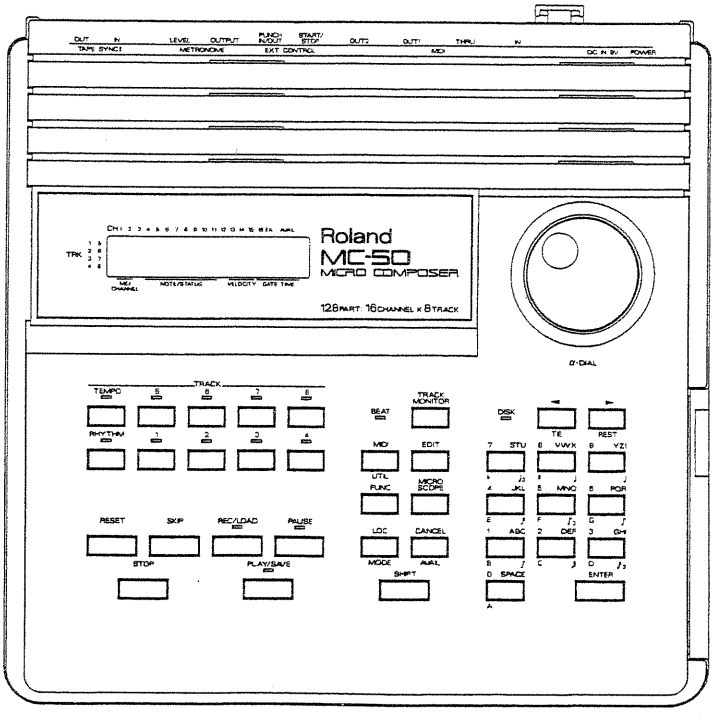
Roland

MICRO COMPOSER

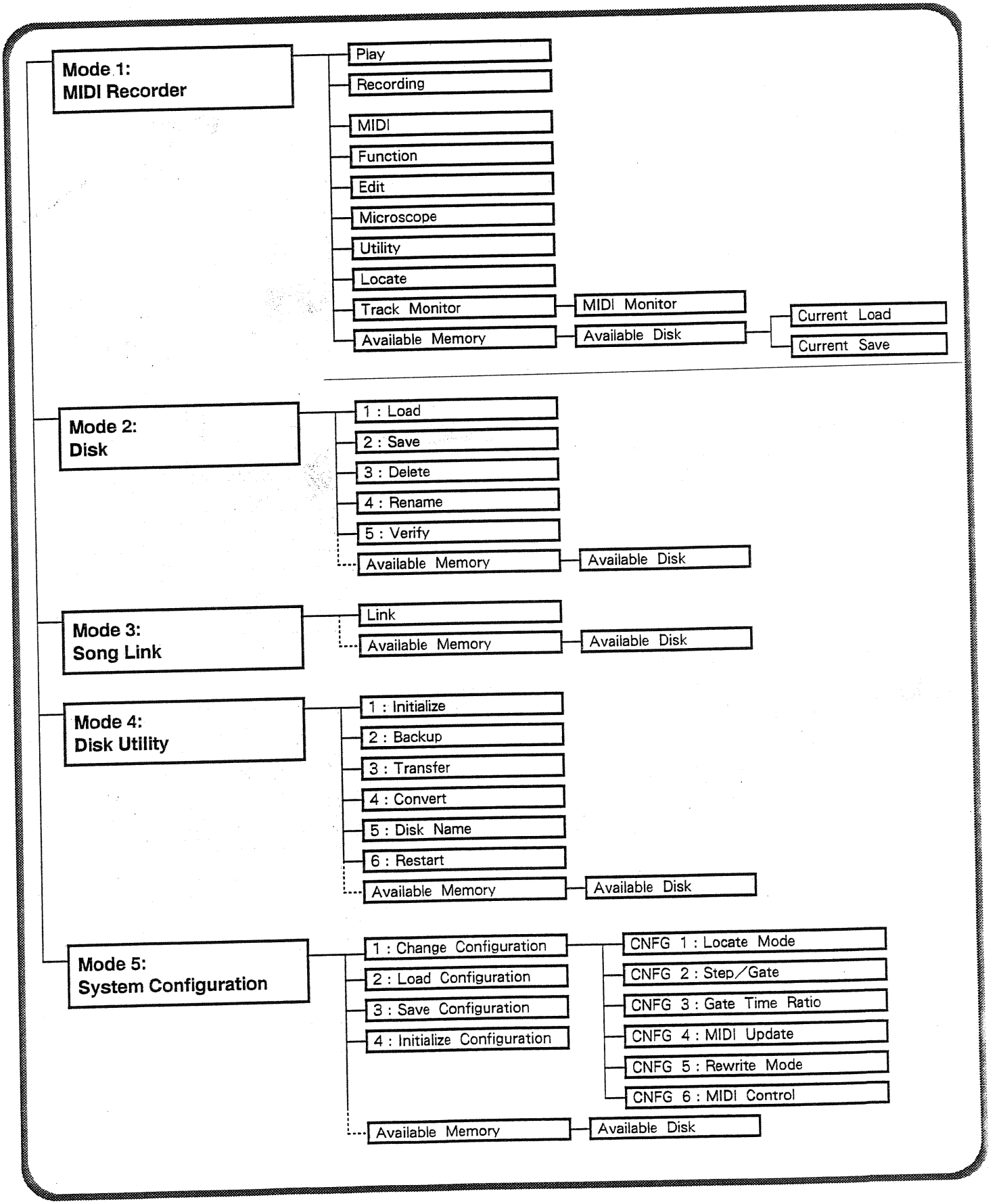
MC-50

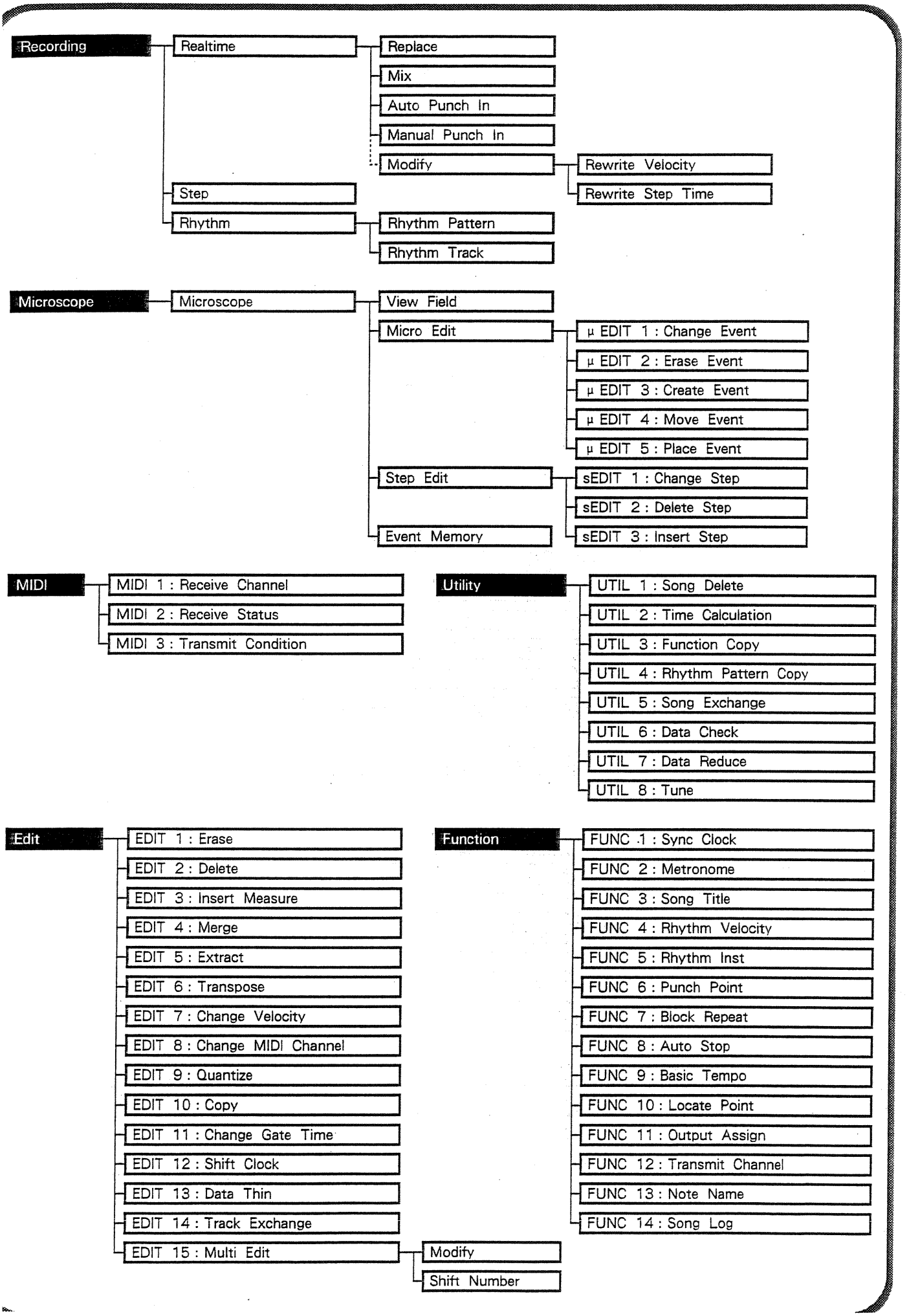
Owner's Manual II
(REFERENCE)



MC-50 (SUPER-MRC)

OPERATION MAP




Recording
Realtime
Replace
Mix
Auto Punch In
Manual Punch In
Modify
Rewrite Velocity
Rewrite Step Time
Step
Rhythm
Rhythm Pattern
Rhythm Track
Microscope
Microscope
View Field
Micro Edit
μ EDIT 1 : Change Event
μ EDIT 2 : Erase Event
μ EDIT 3 : Create Event
μ EDIT 4 : Move Event
μ EDIT 5 : Place Event
Step Edit
sEDIT 1 : Change Step
sEDIT 2 : Delete Step
sEDIT 3 : Insert Step
Event Memory
MIDI
MIDI 1 : Receive Channel
MIDI 2 : Receive Status
MIDI 3 : Transmit Condition
Utility
UTIL 1 : Song Delete
UTIL 2 : Time Calculation
UTIL 3 : Function Copy
UTIL 4 : Rhythm Pattern Copy
UTIL 5 : Song Exchange
UTIL 6 : Data Check
UTIL 7 : Data Reduce
UTIL 8 : Tune
Edit
EDIT 1 : Erase
EDIT 2 : Delete
EDIT 3 : Insert Measure
EDIT 4 : Merge
EDIT 5 : Extract
EDIT 6 : Transpose
EDIT 7 : Change Velocity
EDIT 8 : Change MIDI Channel
EDIT 9 : Quantize
EDIT 10 : Copy
EDIT 11 : Change Gate Time
EDIT 12 : Shift Clock
EDIT 13 : Data Thin
EDIT 14 : Track Exchange
EDIT 15 : Multi Edit
Modify
Shift Number
Function
FUNC 1 : Sync Clock
FUNC 2 : Metronome
FUNC 3 : Song Title
FUNC 4 : Rhythm Velocity
FUNC 5 : Rhythm Inst
FUNC 6 : Punch Point
FUNC 7 : Block Repeat
FUNC 8 : Auto Stop
FUNC 9 : Basic Tempo
FUNC 10 : Locate Point
FUNC 11 : Output Assign
FUNC 12 : Transmit Channel
FUNC 13 : Note Name
FUNC 14 : Song Log

Contents

☐ How to use this manual

The organization of this manual follows the structure of the MC - 50. The title of each item is as self - explanatory as possible, and an index of all functions is included at the end of this manual so you can quickly find the operation you need. If you are using the MC - 50 for the first time, please read through Owner's Manual I (USER'S GUIDE) to gain an understanding of its basic operation.

