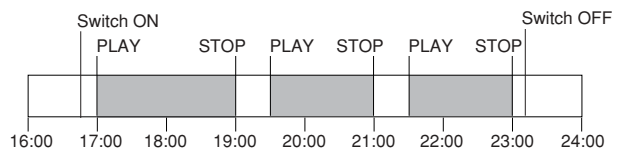
The Disklavier above is set to play songs continuously from 5:00 p.m. to 11:00 p.m., with interruptions for live performances at 7:00 p.m. and 9:00 p.m. for 30 minutes each.

Grp1 is played back at 5:00 p.m. and stopped at 7:00 p.m. At 7:30 p.m., playback of Grp1 picks up where it last left off. It stops again at 9:00 p.m., and at 9:30 p.m., it starts playback again from where it left off.

Only one group is registered, but since it contains many disks, and is set to RND playback, it will last through the evening.

Example 3

Location: store

07:55	Turn on Control Unit (manually)	
08:00	Opening (1 song)	01:[08:00 > PLAY > Grp1]
10:00	Time (1 song)	02:[10:00 > PLAY > Grp2]
12:00	Lunch (continuous)	03:[12:00 > PLAY > Grp3]
13:00	Lunch end	04:[13:00 > STOP]
15:00	Time (1 song)	05:[15:00 > PLAY > Grp2]
17:00	Closing (3 songs)	06:[17:00 > PLAY > Grp4]
17:15	Turn off (manually)	

Memory Disk 1: 1 song for opening of store Grp1
Memory Disk 2: 1 song to be played on the hour Grp2
Memory Disk 3: several songs for continuous play during lunch Grp3
Memory Disk 4: continuation of disk 3 ....Grp3
Memory Disk 5: 3 songs for closing of store Grp4

The Disklavier above is turned on at 7:55 a.m., and Timer Play starts at 8:00 a.m. with the opening of the store. Songs are set to be played at 8:00 a.m. for the opening of the store, at 10:00 a.m. and 3:00 p.m. to signify the time, during lunch, and at 5:00 p.m. for the closing of the store.

Chapter 15
Disk and Song File Utilities

This chapter describes the song formats and disk types that the Disklavier uses to control song data on disks. This information is relevant to using the Disklavier song data with other Yamaha instruments or MIDI equipment.

Song Format

Song format refers to the format in which songs are recorded. The Disklavier supports both the most commonly used Standard MIDI File (SMF) format and Yamaha's E-SEQ format.

Disk Types

You can format the Memory Disks and floppy disks in either SMF or E-SEQ format, in accordance with how else you plan to use the disk. SMF type disk is recommended if you plan to edit Disklavier songs on a MIDI instrument or computer. E-SEQ is recommended if you plan to play back the disk on earlier Disklavier models or the Clavinova series.
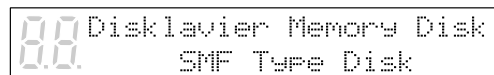
Memory Disks are formatted as SMF type disks as a factory presetting.

Note: The terms "SMF type disk" and "E-SEQ type disk" are unique to the Yamaha Disklavier, and should not be confused with SMF and E-SEQ song formats. Nevertheless, with the Disklavier, song format and disk type have much to do with each other.

SMF Type Disks

SMF type disks can store both SMF abd E-SEQ songs.

If a disk is formatted as an SMF type disk, the following display should appear as the disk title display.
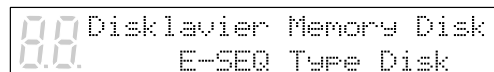
```
00  Disklavier Memory Disk
         SMF Type Disk
```

Up to 99 songs can be recorded onto an SMF type disk, depending on the size of the song file.

E-SEQ Type Disks

E-SEQ type disks can only be used for E-SEQ songs. It is not possible to copy SMF songs to an E-SEQ type disk. E-SEQ disks can be played back by earlier Disklavier models as well as by the Disklavier.

If a disk is formatted as an E-SEQ type disk, the following display should appear as the disk title display.

```
00  Disklavier Memory Disk
         E-SEQ Type Disk
```

Up to 60 songs can be recorded onto an E-SEQ type disk.

Cl and Other Type Disks

Disks formatted by instruments other than the Disklavier may be displayed as a Cl Type Disk or Other Type Disk.

Formatting Disks

The procedure below allows you to format new unformatted floppy disks and to reformat both the Memory Disks and formatted floppy disks. New floppy disks must be formatted before they can be used with the Disklavier.

Formatting a disk erases all the data previously stored on the disk, so always make sure the disk you are going to format does not contain songs you want to keep.

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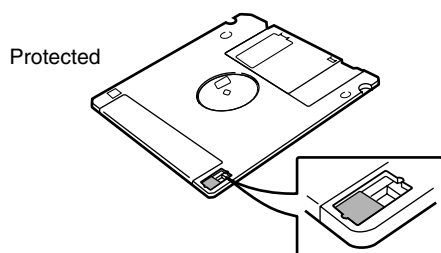
When the tab window is open, formatting and recording are not possible.
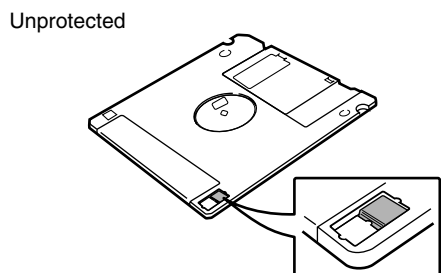
Unprotected

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

1 **Press [DRIVE] and specify the disk to format.**

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

If the disk has not been formatted, the following display appears.

```
8.8. UNFORMATTED DISK
```
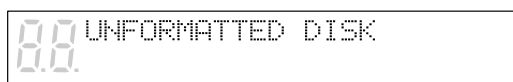
If the disk contains songs, it might be worth checking them to see if there are any you want to keep.

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **With the ▶ cursor next to the Disk option, press [ENTER].**

The Disk menu appears.

```
8.8. ▶Format      *SongDelete
     *SongCopy    *SongSort    →
```

4 **With the ▶ cursor next to the Format option, press [ENTER].**

The following display appears.

```
8.8. [Disk Format]
     ▶SMF Type Disk
```
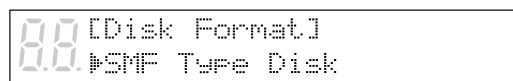
5 **Use the [–/NO] and [+/YES] to select a disk type: SMF Type Disk or E-SEQ Type Disk. Then press [ENTER].**

SMF type disk is recommended if you are not going to be using this disk with other Disklavier models. For more information on disk types, see "Disk Types" on page 60. A display similar to the following appears.

```
┌─────────────────────────────────┐
│ 🔲🔲 [Disk Format]        SURE?  │
│ 🔲🔲  SMF Type Disk   (YES,NO)   │
└─────────────────────────────────┘
```

6 **Press [+/YES] to start the disk formatting process.**

If you do not want to continue with the formatting process, press [–/NO].

7 **Formatting is complete when the following display appears.**

```
┌─────────────────────────────────┐
│ 🔲🔲 COMPLETE                    │
│ 🔲🔲  PRESS ANY BUTTON           │
└─────────────────────────────────┘
```

Press any button to return to the normal display.

Converting Song Format

SMF songs can be converted to E-SEQ songs and vice versa.

Note: When converting songs from SMF to E-SEQ song format, if there is an instrumental part on track 3, incremental pedal data will be lost to accommodate the instrumental part on track 3.

1 **Specify a disk.**

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

```
┌─────────────────────────────────┐
│ 🔲🔲 ▶Disk       *MIDI Setup    │
│ 🔲🔲 *M-Tune     *Silent        │
└─────────────────────────────────┘
```

3 **With the ▶ cursor next to the Disk option, press [ENTER].**

The Disk menu appears.

```
┌─────────────────────────────────┐
│ 🔲🔲 ▶Format     *SongDelete    │
│ 🔲🔲 *SongCopy   *SongSort    → │
└─────────────────────────────────┘
```

4 **Press [➡] until the ▶ cursor is next to the Song Convert option, then press [ENTER].**

The following display appears.

```
┌─────────────────────────────────┐
│ 🔲🔲 ←*DiskCopy  ▶SongConvert   │
│ 🔲🔲  *Counter   *DiskConvert   │
└─────────────────────────────────┘
```

5 **Use the [–/NO] and [+/YES] buttons to select the song that you want to convert.**

6 When you have selected the song, press [➡] until the ⊫ cursor is next to the arrow. Then use the [–/NO] and [+/YES] buttons to select a song format: E-SEQ, SMF0 or SMF1.

Symbol	Song format
E-SEQ	E-SEQ format
SMF0	Standard MIDI File format 0
SMF1	Standard MIDI File format 1

```
[Song Convert]      (ENT)
 ⊫ 01 PIANO001.MID⊫E-SEQ
```

7 Press [ENTER].

A display similar to the following appears.

```
[Song Convert]SURE?(Y/N)
   01 PIANO001.MID⊫E-SEQ
```

8 Press [+/YES] to begin song conversion.

If you do not want to convert the song, press [–/NO].

9 When song conversion is completed, the following display appears. Press any button to return to the normal display.

```
COMPLETE
  PRESS ANY BUTTON
```

When a song format is converted, the file name extension changes.

Converting Disk Type

SMF type disks can be converted to E-SEQ type disks and vice versa. This can be helpful when you want to play back a song recorded in the SMF format on an earlier Disklavier model, or when you want to use song data recorded in the E-SEQ format with other MIDI instruments.

1 Specify a disk.

2 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

3 With the ⊫ cursor next to the Disk option, press [ENTER].

The Disk menu appears.

```
⊫Format     ＊SongDelete
＊SongCopy   ＊SongSort   ➡
```

4 Press [➡] until the ⊫ cursor is next to the Disk Convert option, then press [ENTER].

```
⬅＊DiskCopy ＊SongConvert
 ＊Counter  ⊫DiskConvert
```

The following display appears.

```
[DiskConvert]
   SMF⊫E-SEQ Type (ENT)
```

5 Use the [–/NO] and [+/YES] buttons to select a song format.

E-SEQ type disks can be converted to SMF type disks or Piano1 disks.
SMF type disks can be converted to E-SEQ type disks or Piano1 disks.

Note: Piano1 is a format that can be played back by all Disklaviers. In the display, disk type for a Piano1 type disk will be shown as E-SEQ.

6 | Press [ENTER].

The following display appears.

```
00. INSERT DESTINATION DISK
```

Insert the destination disk.

Depending on the size of the disk, the following display may appear.

```
00. INSERT SOURCE DISK
```

Eject the destination disk and insert the source disk. You may need to repeat this several times until the conversion is complete.

If all data cannot fit onto one disk, the following display appears. Insert another floppy disk and conversion will continue.

```
00. INSERT ANOTHER
    DESTINATION DISK
```

7 | When the conversion process is complete, the following display appears. Press any button to return to the normal display.

```
00. COMPLETE
     PRESS ANY BUTTON
```

Chapter 16
The Disklavier & MIDI

This chapter describes how the Disklavier can be used with other MIDI instruments. The Disklavier's MIDI functions are quite flexible, so there are many different connection possibilities. This chapter provides a few examples. Even if your particular application is not among these examples, you should be able to derive the information required to create your own setup by reading through these setup examples.

Note: For the MIDI setups described in this chapter, it is recommended that you connect your MIDI instrument to the MIDI OUT connector and set the HOST SELECT switch to MIDI so that the Disklavier functions properly. See "Setting the HOST SELECT Switch" on page 73.

Start/Stop Control of a MIDI Instrument with the Disklavier

In this setup, song disks are played back on the Disklavier and a MIDI drum machine or sequencer plays in synchronization. When [PLAY] is pressed, the MIDI instrument starts to play. It can also be paused and stopped via the Disklavier. In addition, the tempo of the MIDI instrument will change as the tempo of the Disklavier is adjusted.

1 **Connect the Disklavier's MIDI OUT to the MIDI instrument's MIDI IN connector using a MIDI cable.**
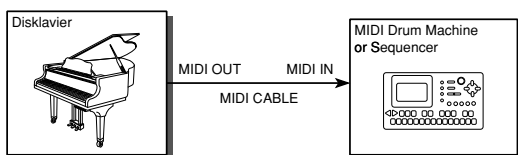
2 **Set the MIDI instrument to synchronize with the incoming MIDI clock, sometimes called "MIDI SYNC".**

Refer to its operating manual for details.

3 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

```
    ▶Disk      ＊MIDI Setup
    ＊M-Tune    ＊Silent
```

4 **Press [➡] until the ▶ cursor is next to the MIDI Setup option, then press [ENTER].**

The following display appears.

```
    ▶Piano Part ＊MIDI Out
    ＊Remote
```

5 **Press [➡] until the ▶ cursor is next to the Remote option, then press [ENTER].**

The following display appears.

```
    ▶Remote Out=OFF
    ＞Remote In=OFF
```

6 **Press [+/YES] to set the Remote Out parameter to ON.**

7 **Press [FUNC.] or [STOP] to exit the MIDI setup.**

The Disklavier can now be used in the sequencer system.

Receiving Data from a MIDI Sequencer

In this setup, the Disklavier is connected to a MIDI sequencer for song recording and playback. In this way you can use a MIDI sequencer's powerful recording and editing functions for creating your Disklavier songs. The sequencer can be a dedicated music sequencer, a MIDI data recorder, or a MIDI sequencer program running on a computer.

A 500 millisecond delay is applied to the incoming MIDI data so that the Disklavier plays more fluently. Because of the delay, beware that the beat indicator on the sequencer is slightly ahead of the actual sounds being produced. Be aware of this. To control the Disklavier in real time, see "Controlling the Disklavier in Real Time" on page 68.