FUNCTION

EDIT

MICROSCOPE

UTILITY

MODE 2 : DISK

MODE 3 : SONG LINK

MODE 4 : DISK UTILITY

MODE 5 : SYSTEM CONFIGURATION

SUPER - MRP (PERFORMANCE SYSTEM)

APPENDIX

About the MC - 50

This section gives a general overview of the MC - 50 and how its data is organized.

1. SUPER - MRC and SUPER - MRP

The MC - 50 is a MIDI sequencer which contains the SUPER - MRC and SUPER - MRP system programs. These two system programs include new functions which have been added to the system programs of the MC - 500mk II .

◆ **SUPER - MRC** is a system program that allows you to create and edit song data.

◆ **SUPER - MRP** is a system program that allows you to specify the playback order of songs created using the SUPER - MRC.

As with previous models in the MC series, the MC - 50 is able to use system programs loaded from other system disks. For example, you can use programs such as the MRB - 500 (bulk librarian) for managing MIDI sound module data.

2. Song Data

Song data consists of "tracks" containing musical data, and functions which determine how the song will be played. The MC - 50 can hold up to 8 songs in its internal memory.

◆ Phrase tracks (1—8)

You can record various types of MIDI messages in a Phrase track. Each Phrase track can record song data consisting of MIDI channels 1—16. As long as the MIDI channels are different, the same track can contain independent data for more than one song. Also, since song data is handled independently for each Phrase track, even MIDI messages of the same channel can be handled separately if recorded on different tracks. In this way, although the MC - 50 may appear to have only eight tracks, it has the functionality of 128 tracks (8 × 16).

The MC - 50 has two MIDI OUT connectors. For example, if tracks 1 and 2 each have 16 channels of song data, track 1 can be sent to MIDI OUT 1 and track 2 to MIDI OUT 2, for a performance using 32 MIDI sound modules.

◆ Rhythm track

The Rhythm track places previously prepared one - measure Rhythm patterns in the order in which they are to be performed. The Rhythm track does not contain the actual Rhythm pattern data itself, but only the numbers (pattern numbers) of the Rhythm patterns. This means that if you modify the Rhythm pattern settings, the performance will change.

The Rhythm track not only contains the drum performance, but also information on the length of the song and the time signature of each measure. This means that it is not possible to playback measures beyond the length of the Rhythm track. Be aware that if you edit the song data to make a Phrase track longer than the Rhythm track, the length beyond the end of the Rhythm track cannot be played back.

◆ Rhythm patterns

Rhythm patterns are created one measure at a time. 240 Rhythm patterns can created for each set of song data.

◆ Tempo track

The Tempo track records only changes in tempo. Use it when you want to change the tempo during a performance.

◆ Functions

Fourteen functions are provided, allowing you to specify how a song is played back or recorded, for example.

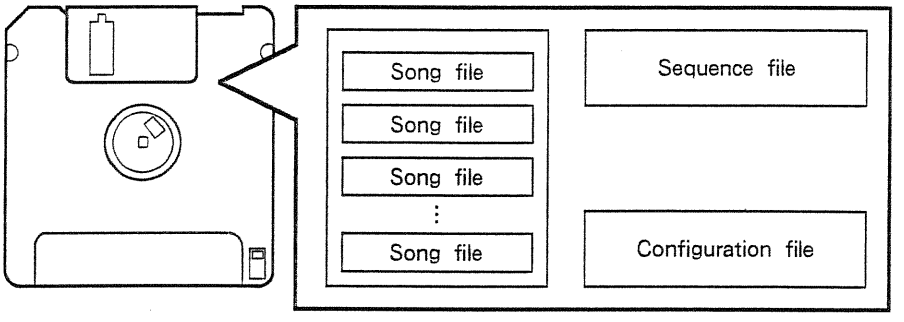
3. Data Handling

In addition to the song data explained above, the MC - 50 uses Configuration data and Sequence data.

◆ **Configuration data** specifies the environment in which you are using the MC - 50. In contrast to Functions, which specifies functions for each individual song, configuration data is common to all songs.

◆ **Sequence data** contains SUPER - MRP settings, and is not used with SUPER - MRC.

All this data will be lost when the power is turned off. If you wish to save it, you must write it to disk. Disks store this data in units called "**Files**". A disk can contain up to 108 Song files. Each disk also holds one Configuration file and one Sequence file. You can think of Configuration files and Sequence files as containing settings for all the Song files on a disk.



Sets of song data in MC - 50 memory are distinguished by **Song numbers**. There will be no problem even if two or more sets of song data have the same name. However, the Song Files on a disk are distinguished by song name (**Song title**). This means that it is not possible to store more than one Song File of a given Song Title on a single disk.

4. The five Modes of SUPER-MRC

The functions of SUPER - MRC are divided into five modes. Each mode is further subdivided.

◆ Mode 1: MIDI Recorder

Play	Play song data
Recording	Create song data
Available memory	Checks the amount of remaining internal/disk memory Save and load song data
MIDI	Specify how MIDI messages will be transmitted and received
Function	Set song functions
Edit	Edit/modify song data
Microscope	Check/edit/modify individual MIDI messages in song data
Utility	Edit entire song Convenient functions such as playing time calculation, etc.
Locate	Set/jump Locate points
Track monitor/ MIDI monitor	Monitor the song data Monitor the MIDI messages being received at MIDI IN

◆ Mode 2: Disk

Load	Load a song file from disk into MC-50 memory
Save	Save MC-50 memory onto disk
Delete	Delete a song file from disk
Rename	Change the name of a song file on disk
Verify	Compare song data in MC-50 memory with song data on disk

◆ Mode 3: Song Link

Combine two or more songs in MC - 50 memory into one song.

◆ Mode 4: Disk Utility

Initialize	Initialize a disk
Backup	Copy a disk
Transfer	Copy song files between disks
Convert	Convert MRC-500/300 song files for use with SUPER-MRC
Disk name	Name a disk
Restart	Start up a different system program from SUPER-MRC

◆ Mode 5: System Configuration

Change	Modify configuration data
Load	Load a configuration file from disk into the MC-50
Save	Save configuration data to disk
Initialize	Initialize the configuration data

5. Basic Operation

This section explains the basic key operations. For details, refer to the appropriate section.

☐ When using the functions of mode 1

To select the functions of mode 1, press the appropriate key. To exit (or abort) the function, press [STOP]. It is not possible to move directly from one function to another function: you must first press [STOP], and then move to the other function.

Recording	[REC]
Available memory	Hold [SHIFT] and press [AVAIL]
MIDI functions	[MIDI]
Functions	[FUNC]
Edit functions	[EDIT]
Microscope	[MICROSCOPE]
Utility	Hold [SHIFT] and press [UTIL]
Locate functions	[LOC]
Track monitor	[TRACK MONITOR]
MIDI monitor	[TRACK MONITOR] → [MIDI]

When you select MIDI/Edit/Function/Utility, a menu will appear: select the desired function from the menu then and proceed.

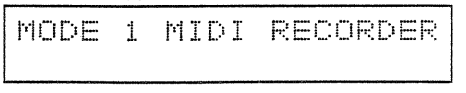
☐ Switching modes

To switch from mode 1 to another mode, use the following procedure:

① Move to the mode select display.

Hold [SHIFT] and press [MODE]

Mode number



② Select a mode number, and press ENTER.

Alpha - dial / Numeric keys [1] — [5] → [ENTER]

If you select a mode other than 2/4/5, you will get the menu display of that mode. Select the desired function from the menu display, and then proceed. To return from the function to the menu display, press [STOP].

To move to another mode, move to the menu display of that mode, and then hold [SHIFT] and press [MODE]. You will return to the mode select display.

☐ Basic key operations

Except for special operations, you will use the cursor keys ([◀][▶]), Alpha - dial, and Numeric keys to make various settings.

◆ Cursor movement

The blinking (or underlined) area of the display is called the "Cursor". Use [◀][▶] to move the cursor to the value of the item you wish to modify. For some functions, a single screen may not be able to display all the items. In such cases, move the cursor to select the next screen.

◆ Setting values

To set a value, use the Alpha - dial or the Numeric keys. In general, the Alpha - dial and Numeric keys work in the same way, and you may use either as you wish.

When you rotate the Alpha - dial to the right, the value will increase. When you rotate it to the left, the value will decrease. The value specified by the Alpha - dial is finalized as it is modified. However when selecting modes or functions, you must press [ENTER] to finalize the value.

The Numeric keys work differently depending on the value you are modifying.
In general, after modifying a value with the Numeric keys, press [ENTER] to finalize the value. If the modified value has not been finalized, the value will blink alternately with "+". If you select another item or function before finalizing the value, it will return to the previous, unmodified value. To finalize the value, press [ENTER]. To return to the previous value, press [CANCEL].

Number	Directly specify the number. To make the value positive (+), hold [SHIFT] and press Numeric key [8]. To make the value negative (−), hold [SHIFT] and press Numeric key [7].
Item	The item will change successively from [0].
Name (alphabet)	You can enter the alphabetical characters printed on the numeric keys. Each time you press a button, you will cycle through the characters. To enter lower case characters, hold [SHIFT] and press a Numeric key.
Notes	Press the appropriate Numeric key as indicated by the note mark printed on the lower right of the key.

When making editing settings etc., you can press the Numeric key [0] to specify values such as all MIDI channels (ALL), all tracks (ALL), all Phrase tracks (1—8), or the last measure (END).
You can also use the Numeric keys while holding [SHIFT] to specify special values.

＊You can also use the Track keys to select tracks for various settings.

This chapter explains how to start up SUPER-MRC, how to playback, and various convenient functions for playback.

SUPER - MRC Startup and Standby

☐ Starting up SUPER - MRC (method 1)

When you turn the power on, the following displays will appear.

Initial display

```
MC-50 SUPER-MRC
Recording System
```

➡ after a short time

Standby display

```
SONG  1
M=    1   ♩=120   REAL
```

☐ Starting up SUPER - MRC (method 2)

When SUPER - MRC is started up, it will load the specified song file from the song disk into MC - 50 memory. In order to automatically read in a song file, you must specify an "auto load filename" in the configuration file on the song disk.

＊ To set an auto load filename, refer to "Mode 5: Save" (☞P.164).

① Turn the MC - 50 power on, and insert a song disk while the initial display is displayed.
When SUPER - MRC starts up, the song file (and configuration file) will be read into the MC - 50.

☐ Starting a system from a system disk

You can start up a system program from a system disk (such as the separately sold MRB - 500 Bulk Librarian, etc.) by turning the power on.

＊ To start up another system program (SUPER - MRP, system disk) while SUPER - MRC is running, refer to "Mode 4: Restart" (☞P.153).

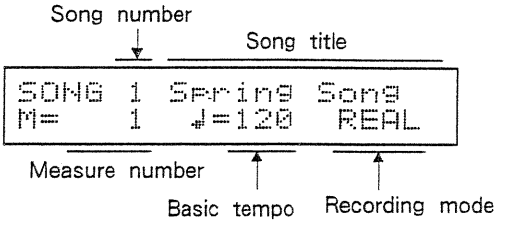
① Hold Numeric key [3] and turn the power on.