The Disklavier's Piano Rcv Ch parameter must be set to match that of the sequencer track that contains the piano parts. For example, if the piano part is recorded on sequencer track 7 and track 7 is transmitting on MIDI channel 12, the Disklavier should be set to receive on MIDI channel 12. The Piano Rcv Ch parameter has the following options.

Option	Description
##	MIDI IN data is played by just the internal tone generator.
01 - 16	MIDI IN data is played by the piano on the specified MIDI channel.
HP	MIDI IN data is played by the piano. Left-hand part on MIDI channel 1, right-hand part on MIDI channel 2 and half pedal data on MIDI channel 3.
1+2	MIDI IN data is played by the piano. Left-hand part on MIDI channel 1, right-hand part on MIDI channel 2.
Prg	MIDI IN data is played by the piano on the channel with the smallest number containing a piano group voice.
Prg(all)	All channels that contain a piano group voice in the MIDI IN data is played by the piano.

1 **Connect the MIDI sequencer's MIDI OUT to the Disklavier's MIDI IN with a MIDI cable.**
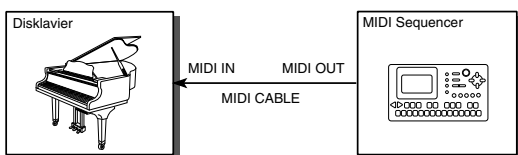
2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **Press [➡] until the c cursor is next to the MIDI Setup option, then press [ENTER].**

The following display appears.

```
 ▮▶Piano Part  *MIDI Out
 ▮▮ *Remote
```

4 **With the ▮ cursor next to the Piano Part option, press [ENTER].**

The following display appears.

```
 ▮▶Piano Rcv Ch=01      ↦
 ▮▮ >Delay In(500ms)=ON
```

5 **Use the [–/NO] and [+/YES] buttons to select a MIDI channel.**

☞ See page 66 for a list of available options.

6 **Press [➡] until the ▮ cursor is next to the Delay In parameter, then use the [–/NO] and [+/YES] buttons to set the Delay In (500 ms) to ON.**

```
 ▮▮ >Piano Rcv Ch=1+2    ↦
 ▮▮ ▶Delay In(500ms)=ON
```

☞ For more information on the 500 ms delay function, see "Controlling the Disklavier in Real Time" on page 68.

7 **Press either [FUNC.] or [STOP] to return to the normal display.**

The Disklavier can now be used in the sequencer system.

Controlling the Disklavier in Real Time

As the Disklavier uses a mechanical system for driving the piano keys, incoming MIDI data cannot be played instantly. For this reason a fixed delay of 500 ms is usually applied to all incoming MIDI data. For most applications this delay will not be a problem.

If you want to play the Disklavier in "real time" via a MIDI master keyboard, synthesizer, or MIDI guitar controller, this fixed delay can be turned off. However, it will still take the Disklavier time to respond to incoming MIDI data and the Disklavier piano response time will vary based on the velocity of the notes and is not user-controllable.

You need to set the Delay In parameter to OFF and set the Piano Rcv Ch parameter to match that of the other keyboard's MIDI transmit channel. If the channels do not match, the Disklavier will not respond to the MIDI data.

☞ Refer to the other keyboard's user guide for information on setting its transmit MIDI channels.

1 **Connect the MIDI controller's MIDI OUT to the Disklavier's MIDI IN using a MIDI cable.**

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **Press [➡] until the ▶ cursor is next to the MIDI Setup option, then press [ENTER].**

The following display appears.

```
⊟⊟ ▶Piano Part ⊕MIDI Out
⊟⊟ ⊕Remote
```

4 **With the ▶ cursor next to the Piano Part option, press [ENTER].**

The following display appears.

```
⊟⊟ ▶Piano Rcv Ch=01      →
⊟⊟ >Delay In(500ms)=ON
```

5 **Use the [–/NO] and [+/YES] buttons to select a MIDI channel.**

☞ See page 66 for a list of available options.

6 **Press [➡] until the ▶ cursor is next to the Delay In parameter, then use the [–/NO] and [+/YES] buttons to set the Delay In (500 ms) to OFF.**

```
⊟⊟ >Piano Rcv Ch=1+2     →
⊟⊟ ▶Delay In(500ms)=OFF
```

7 **Press [FUNC.] or [STOP] to return to the normal display.**

Sending Song Data to a MIDI Instrument

The parts of an Ensemble song are usually played by the internal XG tone generator. However, because the song data that is sent to the internal XG tone generator is simultaneously sent to the MIDI OUT connector, you can also output the song file to an external tone generator or a MIDI instrument such as a synthesizer.

When playing back songs from a computer, for example, it is a good idea to connect an external tone generator if the song has more than 16 channels. In this case, the Disklavier will play channels 1 to 16 and the rest of the channels will be played by the external tone generator. See "Playing Back More than 16 Channels" on page 74.

For the best compatibility, your external MIDI instrument should support Yamaha XG, General MIDI (GM), or both.

1 **Connect the Disklavier's MIDI OUT to the external MIDI instrument's MIDI IN connector using a MIDI cable.**
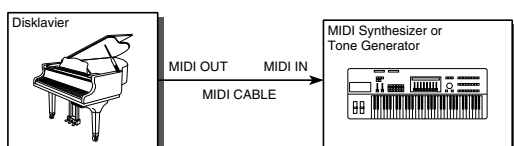
2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **Press [➡] until the ⵊ cursor is next to the MIDI Setup option, then press [ENTER].**

The following display appears.

```
 ▸Piano Part ⬩MIDI Out
 ⬩Remote
```

4 **Press [➡] until the ⵊ cursor is next to the MIDI Out option, then press [ENTER].**

5 **Use the [–/NO] and [+/YES] buttons to select ESBL Out.**

```
 ▸MIDI Out=ESBL Out
             (500ms)
```

6 **Press [FUNC.] or [STOP] to exit the MIDI Setup mode.**

Playing Back Import Files

Songs recorded onto floppy disks using MIDI equipment other than the Disklavier can be played back with the Disklavier. These are called "import files". For these files, you must specify the tracks to be played by the Disklavier piano, as piano parts in import files may be stored on any track.

1 **Insert the song disk into the disk drive.**

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **Press [➡] until the ▐ cursor is next to the MIDI Setup option, then press [ENTER].**

The following display appears.

```
 ▐▐ ▶Piano Part *MIDI Out
 ▐▐.*Remote    *Local
```

4 **With the ▐ cursor next to the Piano Part option, press [ENTER]. Then, press [➡] until the following display appears.**

```
 ▐▐ ←Import File L▶01  R=##
 ▐▐. PianoPart ESBL Out=OFF
```

5 **Use the [–/NO] and [+/YES] buttons to set the piano part channels.**

Option	Description
##	The import file is played by the tone generator only.
01 - 16	The import file is played by the piano on the specified MIDI channel.
Prg	The import file is played by the piano on the channel with the smallest number containing a piano group voice.
Prg(all)	All channels that contain a piano group voice in the import file is played by the piano.

6 **Press [PLAY] to play back the song disk.**

Chapter 17
The Disklavier & Personal Computers

Creating music with computers used to be a job for professionals only. However, in this age of multimedia and personal computers, almost anyone can enjoy creating music.