② Insert system disk, and press [ENTER].

☐ The standby display

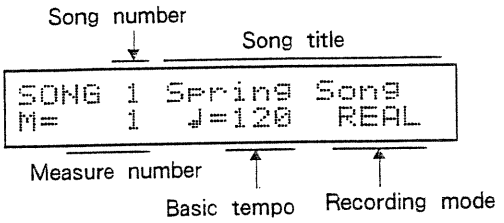
When SUPER - MRC is started up, the standby display will appear. The standby display is the basic display from which you begin various operations. If the MC - 50 is in the standby display and is not playing, this is known as the **Standby condition**.

The standby display shows the following settings.



Play

☐ Basic play operations



Start playback	PLAY
Pause playback/start playback from the paused location	PAUSE
Stop playback	STOP
Stop playback and return to the first measure	RESET

◆ In the standby condition, use ◀ ▶ to move the cursor (blinking) to the Song number / Measure number / Basic tempo / Recording mode, and use the Alpha - dial (or Numeric keys → ENTER) to modify the value.

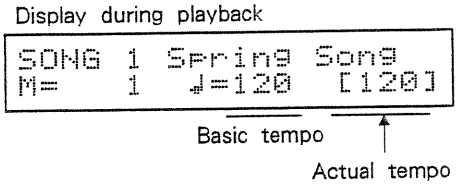
◆ When you stop playback on a location other than a measure boundary, a "+" mark will be displayed at the right of the measure number.

◆ You can connect a pedal switch (DP - 2, etc.) to the START/STOP jack to start and stop the MC - 50 each time the pedal is pressed.

* Notes that are sounding when you press PAUSE will continue sounding.
* To automatically stop at a point you specify, set "FUNC 8: Auto stop" (☞P.70).
* If you want the MC - 50 to stop at next of the measure in which you pressed STOP , set "CNFG 1: Locate mode" (☞P.156).

☐ Tempo

Each song is played according to its displayed Basic tempo (and the tempo in the Tempo track).
During playback, the Basic tempo and the actual tempo will be displayed. If tempo data has not been recorded in the Tempo track, both of these values will be the same. If tempo data exists, the tempo will change around the value of the displayed Basic tempo.



The Basic tempo can be temporarily changed in the standby condition or during playback. If you select another song, the Basic tempo of that song will be selected.

< Temporarily modifying the Basic tempo >

Use ◀ ▶ to move the cursor to Tempo, and use the Alpha - dial (or the Numeric keys → ENTER) to modify the tempo. To return to the Basic tempo, hold SHIFT and rotate the Alpha - dial.

< Setting the Basic tempo of a song >

The Basic tempo can be set for each song, and is initially set to 120. To modify this value, refer to "FUNC 9: Basic tempo" (☞P.71).

☐ Moving between measures

Use the [◀][▶] to move the cursor to the measure number, and use the Alpha - dial(or Numeric keys → [ENTER]) to specify the measure number.

< Key functions >

Move to the last measure	[SKIP]
Move to the first measure	[RESET]
Move to the next measure	Hold [PAUSE] and press [SKIP]
Move to the previous measure	Hold [PAUSE] and press [RESET]

☐ Playback track on/off

The indicator of each track key will light to indicate tracks which contain song data. When you press a key which is lit, the indicator will go out, and song data of that track will no longer be transmitted from MIDI OUT. If you turn the Tempo track off, the song will be played back at the displayed Basic tempo.

☐ Song selection

Use [◀][▶] to move the cursor to the song number, and use the Alpha - dial(or Numeric keys → [ENTER]) to specify the song number.

To select a song number which contains no song data, use the Numeric keys to select the song number, and then hold [SHIFT] and press [ENTER]. Once you have selected a song number, it can be selected in the same way as song numbers which contain song data.

< Key functions >

Select the next song number	Hold [SHIFT] and press [SKIP]
Select the previous song number	Hold [SHIFT] and press [RESET]

☐ Special playback

◆ Block repeat play (continue playback over a specified area)
Hold [SHIFT] and press [PLAY].

＊Specify the area of repetition in "FUNC 7: Block repeat" (☞P.69).

◆ Quadruple speed playback (upper limit: tempo 500)
Hold [PLAY] and press [▶].

◆ Quarter speed playback (lower limit: tempo 5)
Hold [PLAY] and press [◀].

☐ Other functions

◆ If notes on a MIDI sound module are stuck, you can turn them off by holding
Hold [STOP] and press [MIDI].

◆ If you want the changing messages (except for note messages) in the area over which you moved to be output from MIDI OUT, hold [PAUSE] and press [MIDI].(If you simply move to a different measure, messages in the song data you skipped over will not be transmitted from MIDI OUT. For example, if the area you skipped contains a Program Change message, the MIDI sound module would not be set to the appropriate program. In such cases, you can use this function to ensure that when playback begins from the new location, the settings of the MIDI sound module will be correct.)

*If you wish to automatically transmit any changes in song data (except for Note messages) which precede the point newly moved to in response to a Song Position Pointer message, refer to "CNFG 4: MIDI update" (☞ P.159).

Locate Functions

☐ Explanation

Locate points contain data (measure, beat, clock) to specify a position. In standby condition or microscope display, you can use the Locate Jump function to move quickly to a previously specified Locate point.
Locate points are also used when specifying the area or position for various functions.

Locate points are handled as numbers 0—9. You can freely set your own Locate point for numbers 1—8.

Locate number	Type of Locate point	Remarks
0	System Locate point	This is set automatically where recording begins.
1—8	User Locate point	These can be set at any location in the song.
9	System Locate point	This is set automatically where recording ends.

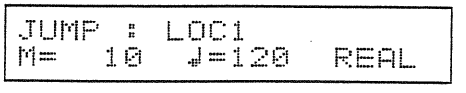
* Locate points are renewed each time they are set.
* To name a Locate point or set a Locate point by specifying individual measure/beats, refer to "FUNC 10: Locate point settings" (☞P.72).
* To use the Locate Jump function to move to the beginning of the measure of a Locate point, refer to "CNFG 1: Locate mode" (☞P.156).

☐ Locate point settings

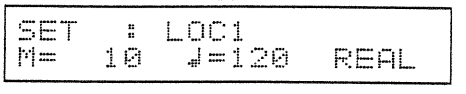
● From the standby condition / play condition / microscope display

① Move to the position where you wish to set a Locate point.

② Select the Locate Point setting display.
LOC → REC



Locate number



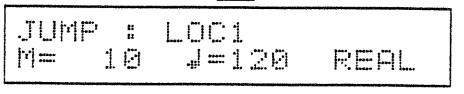
③ Select a Locate number, and execute.
(Alpha - dial / Numeric keys) → ENTER

☐ Locate jump

● From the standby condition / microscope display

① Select the Locate display.
LOC

Locate number



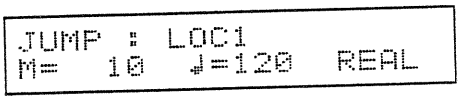
② Select a Locate number, and execute.
(Alpha - dial / Numeric keys) → ENTER

☐ Locate point delete

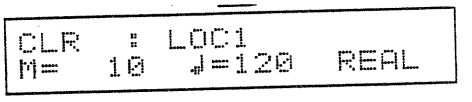
● From the standby condition

① Select the Locate Point delete display.

LOC → Hold SHIFT and press REC



Locate number



② Select a Locate number, and execute.

(Alpha - dial / Numeric keys) → ENTER

Checking Song Data (Track Monitor)

☐ Explanation

The track monitor graphically indicates the type and channel of MIDI messages being transmitted from each Phrase track.

In the track monitor display, you can specify the MIDI messages to be displayed.

Numeric key input	Display	MIDI message
0	PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
1	CC	Control Change 0—120
2	PG	Program Change
3	CAf	Channel Aftertouch (Channel Key Pressure)
4	PB	Pitch Bend
5	EX	Exclusive
6	TU	Tune Request
7	MOD	Channel Mode messages
9	NT	Note

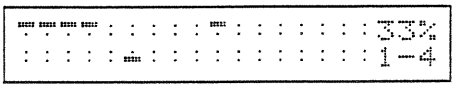
☐ Procedure

● From the standby condition

① Select the Song number you wish to check.

② Select the Track Monitor display.

[TRACK MONITOR]

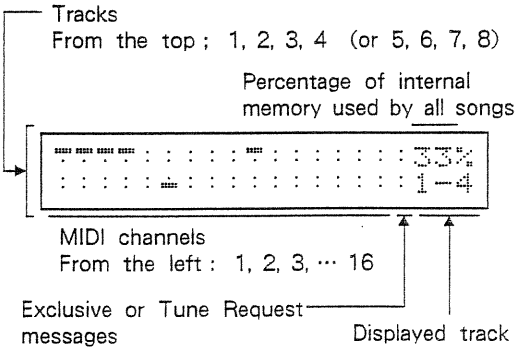


③ Select the MIDI message and tracks you wish to monitor.

Numeric keys [0]—[7], [9] (select MIDI message)

[TRACK MONITOR] (select the tracks)

To switch the displayed tracks (1—4, 5—8), press [TRACK MONITOR]. When all MIDI messages are being displayed, the percentage of data usage will be displayed, but if you have used the Numeric keys to select a specific type of MIDI message, the name of the selected MIDI message will be displayed. To return to the display of all MIDI messages, press [TRACK MONITOR] once again.



● To exit the track monitor, press [STOP].

■ Checking MIDI Messages from MIDI IN

(MIDI Monitor)

☐ Explanation

The MIDI monitor graphically indicates the type and channel of MIDI messages being received from MIDI IN.

In the MIDI monitor display, you can specify the type of MIDI messages to be displayed.

Numeric key input	Display	MIDI message
0	PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
1	CC	Control Change 0—120
2	PG	Program Change
3	CAf	Channel Aftertouch (Channel Key Pressure)
4	PB	Pitch Bend
5	SYS	System messages
6	TU	Tune Request
7	MOD	Channel Mode messages
9	NT	Note

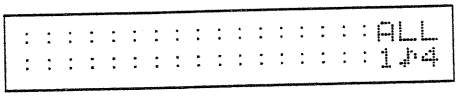
*The MIDI monitor function displays all MIDI messages from MIDI IN, regardless of the Receive status settings (☞P.57).

☐ Procedure

● From the standby condition

① Select the MIDI Monitor display.

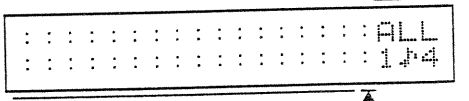
TRACK MONITOR → MIDI



② Select the MIDI message you wish to monitor.

Numeric keys 0—7, 9

MIDI messages being displayed



MIDI channnel
From the left : 1, 2, 3, ··· 16

System messages

If all MIDI messages are being monitored, the display will show "ALL", but if you have used the Numeric keys to select a specific type of MIDI message, the name of the selected MIDI message will be displayed. To return to the display of all MIDI messages, press TRACK MONITOR.

When a MIDI message is received, a note mark will appear in the upper line of the display. If you have selected System messages (SYS), the following MIDI messages will be displayed starting from the left.

	MIDI message
1	F0 (Beginning of Exclusive)
2	F1 (MIDI Time Code Quarter Frame)
3	F2 (Song Position Pointer)
4	F3 (Song Select)
7	F6 (Tune Request)
8	F7 (End of Exclusive)

	MIDI message
9	F8 (MIDI Clock)
11	FA (Start)
12	FB (Continue)
13	FC (Stop)
15	FE (Active Sensing)
16	FF (System Reset)
17	Exclusive

● To exit the MIDI monitor, press STOP.

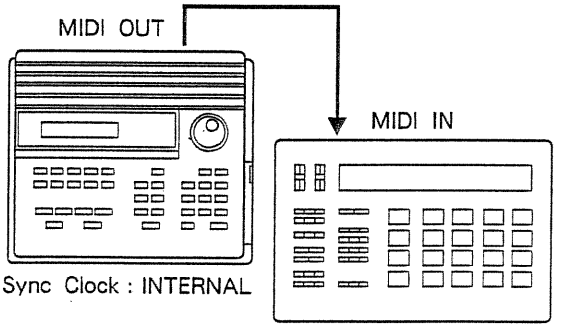
Synchronized Playback (MIDI Sync / Tape Sync)

In addition to playing MIDI sound modules, the MC - 50 is able to playback in synchronization with other MIDI devices such as sequencers, rhythm machines, or with multitrack tape recorders.

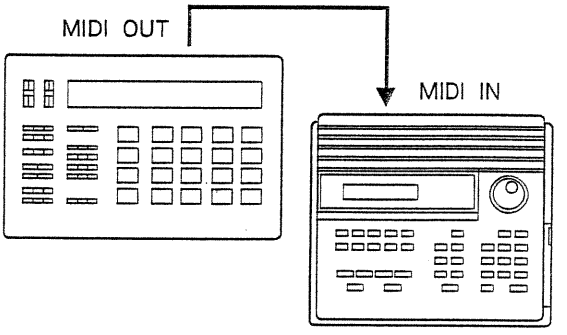
☐ When synchronizing the MC - 50 with other MIDI devices

It is possible to playback the song data of the MC - 50 in synchronization with the song data of other sequencers or rhythm machines. In such cases, you must decide which device will control the other device. In general, the controlling device is called the **Master**, and the device being controlled is called the **Slave**. Set the master to transmit MIDI clocks (synchronization signals), and set the slave to receive MIDI clocks.

When using the MC - 50 as master



When using the MC - 50 as slave



When you operate the MC - 50 to begin playback, it will transmit MIDI clocks according to the tempo. Since the MC - 50 is operating on its own clock, it will ignore any MIDI clocks it receives.When using the MC - 50 as slave, set sync clock (☞P.62) to "MIDI". When "MIDI" is selected, playback will begin when a Start message and MIDI clock is received from MIDI IN.

*When using other connected devices as slaves, refer to their operating manuals.

In addition to MIDI clock, the MC - 50 recognizes the following messages.

MIDI message	Function
Start	Start from the beginning of the song
Continue	Start from the middle of the song
Stop	Stop playback
Song Position Pointer	Move the playback position of the song
Song Select	Select a song

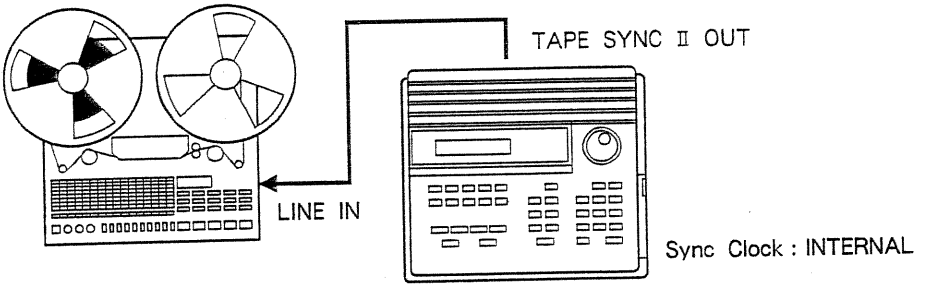
*Song Position Pointer is a message which specifies the position from the beginning of the song. When you move to another measure on the master device, the slave device will move to the same position. This message is able to specify a position in the range of 1—1024 measures (4/4 time).

☐ Controlling the MC-50 by a multitrack recorder

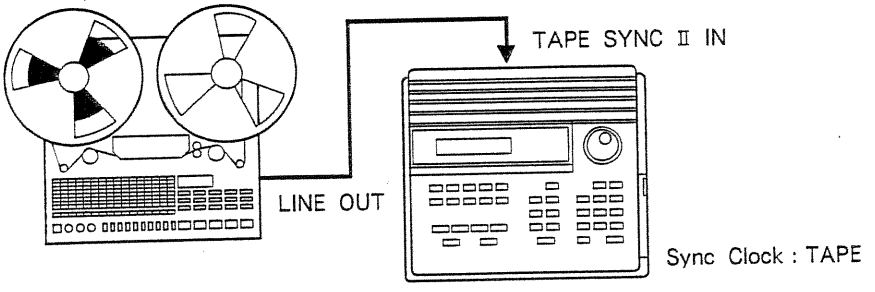
It is possible to make the MC - 50 playback in synchronization with a multitrack recorder (MTR). In this case, use the MTR as the master and the MC - 50 as the slave. In order to synchronize the MC - 50 to the MTR, you must first record a tape sync signal (FSK signal) on an unused track of the tape. A tape sync signal is output from the TAPE SYNC II OUT jack when the MC - 50 is played back, so record this tape sync signal on the MTR to which you want to synchronize the MC - 50.

The tape sync signal of the MC-50 includes data to specify the position in the song. This means that even if you start MTR playback in the middle of the song, the MC - 50 will automatically move to the same location and begin playing back. This is labeled "TAPE SYNC II " to avoid confusion, since the tape sync signal of previous MC-series models did not contain position-specifying data.

When recording the tape sync signal to MTR



When synchronizing the MC-50 to the MTR



To synchronize the MC-50 to an MTR, set the sync clock (☞P.62) of the MC - 50 to "TAPE". Playback will begin when a tape sync signal is received from the TAPE SYNC II jack.

* Do not use equalization or noise reduction when recording/playing back the tape sync signal on the MTR. Doing so can cause problems. If the MTR is designed so that noise reduction is permanently on, use the same settings for recording and playback.

☐ Record the tape sync signal on the MTR

Make connections as explained on the previous page, and set the sync clock to "INTERNAL" for the song you wish to synchronize.

① Adjust the recording level of the MTR.

When the MC - 50 is in standby condition, it will output a pilot signal that will change to the sync signal when playback begins. Adjust the recording level of the pilot signal to about − 10— − 3 VU.

② Start recording on the MTR.

③ After recording 5—10 seconds of the pilot signal, start the MC - 50 and record the sync signal.
[PLAY]

＊Be sure to start from the beginning of the song. If you start from the middle, synchronized playback will not be possible.

④ When the MC - 50 finishes playing back, wait 5—10 seconds and stop recording on the MTR.

☐ Playback the MC-50 in synchronization with the MTR

Make connections as explained on the previous page, and set the sync clock to "TAPE" for the song you wish to synchronize.

① Start the MTR.

② Put the MC - 50 in standby condition.
[PLAY]

If you start playback from the pilot signal, synchronization will begin immediately from the beginning of the song. If you start playback from the middle, it will take a bit of time for the MC - 50 to synchronize and begin playback.

When the tape sync signal stops, the MC - 50 will stop playback.

＊If the MC - 50 does not synchronize correctly, press [STOP] and then press [PLAY] once again. If it still does not synchronize correctly, re-record the tape sync signal.

＊If you wish to synchronize the MC - 50 to a tape signal recorded by the MC - 500/300 or MC - 500mk Ⅱ, be sure to start from the pilot signal. The MC - 50 will not operate if you start from the middle of the song.

RECORDING

This section explains how to record Song data. There are various ways of recording each type of track, as follows.

Phrase Track (1—8)

- Realtime Recording
  - Replace Recording
  - Mix Recording
  - Auto Punch In Recording
  - Manual Punch In Recording
  - Modify Recording
    - Rewrite Velocity
    - Rewrite Step Time
- Step Recording

Rhythm Track

- Rhythm Pattern
- Rhythm Track

Tempo Track

- Replace Recording

This section explains recording methods for the various tracks.

☐ Phrase track (1—8) recording

There are two main ways to record a Phrase track; realtime recording and step recording.

The following MIDI messages can be recorded in a Phrase track.

Note on (Velocity)	Channel Aftertouch (Channel Key Pressure)
Note off	Pitch Bend
Polyphonic Aftertouch (Polyphonic Key Pressure)	Local on/off
Control Change	Exclusive
Program Change	Tune Request

< Realtime recording >

In realtime recording, the actual performance of an external MIDI device (MIDI keyboard, etc.) is recorded as MIDI messages. You can select from the following recording methods.

◆ Replace recording

When recording on each Phrase track for the first time, you will normally select Replace recording. If the track which you are recording contains song data, all song data on that track will be rerecorded.

◆ Mix recording

If song data exists on the track you are recording, the newly recorded data will be added to that song data without erasing it.

◆ Auto punch in recording

Use this when you wish to rerecord the song data of a previously specified area.

◆ Manual punch in recording

Use this when you wish to rerecord the song data over the area you specify using a pedal switch.

◆ Modify recording

Modify recording is a special way of recording that allows you to rerecord only the velocities (or Step times) of each note message in the Phrase track.

＊To rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). Or, if you do not wish to record a specified type of MIDI message, set "MIDI 2: Receive status" (☞P.57).

< Step recording >

Step recording allows you to enter note messages (MIDI channel / Step time / Note number / Velocity / Gate time) one by one. If you wish to enter MIDI messages other than note messages one by one, use the Microscope function.

☐ Tempo track recording

The Tempo track records only tempo change data. If tempo data already exists, that tempo data will be rerecorded. To input tempo data you can either use the Alpha - dial / Numeric keys, or MIDI messages from an external device. It is also possible to record tempo data just as it comes from an external device (MIDI clock, tape sync signal).

* The setting of "Mode 5: MIDI control" (☞P.161) determines which MIDI message will be used to record the Tempo track. Tempo data is handled without regard to MIDI channel, so any MIDI channel can be used. However, the setting of "MIDI 1: Receive channel" (☞P.56) will apply.
* When the MC - 50 is being controlled by an external device for synchronized playback, the tempo data in the Tempo track is ignored.

☐ Rhythm track recording

The one - measure Rhythm patterns you have previously created are arranged in the Rhythm track in the order of playback. The Rhythm track does not contain the Rhythm pattern data itself, but only the numbers of the Rhythm patterns (the pattern numbers). This means that if you later change the Rhythm pattern settings, the performance will be different.

Rhythm patterns are created one measure at a time. They can be recorded either by inputting notes one at a time, or by recording a performance from a drum pad or keyboard. Up to 240 Rhythm patterns can be created for each song. Rhythm patterns can contain only note messages. If you wish to use messages other than note messages, record them in a Phrase track on the MIDI channel being received by your MIDI rhythm sound module.

< Relation to other tracks >

A song is played back in accordance with the time signature of each Rhythm pattern arranged in the Rhythm track, and the number of Rhythm patterns determines the length of the song. This means that it is not possible to playback a measure for which there is no Rhythm pattern. However, when recording a Phrase track (or the Tempo track), recording is possible even if Rhythm patterns have not yet been arranged in the Rhythm track. This is because rest patterns are automatically arranged in the Rhythm track.

If Rhythm patterns are not arranged in the Rhythm track, you will specify the time signature of the rest patterns when recording a Phrase track. Also, even if Rhythm patterns have been arranged, you can specify the time signature when you record from a measure for which there is no Rhythm pattern.

When recording a Phrase track from a measure which has a Rhythm pattern, rest patterns of the same time signature as the last Rhythm pattern will automatically be filled in if you record beyond the last Rhythm pattern.