General MIDI and Standard MIDI File (SMF) formats supported by the Disklavier are formats common to most personal computers and MIDI instruments. For example, use your personal computer to download SMF data from the Internet and play it on the Disklavier.

The Disklavier can be connected to a personal computer using the TO HOST connector. It can also be connected via MIDI IN/OUT connectors, but a separate MIDI interface is required. The TO HOST connector allows you to connect your Disklavier to a personal computer without the MIDI interface.
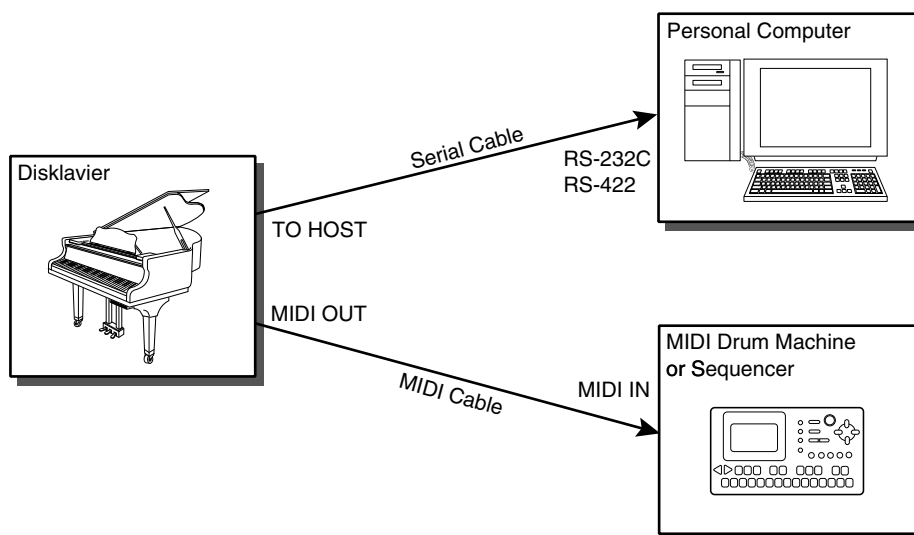
Note: To use the Disklavier properly with the computer setups described in this chapter, it is recommended that you connect your computer to the TO HOST connector and set the HOST SELECT switch to PC1, PC2, or MAC depending on your computer type. See "Setting the HOST SELECT Switch" on page 73.

Connecting to a Personal Computer

Specifically, Apple Macintosh, IBM PC/AT, and NEC PC-9801/9821 series computers can be directly connected to the Disklavier. Connect the RS-232C or RS-422 connector on your computer to the TO HOST connector on the Control Unit using the specified cables shown below (available separately). Also refer to your computer's operating manual to make sure the connection is made properly.

Your computer may also require a serial port driver for this function. This software is used for controlling the MIDI interface. For further information, please consult your Yamaha dealer.

Note: Be sure to turn the computer and Disklavier power switches off before making the connections and setting the HOST SELECT switch.

Connecting to an Apple Macintosh Series Computer
Use a standard Macintosh 8-pin system peripheral cable.
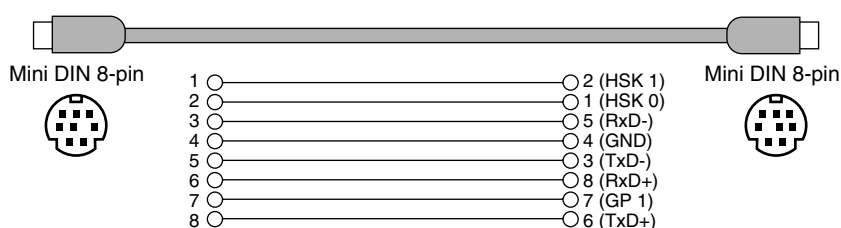
Connecting to an NEC PC-9801/9821 Series Computer
Use a standard 8-pin MINI DIN ➔ 25-pin D-SUB cross cable.
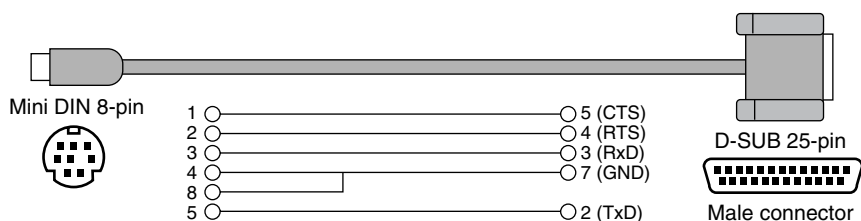
Connecting to an IBM PC/AT Series Computer
(a) Use a standard 8-pin MINI DIN ➔ 9-pin D-SUB cross cable.
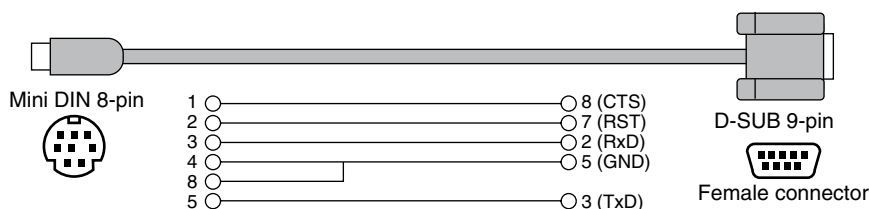
(b) Use a standard 8-pin MINI DIN ➔ 25-pin D-SUB cross cable.
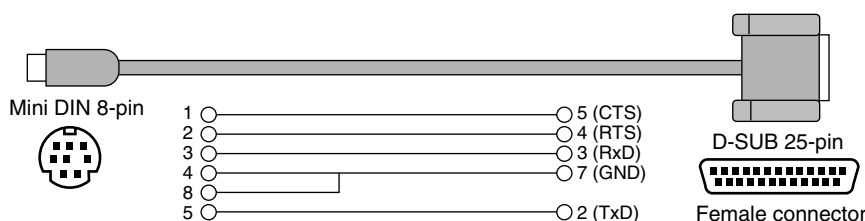
Setting the HOST SELECT Switch

Set the HOST SELECT switch on the rear panel of the Control Unit according to your computer type.

HOST SELECT

PC1 ─┐ ┌─ PC2
MIDI ─┤ ├─ MAC
      □
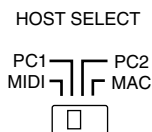
HOST SELECT	Computer type	Baud rate	Remarks
MAC	Apple Macintosh series	31,250	On the computer side, set the clock speed to 1 MHz.
PC1	NEC PC-9801/9821 series	31,250	Some software require the HOST SELECT switch to be set to PC2 (38,400 bps) in order to function properly.
PC2	IBM PC/AT series	38,400	
MIDI	General MIDI equipment	31,250	MIDI data is sent/received via MIDI OUT/IN connectors, and not the TO HOST connector.