In this way, the Rhythm track is an important track which determines the time and length of the song data.

Replace Recording (Phrase Track / Tempo Track)

☐ Explanation This section explains how to use Replace Recording on a Phrase track or the Tempo track.

◆ Replace recording on a Phrase track (1—8)

When you first record a Phrase track, you will normally select Replace recording. If song data exists on the track you are about to record, this will rerecord all song data on that track.

*If you want to rerecord only a specified MIDI channel of song data, set "MIDI 1: Receive channel" (☞P.56). If you want a specific channel of MIDI messages to not be recorded, set "MIDI 2: Receive status" (☞P.57).

◆ Replace recording on the Tempo track

The Tempo track records only tempo change data. If tempo data already exists, that tempo data will be rerecorded.
To control the tempo, you can use either the Alpha - dial / Numeric keys (PANEL) or MIDI messages from an external device (MIDI). To select the MIDI message which will control the tempo, set "Mode 5: MIDI control" (☞P.161). (Initially, note numbers will control tempo.)
It is also possible to record tempo data (MIDI clock, tape sync signal) just as it is received from an external device.

When using MIDI messages from an external device to control the tempo, the tempo can be controlled in the following ways by each type of message.

MIDI message	Tempo change
NOTE # (Note number) 36 (C2)—84 (C6)	Higher note numbers will make the tempo faster. To select the Basic tempo, play Note number 60 (C4). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—484. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
VELO (Velocity) 1—127	Higher velocity will make the tempo faster. To select the Basic tempo, play a note with a velocity of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
CC (Control Change) the value 0—127 of any one control number	Higher values will make the tempo faster. To select the Basic tempo, transmit a value of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
PB (Pitch Bend) −128—+128	As the pitch is raised the tempo will become faster, and as the pitch is lowered the tempo will become slower. To select the Basic tempo, move the pitch bender to the center position (0). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.

*Tempo data will change the tempo relative to the Basic tempo of the song.

*Tempo messages are handled without regard to the MIDI channel, and can be recorded using MIDI messages of any MIDI channel. However, the setting of "MIDI 1: Receive channel" (☞P.56) is valid. If you have set this to a setting other than "ALL", make sure to match the specified receive channel.

< Start recording >

There are two ways to start recording; Count In and Key On.

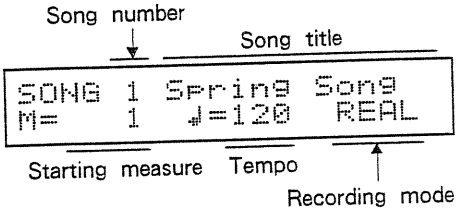
Count In start	A count-in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC-50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

☐ Replace recording a Phrase track

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, and Recording mode (REAL).

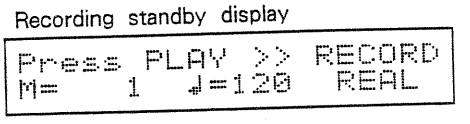
◀ ▶ (move the cursor)
Alpha - dial / Numeric keys (modify the values)
ENTER (finalize the values)

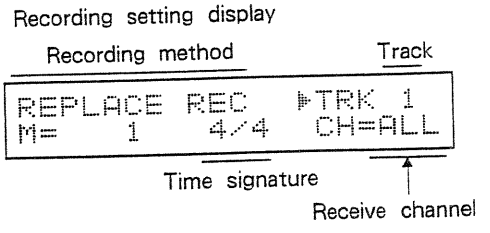


* If you wish to select a song number for which no song data exists, hold SHIFT and use the Alpha-dial, or use the Numeric keys to select the song number and then hold SHIFT and press ENTER.

② Select the Recording setting display, and select the Recording method (REPLACE) and Phrase track.

REC → REC →
Alpha - dial / Numeric keys (modify the values)
◀ ▶ (move the cursor)
ENTER (finalize the values)
Track keys (select the track)





* If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.
* The Recording setting display and the standby display will alternate each time you press REC.

③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

REC → PLAY (Count In Start)
REC → PAUSE (Key On Start)

* If you have selected Key On Start, you can press PLAY to begin recording without a count in.

④ Stop recording.

STOP

☐ Replace recording for the Tempo track

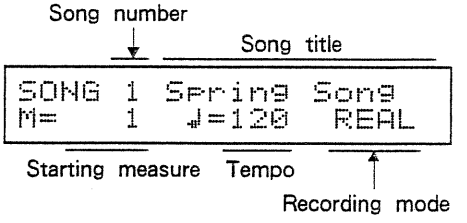
If you are using MIDI clock from an external device to record tempo data, set Sync Clock (☞ P.62) to "MIDI". If you are using a tape sync signal from a multitrack recorder to record tempo data, set the sync clock to "TAPE".

*When recording tempo data with the MIDI clock on the external MIDI device, do not transmit the exclusive messages from external device, as the correct tempo may not be recorded. Turn the transmission of exclusive messages from the external MIDI device off, or turn the reception of exclusive messages off (☞ P.57 "MIDI 2: Receive Status").

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, Recording mode (REAL).

[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

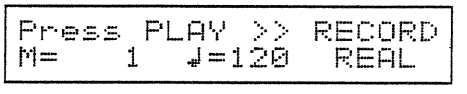


*If you wish to select a song number which contains no song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

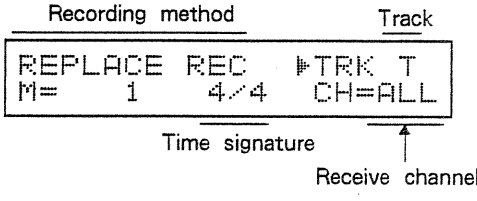
② Select the Recording setting display, and select Tempo track (T), and the Tempo control method (PANEL or MIDI).

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◄][►] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display 1

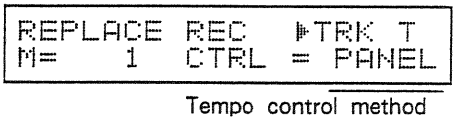


*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

*If you are recording tempo data received from an external device, it will not be possible to select the "Tempo control method".

*The Recording setting displays and the standby display will alternate each time you press [REC].

Recording setting display 2

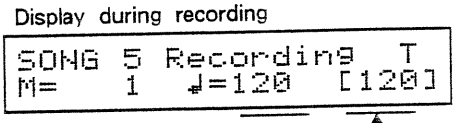


③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

Display during recording



Baisc tempo

Tempo being recorded

* If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

< Tempo recording using the Alpha - dial / Numeric keys >

Normally, you will record using Count In Start. If you are using Key On Start, press [PLAY] to record. (Recording will not begin even if you change the tempo.)

< Tempo recording using a specified MIDI message >

You may use either starting method.

< Tempo recording of tempo data received from an external device >

Recording will begin when you start playback on the external MIDI device (or multitrack recorder).

④ Stop recording.

[STOP]

Mix Recording (Phrase Track)

☐ Explanation

When song data exists in the track you are recording, that song data will not be erased, but the newly recorded data will be added to the previous song data. Use this method when adding song data to a track which already contains song data.

< Recording start methods >

To start recording, you can either use Count In or Key On.

Count In start	A count - in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC - 50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

* If you want to record only a specified MIDI channel of song data, set "MIDI 1: Receive channel" (☞ P.56). If you want a specific channel of MIDI messages to not be recorded, set "MIDI 2: Receive status" (☞ P.57).

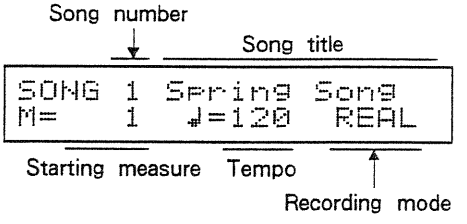
* Do not perform mixed recording if exclusive messages are stored in the track to be recorded.To record over tracks where exclusive messages are stored, record into an empty track first, and then use the Merge function (☞ P.84).

☐ Procedure

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, Recording mode (REAL).

[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

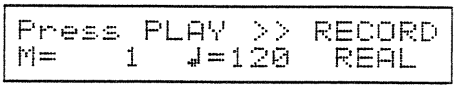


* If you wish to select a song number which contains no song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

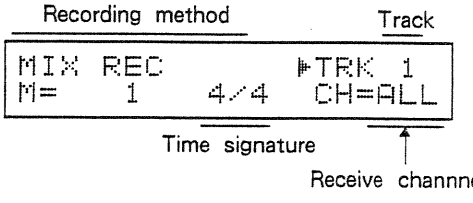
② Move to the Recording setting display, and select the Recording method (MIX REC) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◄][►] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display



* If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.
* The Recording setting display and the standby display will alternate each time you press [REC].

③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

* If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

④ Stop recording.

[STOP]

Auto Punch In Recording (Phrase Track)

☐ Explanation

This rerecords a previously specified section of the song data. Make settings in "FUNC 6: Punch point" (☞P.68) to specify the section to be rerecorded. When you use Auto Punch In Recording, the area outside the specified section will be played back and not recorded. When the specified section is reached, the MC - 50 will automatically enter Replace Recording mode.

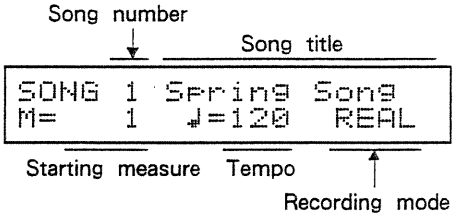
*It is not possible to use Auto Punch In Recording on a track which has not been previously recorded.
*If you want to rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). If you want a specific type of MIDI message not to be recorded, set "MIDI 2: Receive status" (☞P.57).

☐ Procedure

● From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

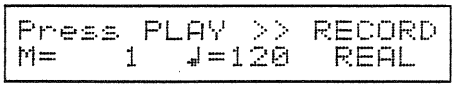


*Set the starting measure to a measure before the punch in point.

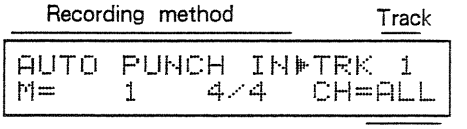
② Move to the Recording setting display, and select the Recording method (AUTO PUNCH IN) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◀][▶] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display



*The Recording setting display and the standby display will alternate each time you press [REC].

③ Move to the Recording standby display, and start.

[REC] → [PLAY] (Count In Start)

When you enter the recording section, the REC indicator will change from blinking to lit, and recording will begin.

*"Hanging notes" may occur by preessing [STOP] to cancel recoding. In this case, pressing [STOP] again while holding down [MIDI] will correct the problem.

④ When the recording section ends, stop recording.

[STOP]

Manual Punch In Recording (Phrase Track)

☐ Explanation

You can rerecord a specific section of song data using a pedal switch (DP - 2, etc.) connected to the PUNCH IN/OUT jack. When you use Manual Punch In Recording, you will playback without recording until you press the pedal. Press the pedal at the point where you wish to begin rerecording, and you will begin Replace Recording. Press the pedal once again and you will stop recording and will return to playback mode. Since the playback/recording modes will alternate each time you press the pedal, you can rerecord several sections if desired.

* It is not possible to to use Manual Punch In Recording for a track on which nothing has been previously recorded.
* If you want to rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). If you want a specific type of MIDI message not to be recorded, set "MIDI 2: Receive status" (☞P.57).