* Apple and Macintosh are trade marks of Apple Computer, Inc.
* IBM PC/AT is a trademark of International Business Machines Corporation.
* PC-9801/9821 is a trademark of NEC Corporation.

Playing Back Songs Created in a Computer

Songs created and stored in your computer system can be played back by the Disklavier.

1 Press [FUNC.].

The FUNC. indicator lights and the Function menu appears.

2 Press [➡] until the ▶ cursor is next to the MIDI Setup option, then press [ENTER].

The following display appears.

```
88 ▶Piano Part *MIDI Out
88 *Remote
```

3 With the ▶ cursor next to the Piano Part option, press [ENTER].

The following display appears.

```
88 ▶Piano Rcv Ch=01      ⇥
88 >Delay In(500ms)=ON
```

4 With the ▶ cursor next to the Piano Rcv Ch parameter, use the [–/NO] and [+/YES] buttons to select the channel for the piano part.

The selected channel will be played by the Disklavier piano, and the other channels by the internal XG tone generator. See "Receiving Data from a MIDI Sequencer" on page 66 for details on MIDI channels.

5 Press [➡] until the ⊪ cursor is next to the Delay In parameter, then use the [–/NO] and [+/YES] buttons to set it.

```
88 >Piano Rcv Ch=1+2
8.8. ⊪Delay In(500ms)=ON
```

Option	Description
ON	A delay of 500 ms is applied to all incoming MIDI data from the computer so that the timing of the piano and the internal XG tone generator match for smooth playback.
OFF	The delay is not applied, and the piano is played in "real time". However, playback will not be smooth. When Piano Rcv Ch is set to ##, all channels are played by the internal XG tone generator, so Delay In is automatically set to OFF.

☞ For more information on the 500 ms delay function, see "Controlling the Disklavier in Real Time" on page 68.

6 Press [FUNC.] or [STOP] to return to the normal display.

Playing Back More than 16 Channels

You can play back from a computer song data that contains up to 32 channels by connecting the Disklavier's TO HOST connector to the serial port on a computer and its MIDI OUT connector to a MIDI instrument. The 32 channels are sent to the Disklavier using software corresponding to port signals. The Disklavier plays channels 1 to 16 (port 1), and channels 17 to 32 (port 2) are output to an external MIDI instrument.

1 Press [FUNC.].

2 Press [➡] until the ⊪ cursor is next to the MIDI Setup option, then press [ENTER].

The following display appears.

```
88 ⊪Piano Part ✲MIDI Out
8.8. ✲Remote
```

3 Press [➡] until the ⊪ cursor is next to the MIDI Out option, then press [ENTER].

The following display appears.

```
88 ⊪MIDI Out=ESBL Out
8.8.
```

4 With the ⊪ cursor next to the MIDI Out parameter, use the [–/NO] and [+/YES] buttons to select "Thru Port2".

5 Press [FUNC.] or [STOP] to return to the normal display.

Chapter 18
Resetting Your Disklavier

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

Resetting Your Disklavier

You can reset all settings, the Memory Disks, or both.

1 **Specify a disk.**

When you select a Memory Disk, the reset function will be effective for the selected disk only.
If you select Memory Disk 0, the disk is reset in SMF format, and an "opening" song is automatically re-recorded on the disk. If you select Memory Disk 1 to F, the disks are reset in SMF format, and nothing is recorded on the disk.

2 **Press [FUNC.].**

The FUNC. indicator lights and the Function menu appears.

3 **Press [➡] until the ▸ cursor is next to the Reset option, then press [ENTER].**

The following display appears.

```
88  ==Reset==      (-,+,ENT)
0.0.    ▸MemoryDisk[2]+Setup
```

4 **Use the [–/NO] and [+/YES] buttons to select the item that you want to reset. Then press [ENTER].**

Option	Description
Setup	All settings (See next page.)
Memory Disk [X] + Setup	Memory disk number [X] and all settings (SMF format; sample song included) (See also next page.)
Memory Disk [X]	Memory disk number [X] only (SMF format; sample song included)

The following display appears.

```
88  ==Reset==   SURE?(YES,NO)
0.0.    ▸MemoryDisk[2]+Setup
```

5 **Press [+/YES] to reset the settings.**

If you do not want to reset the settings, press [–/NO].

The following table lists the defalt settings for the items that can be reset.

Parameter	Default	Options
General		
Volume	0	-10 to 0
Tempo	0	-50 to +20
Transpose	0	-24 to +24
Repeat	OFF	ALL, RPT, RND, A-B
Pedal Cancel	PD on	PDoff, PD on
Metronomo		
Click	ON	OFF, ON
Tempo	117	30 to 400
Beat	4/4	1/4 to 9/4
Pedal Count	OFF	OFF, ON
Vol (for models with *Slilent* system playback)	100	50 to 127
M-Tune		
TG Master Tune	00	-50 to 00 to +50
BALANCE		
TG Master Balance	100	0 to 127, OFF
MIDI Setup		
Piano Rcv Ch	01	##, 01 - 16, 1+2, Prg, Prg(all)
Delay In (500 ms)	ON	ON, OFF
Import File L	Prg	##, 01 - 16, Prg, Prg(all)
Import File R	Prg	##, 01 - 16, Prg
Piano Part ESBL Out	OFF	OFF, ON
MIDI Out	ESBL OUT	ESBL Out, Thru Port2
Out Ch	01	01 to 16
Split	OFF	OFF, A-1 to C-7
Trans L	00	-60 to 00 to +60
Trans R	00	-60 to 00 to +60
Remote Out	OFF	OFF, ON
Remote In	OFF	OFF, ON
***Silent* Functions** (for models with *Silent* system playback)		
Reverb type	HALL1	ROOM, HALL1, HALL2
Keyboard movement	ON	ON, OFF
Polyphony	32	32, 64

Chapter 19
Troubleshooting

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

Power

You cannot turn on the Disklavier.
*   Make sure the power cord is connected to a suitable AC outlet.
*   Switch on the Disklavier's "MAINS" switch.
*   Press the [STANDBY / ON] button and turn on the Control Unit.
*   If the Disklavier still cannot be turned on, disconnect it from the AC wall outlet, and consult your Disklavier dealer.
☞ *See "Turning On the Disklavier" on page 11.*

Control Unit

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.

Remote Control

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.
☞ *See "Using the Remote Control" on page 2.*

*   Make sure that the remote control's batteries have been installed correctly.
☞ *See "Installing Batteries in the Remote Control" on page 2.*
*   Check the condition of the remote control's batteries.
☞ *See "Battery Replacement" on page 2.*

Playback

None of the playback functions can be used.
*   Insert a Disklavier song disk into the disk drive.

Songs are played back at the wrong tempo or in the wrong key.
*   Reset the tempo or transposition functions. Once the tempo or transposition functions have been set, they will affect playback of all songs until another disk is inserted, or they are reset.

Songs are not played back in the normal song order.
*   Check that the "RND" and "RPT" repeat functions are off.
☞ *See "All Song, Single Song, Random Repeat" on page 29.*

You selected a song using the remote control's number pad, but the last song on the disk is selected.
*   If a song number higher than the last song number on the disk is specified, the last song will be selected.