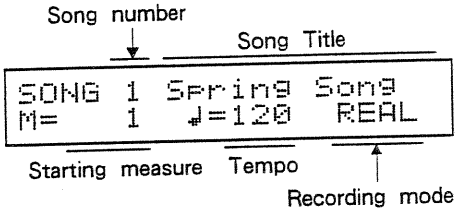
☐ Procedure

● From Mode 1 standby

① Connect a pedal switch (DP - 2, etc.) to the PUNCH IN/OUT jack.

② Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

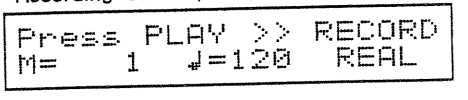


* Set the starting measure to a measure before the section you wish to rerecord.

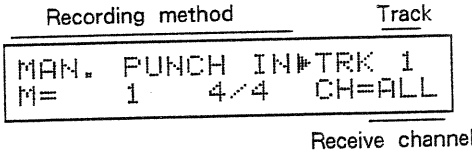
③ Move to the Recording setting display, and select the Recording method (MAN. PUNCH IN) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◀][▶] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display



* The Recording setting display and the standby display will alternate each time you press [REC].

④ Move to the Recording standby display, and start.

[REC] → [PLAY] (Count In Start)

* "Hanging notes" may occur by preessing [STOP] to cancel recoding. In this case, pressing [STOP] again while holding down [MIDI] will correct the problem.

⑤ Press the pedal at the location where you want to begin rerecording. When you press the pedal once again, you will return to playback mode.
While data is being recorded, the REC indicator will change from blinking to lit.

⑥ Stop recording.

[STOP]

Modify Recording (Rewrite Velocity / Rewrite Step Time)

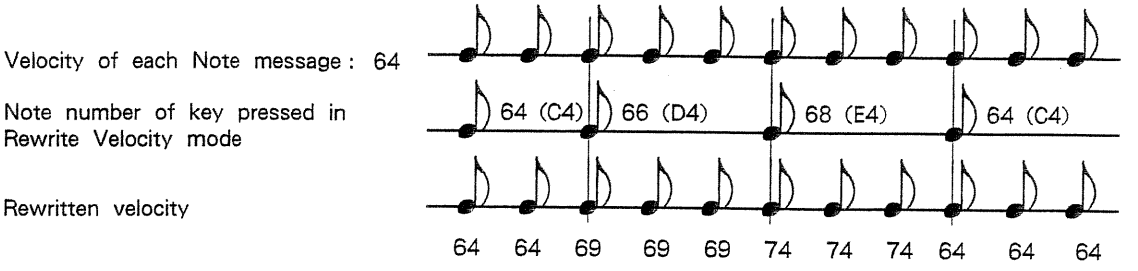
☐ Explanation Modify Recording is a special way of recording that allows you to rerecord the velocity or Step time of each Note message recorded in a Phrase track.

◆ Rewrite Velocity

This allows you to correct the Velocity of each Note message recorded in a Phrase track, while playing.

For example, you could step record all notes at a certain velocity, and later use Modify Recording to add variation to the velocity. If the Phrase track contains song data of two or more MIDI channels, use "MIDI 1: Receive channel" (☞P.56) to specify the MIDI channel of the song data for which you want to rewrite the velocity.

Use "Mode 5: MIDI control" (☞P.161) to select the MIDI message you will use to rewrite velocity. If this has not been set, you can use note numbers 36 (C2)—84 (C6) to change the velocity. For example, when you press the C4 key, the velocity of the next note will be changed to 64. The velocity of subsequent notes will also be changed to 64 until you press another key. In this way, press a key only for those notes whose velocity you wish to modify.



You can select one of the following types of MIDI message to use for rewriting velocity.

MIDI message	Velocity change
NOTE # (note number) 36 (C2)—84 (C6)	As the note number increases, the velocity will increase. Range of change : 4—124
VELO (velocity) 1—127	As the velocity increases, the velocity will increase. Range of change : 1—127
CC (control change) The value of any one control number 0—127	As the value increases, the velocity will increase. Range of change : 1—127
PB (pitch bend) −128—+128	As the pitch is raised, the velocity will increase above 64. As the pitch is lowered, the velocity will decrease below 64. (Pitch bend 0 = velocity 64). Range of change : 1—127

◆ Rewrite Step time

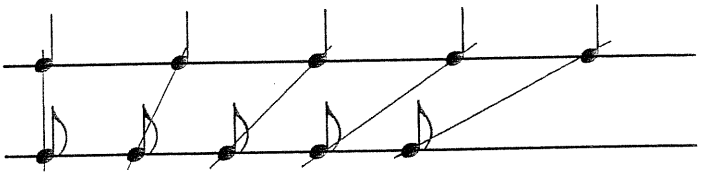
This allows you to rewrite the Step time (the time until the next note) or Gate time of each Note message recorded in a Phrase track, while playing.

For example, you could step record with a specific Step time, and then use Modify Recording to modify the Step time / Gate time / Velocity of each Note message. In this way it is possible to first specify only the pitch of each note, and later rewrite the Step time / Gate time / Velocity.

You can also set "Mode 5: Rewrite mode" (☞P.160) so that Gate time / Velocity are not rewritten.

Step Time of each Note message : 96

Step Time after modification by Rewrite Step Time : 48



*Do not rewrite song data that contains chords recorded in Realtime Recording. Since the notes of a chord recorded in Realtime Recording may not be recorded at precisely the same timing, rewriting the Step time would spread out the notes in each chord.

*The Rewrite Step Time function will rewrite the Step time of all Note messages of all MIDI channels in the specified Phrase track, regardless of the setting of "MIDI 1: Receive channel" (☞ P.56). Also, all MIDI messages other than Note messages will be erased.

< Ways to start recording >

You can start recording by Count In or by Key On.

Count In start	A count-in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC-50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

☐ Rewrite Velocity procedure

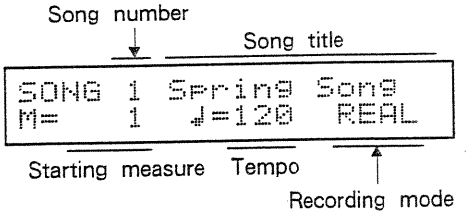
● From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◄][►] (move the cursor)

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



② Move to the Modify Recording setting display, and select "REWRITE VELO" and the Track.

Hold [SHIFT] and press [REC] → [REC] →

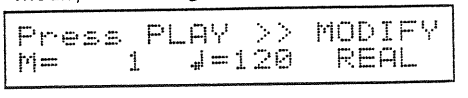
Alpha - dial / Numeric keys (modify the value)

[◄][►] (move the cursor)

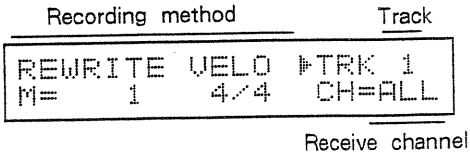
[ENTER] (finalize the value)

Track keys (select the track)

Modify Recording standby display



Modify Recording setting display



*The Modify Recording setting display and the standby display will alternate each time you press [REC].

③ Move to the Modify Recording standby display, and start recording. (When you enter recording mode, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

* To modify the velocity of the starting point, use Key On Start.
* If you have selected Key On Start, you can press [PLAY] to begin recording without a count.
* Until you transmit the specified MIDI message, velocity values will be rewritten to 64.

④ Stop recording.

[STOP]

☐ Rewrite Step Time procedure

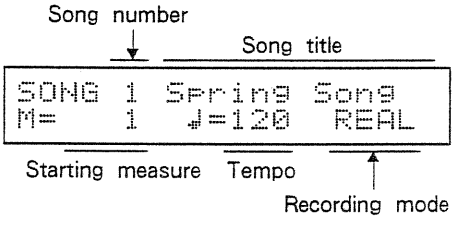
● From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◄][►] (move the cursor)

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



② Move to the Modify Recording setting display, and select "REWRITE STEP" and the Track.

Hold [SHIFT] and press [REC] → [REC] →

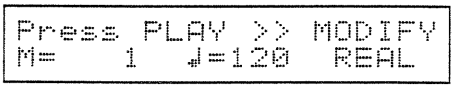
Alpha - dial / Numeric keys (modify the value)

[◄][►] (move the cursor)

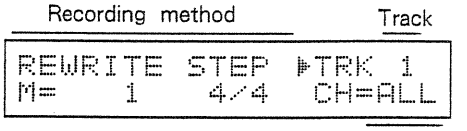
[ENTER] (finalize the value)

Track keys (select the track)

Modify Recording standby display



Modify Recording setting display



* The Modify Recording setting display and the standby display will alternate each time you press [REC].

③ Move to the Modify Recording standby display, and start recording. (When you enter recording mode, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

* If you wish to place a note at the starting point, use Key On Start.
* If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

④ Stop recording.

[STOP]

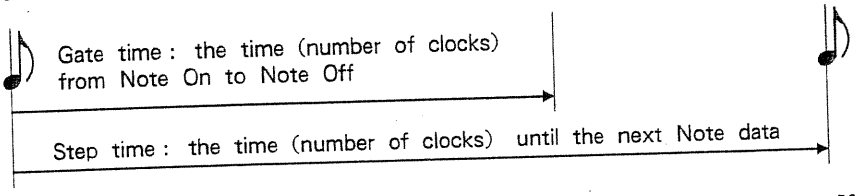
Step Recording

☐ Explanation

Step Recording allows you to enter note data (MIDI channel / Note number / Velocity / Gate time) one by one. If a MIDI keyboard is connected, you can press keys to enter MIDI channel / Note number / Velocity / Gate time.
If song data already exists in the track you are step recording, notes you enter will successively replace the previous notes in the track.

* To enter MIDI messages other than Note data one by one, use the Microscope function (☞P.109).
* Step Recording allows you to record any MIDI channel, regardless of the Receive Channel setting (☞P.56). However, the Receive Channel setting will determine the MIDI messages passed on by the Soft Thru function, so normally you will set the Receive Channel to "ALL".

< Step time and Gate time >



If you input the Step time using the Note symbols, the Gate times will be as shown below. If you input the Step time as a number, the Gate time will be 75% of the Step time. Of course, you can modify the Gate time later, regardless of the Step time you originally input.

Note symbol	Step time	Gate time
𝅘𝅥𝅯	6	4
𝅘𝅥𝅯	12	9
𝅘𝅥𝅯₃	16	12
𝅘𝅥𝅯	24	19
𝅘𝅥𝅯₃	32	26
𝅘𝅥𝅯	48	41
𝅘𝅥₃	64	56
𝅘𝅥	96	86
𝅗𝅥	192	178

* To change the Step time and Gate time of each Note symbol, refer to "Mode 5: Step/Gate" (☞P.157).
* To change the Gate time ratio used when you input the Step time as a number, refer to "Mode 5: Gate Time Ratio" (☞P.158).

☐ Procedure

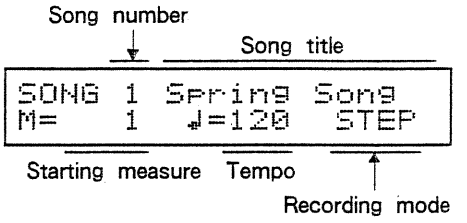
● From Mode 1 standby

① Select the Song number / Starting measure you wish to record, and select the Tempo and Recording mode (STEP).

[◄][►] (move the cursor)

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



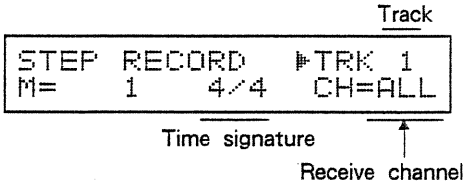
*To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Recording setting display, and select the Phrase track.