A search time is specified using the remote control, 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.

During playback, complex note trills and faint pianissimo passages are occasionally missed.

• Increase the Disklavier's volume level. The Disklavier lowers the playback volume by reducing the force applied to each hammer. So for notes that are already quiet (pianissimo, etc.), when the playback volume is reduced there may not be enough force applied to a hammer for it to strike the strings.

The metronome does not sound during song playback.

• Check that the song uses a measures and beats time format. If not, the metronome will not sound.

The keyboard does not sound in *Quiet* or *Silent* mode.

• You can only play back songs from a disk in *Quiet* and *Silent* modes. Neither the acoustic piano nor digital piano can be played.

☛ *See "Quiet Mode and Silent Mode" on page 23.*

Pedal

During playback, the pedals do not operate.

• Check that the pedal cancel function is not set to "PDoff."

☛ *See "Operating the Pedals Yourself" on page 34.*

Tone Generator (Ensemble Playback)

During Ensemble song playback, the Ensemble parts cannot be heard.

• Make sure that the amp's volume control is set to an appropriate level.
• Readjust the volume balance.

☛ *See "Balancing the Ensemble Volume (TG Master Balance)" on page 21.*

The pitch of the Disklavier and internal XG tone generator do not match.

• Use the TG Master Tune function to tune the internal XG tone generator.

☛ *See "Tuning the Tone Generator (TG Master Tune)" on page 38.*

The TG Master Balance function does not adjust the volume of the internal XG tone generator.

• Make sure that the BALANCE parameter is set to OFF.

☛ *See "Balancing the Ensemble Volume (TG Master Balance)" on page 21.*

Connection with External Devices

The Disklavier cannot send and receive MIDI data with other MIDI instruments.

• Make sure the MIDI cables are connected properly.

Disk Utilities

You cannot copy a song in a Memory Disk onto a floppy disk.
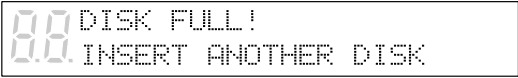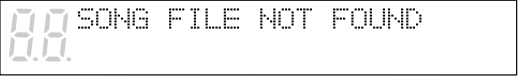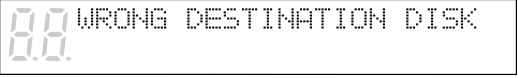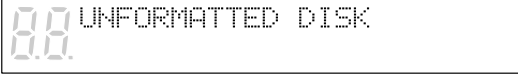
• Copy-protected songs in a Memory Disk cannot be copied onto a floppy disk. They can only be copied onto another Memory Disk.
• Make sure that the floppy disk's erasure tab is set to "unprotected."

☛ *See "Floppy Disk Accidental Erasure Protection" on page 61.*

Chapter 20
Display 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.

Note: This table does not explain every error message.

`CANNOT EXECUTE.` `PROTECTED FILES EXIST`	The current function cannot be executed because protected files exist on the floppy disk.
`DISK FULL!` `INSERT ANOTHER DISK`	No more song data can be copied to the selected disk because the disk is full. Use another disk.
`DISK WRITE PROTECTED!`	The current function cannot be performed because the floppy disk's erasure protection tab is set to "protected." Set the disk's erasure protection tab to "unprotected." ☛ See "Floppy Disk Accidental Erasure Protection" on page 61.
`NOT ENOUGH DISK SPACE`	No more song data can be copied onto the disk because the disk is nearly full.
`SONG FILE NOT FOUND`	The current function cannot be performed because this disk contains no songs or only one song.
`WRONG DESTINATION DISK`	A wrong floppy disk has been inserted as the destination disk. Insert the correct floppy disk.
`UNFORMATTED DISK`	The disk is either new and has not yet been formatted for use with the Disklavier or uses a format not recognized by the Disklavier. Format the disk. ☛ See "Formatting Disks" on page 61.
`UNSUITABLE DISK FORMAT`	In order to be copied, the destination disk must be the same format as the floppy disk.
`ONLY E-SEQ FILES` `CAN BE COPIED`	Only E-SEQ files can be copied onto an E-SEQ type disk.
`ERROR HAS OCCURRED!` `(PRESS STOP KEY!)`	The disk may be damaged. Press the Stop key to clear the message. If this message appears frequently with other disks as well, contact your nearest Yamaha service representative.

Chapter 21
Glossary

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

bpm
An abbreviation for beats per minute

Chain Play
A Disklavier function for playing back multiple disks sequentially.

Clavinova™
A series of Yamaha digital pianos.

Continuous Pedal
See "Incremental Pedal".

Cursor
The "⬍" symbol that is used on the LCD to show the currently selected function or option. When entering song or disk titles, the cursor will be the "_" symbol. Do not confuse this with the [⬅] and [➡] buttons.

Disk
Storage media for data. For clarity in the Disklavier manuals, "disk" is used as a generic term to refer to both the floppy disk and Memory Disks.

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.

E-SEQ Type Disk
One of two disk types that the Disklavier uses to format disks. E-SEQ type disks are compatible with earlier Disklavier models.

Fast Forward & Reverse
Two Disklavier functions that allow you to quickly locate a position within a song. This is faster than preview and review, but the Disklavier does not play.

Fast Preview & Review
Two Disklavier functions that allow you to search quickly through a song with the Disklavier playing.

Floppy Disk
The magnetic storage medium that the Disklavier uses to save songs. The Disklavier uses the 3.5 inch 2DD and 2HD floppy disks commonly used for computers.

Formatting
New disks must be formatted before they can be used with the Disklavier. Formatting prepares the disk so that it is ready to store Disklavier song data.

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".

Import File
Songs recorded onto floppy disks using MIDI equipment other than the Disklavier and played back by the Disklavier.

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 reproduces the up and down movement of the piano pedals.

LCD
Liquid Crystal Display. The Control Unit has an LCD that shows 2 large characters and 2 lines of 24 small characters. For clarity in the Disklavier manuals, the LCD is referred to as the "display".

LED
Light Emitting Diode. The Control Unit's front panel indicators are LEDs.

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.

Memory Disk
The Disklavier has 16 internal Memory Disks that allow you to store song data without a floppy disk. Each Memory Disk has a memory capacity of 1MB.

Metronome
A built-in device designed to mark exact time by a regularly repeated click and flashing LED.

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

Piano Parts
Refers 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. These track assignments are the default settings and can be changed.

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 back on the Disklavier.

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

Program Change Message
A type of MIDI message that is used for selecting programs or voices. When an Ensemble song starts playing, Program Change messages are sent to the tone generator to select the correct instrument voices for each ensemble track.

Quiet Mode (for models with *Silent* system playback)
A *Silent* system mode in which sound is output through the speakers, enabling you to freely adjust the volume of the piano.

Reverb (for models with *Silent* system playback)
Short for "reverberation." The effect that adds a more realistic feel to a sound by simulating the reflection of the sound in rooms and halls of various sizes.