[REC]→

Alpha - dial / Numeric keys / Track keys (select the track)

→[ENTER] (finalize a value)



*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

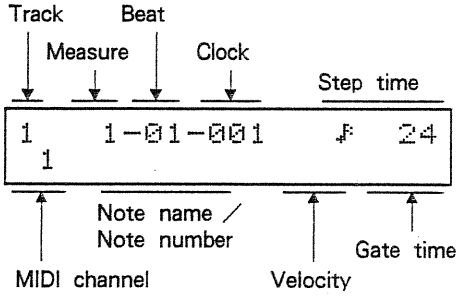
③ Move to the Recording display, and specify the Note data.

Alpha - dial / Numeric keys (modify the values)

[◄][►] (move the cursor)

[ENTER] (finalize a value)

When you finalize the Gate time, you will move to the next step. Repeat this procedure to input Note data.



< Step time input >

When a Note symbol is displayed, rotating the Alpha - dial will change the Note symbol. When specifying by number, use the Numeric keys. When you change the display to number, the Alpha - dial will change the number. When using the Numeric keys to specify Note symbols, hold [SHIFT] and press a Numeric key.

< MIDI keyboard input >

By pressing a key on your MIDI keyboard, you can input MIDI channel / Note number / Velocity all at once. The displayed Step time will be used, and the Gate time will be the value corresponding to that Step time.

< If you make a mistake >

You will move back one step each time you press [RESET]. Move back to the wrong note and correct the value. All notes you backed over will be deleted.

④ Stop recording.

[STOP]

☐ Inputting chords

Here's how to input two or more notes at the same location, such as chords.

< Input from the panel >

When you press [PAUSE] (the Pause indicator will light), the position will be fixed, and will not advance to the next step when a note is entered. After you have entered the notes of the chord, press [PAUSE] once again to return to normal operation.

*If you hold [SHIFT] and press [ENTER] when finalizing the Gate time, chord input will be defeated.

< Input from a MIDI keyboard >

◆Press [PAUSE], and play the chord. After you have input the notes, press [PAUSE] once again.

◆Press each note in the chord without taking your finger off each key until all keys have been pressed. When you release the keys, you will advance to the next step.

◆If you are using a MIDI keyboard which is able to control Hold, play the notes in the chord while pressing the Hold pedal. (If desired, you may release each key after playing it.) After you have played each note in the chord, release the Hold pedal, and you will advance to the next step.

☐ Inputting rests

There are two ways in which to enter a rest; by inputting Rest data, or by simply entering a blank (no data) and moving to the next step. If you enter a rest, you will be able to check the Step time of the rest when using the Microscope function.

◆To enter Rest data, specify the Step time of the rest, move the cursor to the note number, hold [SHIFT] and press Numeric key [9] (displayed as "CH.REST"), and press [ENTER]. To return from the "CH.REST" display to the Note Number display, use the Numeric keys to enter a note number.

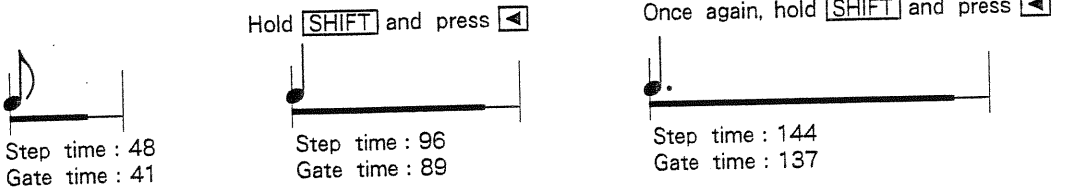
◆To enter a blank (no data), specify the Step time until the next Note data, and hold [SHIFT] and press [▶].

*It is also possible to use [TRACK MONITOR] instead of [SHIFT] to enter a rest.

*If you wish to reduce the amount of data in a song, you can use "UTIL 7: Data reduce" (☞ P.133) to convert Rest data into blanks (no data).

☐ Inputting ties

Each time you hold [SHIFT] and press [◀], the Step time / Gate time of the previous Note data will be lengthened. The Step time will be lengthened by the amount of the first Step time. The Gate time will be the value of the current Step time added to the first Gate time.



*This operation is not possible after you have input a rest, or after you have pressed [RESET] to move back to the previous step.

*You can also use [TRACK MONITOR] instead of [SHIFT] to enter ties.

☐ To stop MIDI message reception during recording

If you want to play the keyboard without recording, you can press [MIDI] to temporarily stop MIDI reception. (The REC indicator will blink.) To return to normal, press [MIDI] once again.

Rhythm Pattern Recording

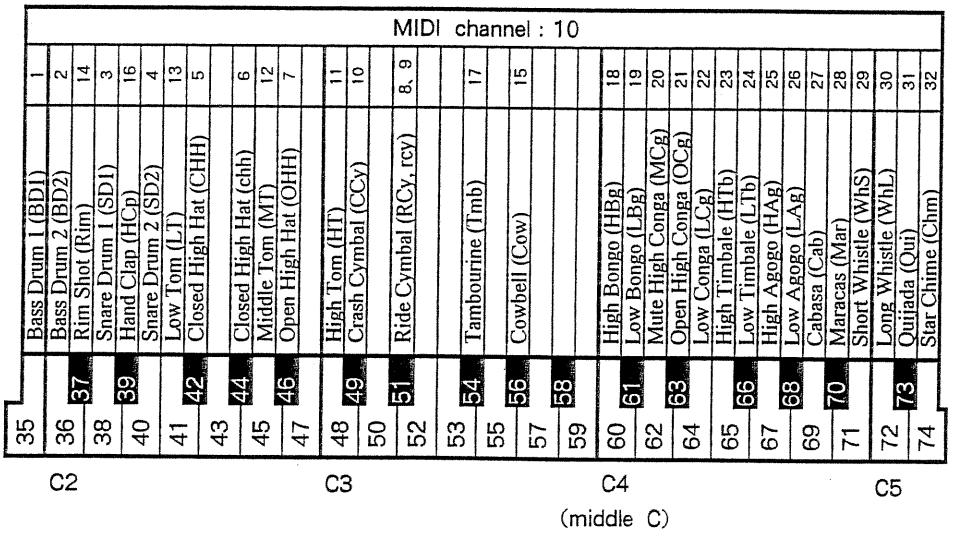
☐ Explanation

This lets you create one - measure Rhythm patterns. You can create up to 240 Rhythm patterns (1—240) for each song. There are two ways to record a Rhythm pattern; by specifying one note at a time (velocity code), or by recording a performance on a drum pad or keyboard. You can also enter flams.

If you need two or more Rhythm patterns that are slightly different, you can create a basic Rhythm pattern and then Copy (☞P.129) it and then edit it.

< Settings before recording >

Before you create a Rhythm pattern, you must specify the MIDI channel / Note number / Instrument name for each drum sound (instrument) to match the rhythm sound module you are using. The MC-50 allows you to specify instrument numbers 1—32. The initial settings are shown below. If you wish to change these settings, refer to "FUNC 5: Rhythm instruments" (☞P.66).



Input Rhythm patterns using Velocity codes 1—8 to input Note and Velocity data. The velocity values of Note messages received from MIDI IN are converted into Velocity codes before being input.

The velocity value of each Velocity code is initially set as follows. To change these velocity values, refer to "FUNC 4: Rhythm velocity" (☞P.65).

Velocity code	1	2	3	4	5	6	7	8
Velocity value	16	32	48	64	80	96	112	127
Received velocity	1—24	25—40	41—56	57—72	73—88	89—104	105—119	120—127

＊To copy the settings from other Song data, refer to "UTIL 3: Function copy" (☞P.128).

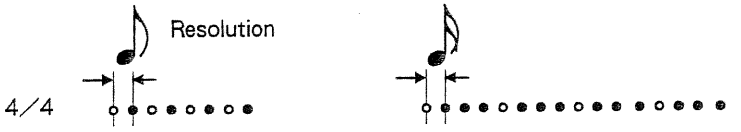
< Rhythm pattern recording >

To create a Rhythm pattern, you will input individual notes (velocity codes) at a timing (grid) determined by the Time and Resolution. The Resolution sets the spacing of the timing grid, and determines the smallest note length that can be input.

When creating a Rhythm pattern, you can use the following time signatures.

1/2—32/2	1/4—32/4	1/8—32/8	1/16—32/16

For example if you use a time signature of 4/4 and a resolution of an 8th note, the recording display will show an eight - part grid. If you set the resolution to a 16th note, a sixteen - part grid will be displayed. To create a Rhythm pattern, specify a Velocity code for each timing of the grid.



If you are inputting a rhythm part using the panel keys, you must specify the Velocity code separately for each instrument number, but if you are inputting from a drum pad, etc., you can input two or more instruments at once.

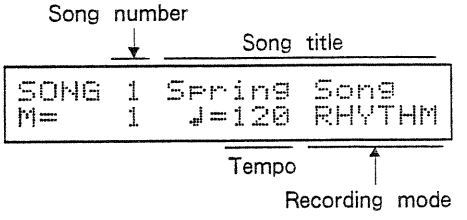
＊The Gate time of each note will be 1/2 the note length of the Resolution.

☐ Input using panel keys

● From Mode 1 standby

① Select the Song number you wish to record, and select the Recording mode (RHYTHM).

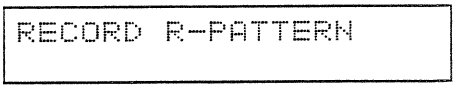
[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



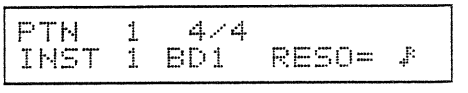
＊To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Pattern recording setting display.

[REC] →
Alpha - dial / Numeric key [2] (select "R - PATTERN") →
[ENTER] / [REC]



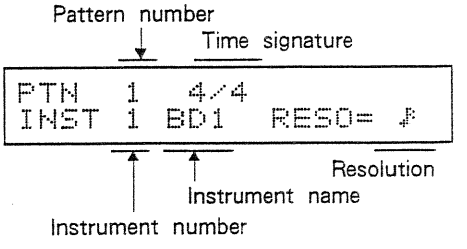
Recording setting display



③ Specify the Pattern number / Time signature / Instrument number you wish to record, and set the Resolution.

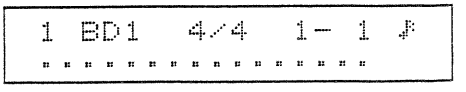
[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the values)
[ENTER] (finalize a value)

When you finalize the Resolution, you will move to the Recording display.



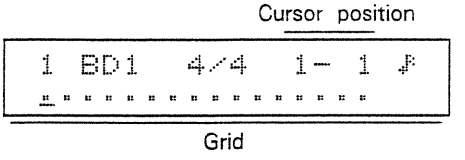
＊The Recording setting display and the Recording display will alternate each time you hold [SHIFT] and press [ENTER].

Recording display



④ For each Instrument number, input a Velocity code into the Grid at the timing you want the instrument to sound.

[◀][▶] (move the cursor)
Hold [SHIFT] and press [◀][▶] (move the cursor one beat)
Numeric keys (input a Velocity Code)
Hold [SHIFT] and use the Alpha - dial / [SKIP] [RESET] (select Instrument numbers)

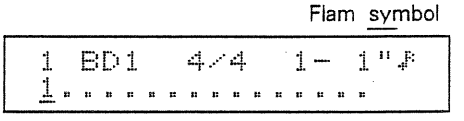


If you wish to select another Rhythm pattern or change the Time signature or Resolution, move to the Recording setting display (hold [SHIFT] and press [ENTER]), and repeat from step ③.