Rhythm Track
Tracks of an ensemble song designated for the accompanying rhythm. The rhythm track is unaffected by the playback transposition function.

Search
A Disklavier function that allows you to start playback from a specific point within a song. This function is set using the remote control.

Sequencer

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

Silent Mode (for models with *Silent* system playback)

A *Silent* system mode in which sound is output through connected headphones so that you can listen to songs or play the piano without disturbing people around you.

Silent System (for models with *Silent* system playback)

Yamaha's innovative system in which a push of the [SILENT] button keeps the hammers from striking the strings, effectively silencing the acoustic piano. Sound is sent to the digital piano tone generator and output through the speakers (*Quiet* mode) or headphones (*Silent* mode).

SMF

Abbreviation for Standard MIDI File.

SMF Song Format

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

SMF Type Disk

One of two disk types that the Disklavier uses to format disks.

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.

Song Format

The method used to store song data in a file. PianoSoft and PianoSoft·Plus songs use the E-SEQ format. The Disklavier also supports songs in the Standard MIDI File (SMF) format.

Song Number

All songs on a Disklavier disk are numbered sequentially. The currently selected song number is shown in the LCD. Songs can be selected directly by entering the song number using the remote control's number pad.

Song Sort

A Disklavier function that allows you to rearrange the order of songs on a disk.

Split Point

When a keyboard split point is set before recording, notes played on the left-hand side of the split point are saved as the left-hand part and notes played on the right-hand side of the split point are saved as the right-hand part. This allows you to play the left- and right-hand parts simultaneously, but on different tracks.

Standard MIDI File (SMF)

A file of MIDI data that can be read and used by a number of different MIDI devices and computers. The Disklavier supports all SMF playback functions.

System Exclusive Messages

MIDI messages used for sending system data to a connected MIDI device. For example, when tuning the internal XG tone generator or an external tone generator, System Exclusive Messages are sent via MIDI.

TG Master Balance

A function that allows you to balance the volume levels of the Disklavier and the internal XG tone generator.

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.

Timer Play

A Disklavier function for automatically playing back groups of disks at pre-set times.

Tone Generator

An electronic device that can generate tones or instrument voices.

Track

Disklavier ensemble song data is organized as tracks. One song can be composed of up to 16 tracks.

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.

Velocity

Because the loudness of a piano note is determined by the speed (velocity) with which a string is struck by a hammer, note loudness is referred to as velocity.

Voice

The sounds produced by a tone generator expressing various instruments. See Chapter 22 "Internal XG Tone Generator Voice & Drum Kit List" for a listing of basic voices.

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 22
Internal XG Tone Generator Voice & Drum Kit List

The following table lists the basic voices for the internal XG tone generator. These voices are available on any XG compatible generator or synthesizer.

Internal XG Tone Generator Basic Voice List

Voice #	Display Name	Full Name
Piano		
001	GrandPno	Acoustic Grand Piano
002	BritePno	Bright Acoustic Piano
003	E.Grand	Electric Grand Piano
004	HnkyTonk	Honky-tonk Piano
005	E.Piano1	Electric Piano 1
006	E.Piano2	Electric Piano 2
007	Harpsi.	Harpsichord
008	Clavi.	Clavichord
Chromatic Percussion		
009	Celesta	Celesta1
010	Glocken	Glockenspiel
011	MusicBox	Music Box
012	Vibes	Vibraphone
013	Marimba	Marimba
014	Xylophon	Xylophone
015	TubulBel	Tubular Bells
016	Dulcimer	Dulcimer
Organ		
017	DrawOrgn	Drawbar Organ
018	PercOrgn	Percussive Organ
019	RockOrgn	Rock Organ
020	ChrchOrg	Church Organ
021	ReedOrgn	Reed Organ
022	Acordion	Accordion
023	Harmnica	Harmonica
024	TangoAcd	Tango Accordion
Guitar		
025	NylonGtr	Acoustic Nylon Guitar
026	SteelGtr	Acoustic Steel Guitar
027	Jazz Gtr	Electric Jazz Guitar
028	CleanGtr	Electric Clean Guitar
029	Mute.Gtr	Electric muted Guitar
030	Ovrdrive	Overdriven Guitar
031	Dist.Gtr	Distortion Guitar
032	GtrHarmo	Guitar Harmonics

Voice #	Display Name	Full Name
Bass		
033	Aco.Bass	Acoustic Bass
034	FngrBass	Electric Bass fingered
035	PickBass	Electric Bass picked
036	Fretless	Fretless Bass
037	SlapBas1	Slap Bass 1
038	SlapBas2	Slap Bass 2
039	SynBass1	Synth Bass 1
040	SynBass2	Synth Bass 2
Strings		
041	Violin	Violin
042	Viola	Viola
043	Cello	Cello
044	Contrabs	Contrabass
045	Trem.Str	Tremolo Strings
046	Pizz.Str	Pizzicato Strings
047	Harp	Orchestral Harp
048	Timpani	Timpani 1
Ensemble		
049	Strings1	String Ensemble1
050	Strings2	String Ensemble2
051	Syn.Str1	Synth Strings 1
052	Syn.Str2	Synth Strings 2
053	ChoirAah	Choir Aahs
054	VoiceOoh	Voice Oohs
055	SynVoice	Synth Voice
056	Orch.Hit	Orchestral Hit
Brass		
057	Trumpet	Trumpet
058	Trombone	Trombone
059	Tuba	Tuba
060	Mute.Trp	Muted Trumpet
061	Fr.Horn	French Horn
062	BrasSect	Brass Section
063	SynBras1	Synth Brass 1
064	SynBras2	Synth Brass 2

Voice #	Display Name	Full Name
Reed		
065	SprnoSax	Soprano Sax
066	Alto Sax	Alto Sax
067	TenorSax	Tenor Sax
068	BariSax	Baritone Sax
069	Oboe	Oboe
070	Eng.Horn	English Horn
071	Bassoon	Bassoon
072	Clarinet	Clarinet
Pipe		
073	Piccolo	Piccolo
074	Flute	Flute
075	Recorder	Recorder
076	PanFlute	Pan Flute
077	Bottle	Bottle Blow
078	Shakhchi	Shakuhachi
079	Whistle	Whistle
080	Ocarina	Ocarina
Synth Lead		
081	SquareLd	Lead 1 (square)
082	Saw.Lead	Lead 2 (saw tooth)
083	CaliopLd	Lead 3 (calliope)
084	Chiff Ld	Lead 4 (chiff)
085	ChranLd	Lead 5 (charang)
086	Voice Ld	Lead 6 (voice)
087	Fifth Ld	Lead 7 (fifths)
088	Bass &Ld	Lead 8 (bass+lead)
Synth Pad		
089	NewAgePd	Pad 1 (new age)
090	Warm Pad	Pad 2 (warm)
091	PolySyPd	Pad 3 (polysynth)
092	ChoirPad	Pad 4 (choir)
093	BowedPad	Pad 5 (bowed)
094	MetalPad	Pad 6 (metallic)
095	Halo Pad	Pad 7 (halo)
096	SweepPad	Pad 8 (sweep)

Voice #	Display Name	Full Name
Synth Effect		
097	Rain	SFX 1 (rain)
098	SoundTrk	SFX 2 (soundtrack)
099	Crystal	SFX 3 (crystal)
100	Atmosphr	SFX 4 (atmosphere)
101	Bright	SFX 5 (brightness)
102	Goblin	SFX 6 (goblins)
103	Echoes	SFX 7 (echoes)
104	Sci-Fi	SFX 8 (sci-fi)
Ethnic		
105	Sitar	Sitar
106	Banjo	Banjo
107	Shamisen	Shamisen
108	Koto	Koto
109	Kalimba	Kalimba
110	Bagpipe	Bag pipe
111	Fiddle	Fiddle
112	Shanai	Shanai
Percussive		
113	TnklBell	Tinkle Bell
114	Agogo	Agogo
115	SteelDrm	Steel Drums
116	WoodBlok	Woodblock
117	TaikoDrm	Taiko Drum
118	MelodTom	Melodic Tom
119	Syn.Drum	Synth Drum
120	RevCymbl	Reverse Cymbal
Sound Effects		
121	FretNoiz	Guitar Fret Noise
122	BrthNoiz	Breath Noise
123	Seashore	Seashore
124	Tweet	Bird Tweet
125	Telphone	Telephone Ring
126	Helicptr	Helicopter
127	Applause	Applause
128	Gunshot	Gun Shot

Internal XG Tone Generator Drum Kit List

Kit #	Display Name	Full Name
001	StandKit	Standard Kit
002	Stnd2Kit	Standard Kit #2
009	Room Kit	Room Kit
017	Rock Kit	Rock Kit
025	ElectKit	Electronic Kit
026	AnalgKit	Analog Kit

Kit #	Display Name	Full Name
033	Jazz Kit	Jazz Kit
041	BrushKit	Brush Kit
049	ClascKit	Classic Kit
001	SFX Kit 1	SFX Kit1
002	SFX Kit 2	SFX Kit2

Chapter 23
Specifications

		Playback models	Playback models with *Silent* system
Sensor System	Pedal Sensors	Sustain & shift: incremental, position-sensing, optical Sostenuto[1]: on/off, optical	
Drive System	Keys	New, high-power, high-efficiency solenoids; 16-note polyphonic	
	Pedals	Sustain & shift: trapwork-integrated solenoids; incremental response	
Data Storage	Internal Memory	1 MB × 16 flash memory disks (16 MB total); up to 9 groups and 99 program sets; built-in calendar/clock/timer	
	File Format	Standard MIDI File (format 0, 1) / E-SEQ	
Removable Media	Floppy Disk	3.5" 2DD (720 KB) or 2HD (1.44 MB) floppy disk	
Control Unit	Main Display	Song number plus 24-character × 2-line LCD	
	Function Indicators	LEDs	
	Drive	Floppy disk	
	Switches	Power, Host Select (MIDI, PC1, PC2, Mac)	
	Dimensions (WHD)	227 × 64 × 180 mm (9" × 2 1/2" × 7")	
	Weight	1.6 kg (3.5 lbs)	
Amplification		60W × 2; tone and volume controls	
	Speakers	16 cm (6 1/4") woofer × 2, 2.5 cm (1") tweeter × 2	
Connectors		MIDI In/Out, AUX In/Out (R, L/Mono), Headphones[2] × 2, To Host (serial port), To Piano, Foot Controller	
Ensemble Tone	Type	Advanced Wave Memory 2 (AWM2)	
	Polyphony	32-note max.	
	Ensemble Parts	16	
	Voice Module Modes	XG, GM	
	Normal Voices	676 (480 selectable)	
	Drum Voices	21 kits total (11 selectable)	
	Pitch	Set at A=440, tunable ±50 cents in 1-cent increments	Set at A=440, tunable ±50 cents in 1-cent increments (in unison with digital piano tone)
Silent System	Silencing Mechanism	—	Motor-driven hammer shank stopper (switch control)
	Action Compensation	—	*Quick Escape* mechanism
	Piano Tone	—	AWM2 digital stereo sampling (CFIIIS concert grand); 16 MB wave memory w/sustain pedal resonance effects
	Polyphony	—	32-note stereo sampling/ 64-note stereo
Power Source		Local AC current	

Supplied Accessories	Wireless remote control unit w/batteries, PianoSoft sample disk, blank 3.5" 2HD floppy disk, owner's manuals, control unit suspension bracket	
Optional Accessories	FC-4, FC-5 foot switches, FC-7 foot controller	HPE-170 headphones, FC-4, FC-5 foot switches, FC-7 foot controller

Function & Controls

Playback Functions	Media Select	Floppy disk, Memory Disks (1 to 16), CD
	Song Select	Rev/fwd, song by song; numerical selection
	Music Search	Rev/fwd, w/ or w/o sound; direct by time or measure
	Repeat	Disk, song, random, segment A~B, segment A~
	Programming	9 disk groups, 99 program sets, chain play, timer play
	Others	L/R part select, auto start, space playback
Playback Controls	Volume	11 levels (0 ~ -10)
	Tempo	-50 ~ +20 in 1 % steps
	Transposition	±24 semitones (2 octaves) in 1-semitone steps
	Balance	Balancing volume of ensemble voices and piano
	Others	Keyboard cancel, pedal cancel, pedal count-in
Recording Functions	Tracks	16 (including 2 for piano)
	L/R Dual Recording	Separate L/R or assignable split point
	Quantize	1/4, 1/6, 1/8, 1/12, 1/16 of a quarter note
	Others	Re-recording
Silent System Controls	Power	On/ off (w/ pilot lamp)
	Volume	Continuous
	Reverb	3 modes, depth control
Metronome	Range	30 ~ 400 beats per minute
	Time Signatures	1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4, 9/4
	Function	Audible (tick, on/off, volume controllable in the *Silent* system), visual (LEDs)
Editing Functions	Track	Mix, move, copy, delete, transpose
Utility Functions	Song	Copy, sort, delete, type convert (SMF, E-SEQ, earlier Disklavier), time format convert
	Disk	Format, copy, type convert
	Calendar/Clock/Timer	Current time display, time/date stamp for recording
	Title Entry	Disk: 64 characters max. Song: 32 characters max.

Notes: 1 Not applicable to models with other center pedal functions.

2 Models with Silent system only.

Specifications are subject to change without prior notice.

YAMAHA [Disklavier] **MIDI IMPLEMENTATION CHART** Date : 01-Feb-2000

Model: Mark III Playback Version : 1.00

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

Notes *1 = Received (transmitted) if switch is on.

*2 = Only ESBL Part can recognize.

*3 = m is always treated as 1 regardless of its value.

Mode 1 : OMNI ON. POLY   Mode 2 : OMNI ON. MONO   O : Yes

Mode 3 : OMNI OFF. POLY   Mode 4 : OMNI OFF. MONO   ✕ : No

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