＊To erase a note you have input, move the cursor to that point in the grid and press Numeric key [0].
＊Be aware that if you modify the Time signature, some data of the Rhythm pattern may be lost.

< Flam input >

To input a flam, hold [SHIFT] and use the Numeric keys to specify a Velocity code. If you move the cursor to a grid location which contains a flam, a symbol will appear to indicate this.



< Checking a Rhythm pattern (monitor) >

While recording, you can press [PLAY] to playback the Rhythm pattern you have created. If you wish playback to repeat, hold [SHIFT] and press [PLAY]. To stop playback, press [PAUSE]. It is also possible to input while the Rhythm Part is playing. Since you can also playback the Rhythm pattern from the Recording Setting display, you can change the Pattern number to hear other Rhythm patterns.

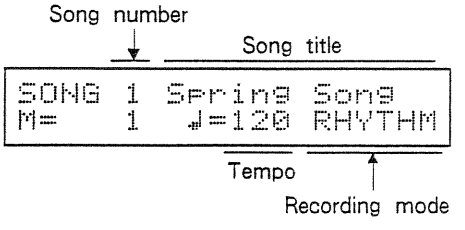
⑤ Stop recording.
[STOP]

□ Input using a drum pad or MIDI keyboard

● From Mode 1 standby

① Select the Song number you wish to record, and specify the Tempo and the Recording mode (RHYTHM).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



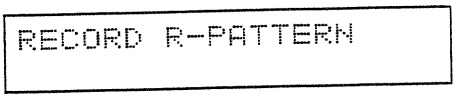
＊To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Pattern Recording Setting display.

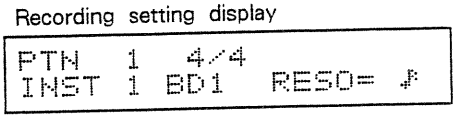
[REC] →

Alpha - dial / Numeric key [2] (select "R - PATTERN") →

[ENTER] / [REC]



Recording setting display

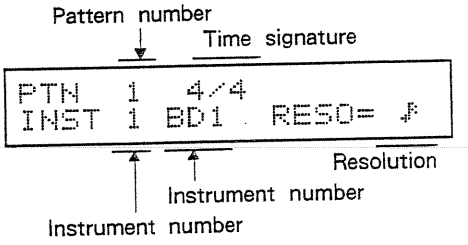


③ Specify the Pattern number / Time signature you wish to record, and set the Resolution.

[◀] [▶] (move the cursor)

Alpha - dial / Numeric keys (modify the values)

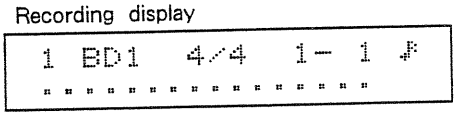
[ENTER] (finalize a value)



When you finalize the Resolution, you will move to the Recording display.

* The Recording setting display and the Recording display will alternate each time you hold [SHIFT] and press [ENTER].

Recording display



④ Start the Rhythm pattern, and record.

Hold [SHIFT] and press [PLAY] (Repeat playback)

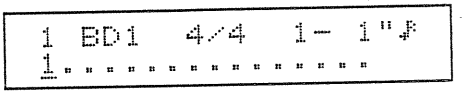
[PAUSE] (stop playback)

When you start the Rhythm pattern, the metronome will sound. Keeping time with the metronome, play the rhythm instruments from your drum pad or MIDI keyboard. Instruments will be recorded without regard to the Instrument number in the display.

< Flam input >

To input a flam, play two notes in rapid succession. If you move the cursor to a grid location which contains a flam, a symbol will appear to indicate this.

Flam symbol



If you wish to select another Rhythm pattern, or to change the Time signature or Resolution, move to the Recording Setting display (hold [SHIFT] and press [ENTER]), and repeat from step ③.

* If you wish to check the sound of an instrument without recording it, press [MIDI] to temporarily halt reception of MIDI messages. (The REC indicator will blink.) Press [MIDI] once again to return to normal operation.
* Be aware that if you change the Time signature, some of the data in the Rhythm pattern may be deleted.

⑤ Stop recording.

[STOP]

In the Rhythm Pattern Recording setting display, you can use the following operations.

☐ Copy Rhythm patterns

Other Rhythm patterns in the same song can be copied.

*If you wish to copy Rhythm patterns from another song, refer to "UTIL 4: Rhythm pattern Copy" (☞P.129).

① Select the Pattern number of the copy distination.

[◀][▶] (move the cursor) → Alpha - dial / Numeric keys

② Specify Copy.

Hold [SHIFT] and press Numeric key [2]

Pattern number of the copy distination — Pattern number of the copy source

③ Select a Pattern number as the copy source, and execute the Copy operation.

Alpha - dial / Numeric keys → [ENTER] → [REC]

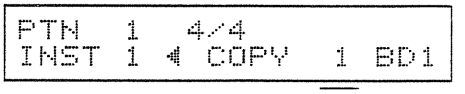
☐ Copy individual instruments

The Rhythm pattern data of another instrument in the same pattern number can be copied.

① Move the cursor to the Instrument number, and specify Copy.

[◀][▶] (move the cursor) →

Hold [SHIFT] and press Numeric key [2]



Instrument number of the copy source

② Select the Pattern number of the copy source, and execute the Copy operation.

Alpha - dial / Numeric keys → [ENTER] → [REC]

☐ Erase Rhythm patterns

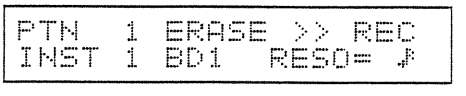
You can erase unwanted Rhythm patterns.

① Move the cursor to the Pattern number, and select the unwanted Rhythm pattern.

[◀][▶] (move the cursor) → Alpha - dial / Numeric keys

② Specify and execute the Erase operation.

Hold [SHIFT] and press Numeric key [4] → [REC]



☐ Erase individual Instruments

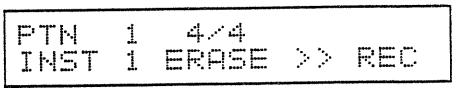
You can erase individual Instruments from the Rhythm pattern.

① Move the cursor to the Instrument number, and select the unwanted instrument.

[◄][►] (move the cursor) → Alpha - dial / Numeric keys

② Specify and execute the Erase operation.

Hold [SHIFT] and press Numeric key [4] → [REC]



In the Recording display, you can use the following operations to erase individual instruments.

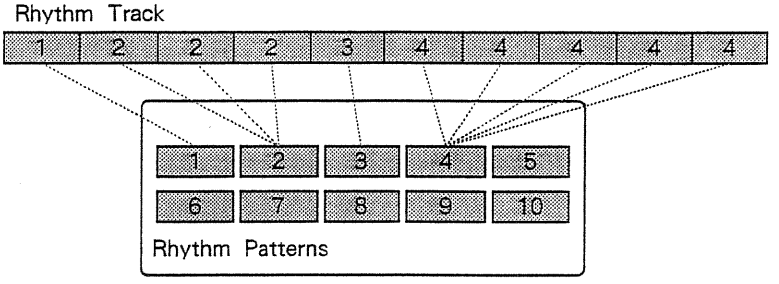
◆While pressing the Hold pedal of your MIDI keyboard, press the key (or pad) corresponding to the instrument number you wish to delete.

◆Connect a pedal switch (DP - 2, etc.) to the PUNCH IN/OUT jack of the MC - 50. While pressing the pedal, press the key (or pad) corresponding to the instrument number you wish to delete.

Rhythm Track Recording

☐ Explanation

The Rhythm track arranges previously prepared Rhythm patterns in the order of performance. The Rhythm track does not contain the actual Rhythm pattern data, but only the pattern numbers. This means that if you later modify the Rhythm pattern settings, the performance will change.



< Biasing a Rhythm pattern >

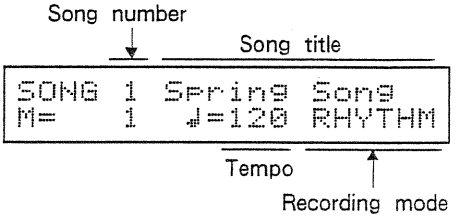
When creating a Rhythm track, you can not only arrange Rhythm patterns in the order of playback, but can also adjust the velocity of each Rhythm pattern. When creating a Rhythm pattern, you specified the velocity of each individual note, but here you can set a Bias to offset the velocity of an entire Rhythm pattern. For example, if you wish to end your song with a fadeout, you can gradually lower the Bias of each Rhythm pattern. Bias can be specified over a range of − 99—+99.

☐ Procedure

● From Mode 1 standby

① Select the Song number you wish to record, and specify the Recording mode (RHYTHM).

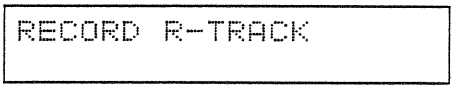
[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



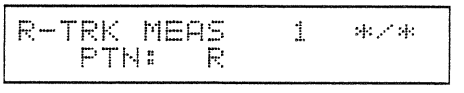
*To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Track recording display.

[REC] →
Alpha - dial / Numeric key [1] (select "R - TRACK") →
[ENTER] / [REC]



Recording display



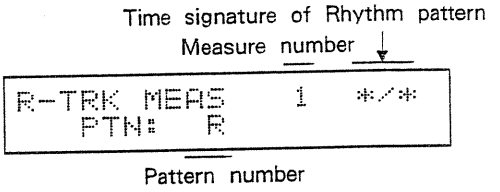
③ Specify the Measure number, Pattern number, and Bias (or Time signature) to assign to the Rhythm pattern.

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize a value)

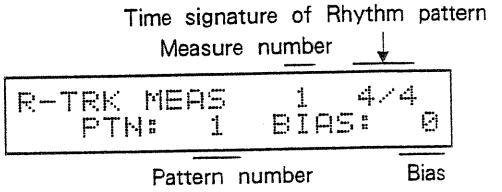
[◀] [▶] (move the cursor)

[SKIP] [RESET] (move through the measures)



Move through the measures, and arrange the Rhythm patterns.

When you select a Pattern Number, the Time of that Rhythm pattern will be displayed, and you can set the Bias. When you finalize the Bias setting, you will move to the next measure.



< Entering a rest pattern >

To enter a rest pattern, press Numeric key [0].

When entering a rest pattern, you can also specify the Time signature. When you specify the Time signature, you will advance to the next measure.

< Checking a Rhythm pattern (monitor) >

While recording a Rhythm track, you can listen to the selected Rhythm pattern playback by pressing [PLAY]. If you wish to play it back repeatedly, hold [SHIFT] and press [PLAY]. To stop playback, press [PAUSE].

④ Stop recording.

[STOP]

AVAILABLE MEMORY

Use the Available Memory functions
when you wish to check the amount of memory remaining in the MC-50 or on disk, to check the amount of memory used by each song,
to save a song to disk (Current Save),
or to load a song file from disk into MC-50 memory (Current Load).

■ Check remaining Internal/Disk Memory

(Available Memory / Available Disk)

☐ Explanation

This allows you to check the amount of internal memory used by each song, and how much more data can be recorded. You can check a disk in the same way.

＊These operations can be performed from Mode 1 standby, or from Modes 2—5 menu displays. However, they cannot be performed from Mode 3 when you have selected a song number to be Linked.

＊The amount of memory is displayed in units called "bytes".

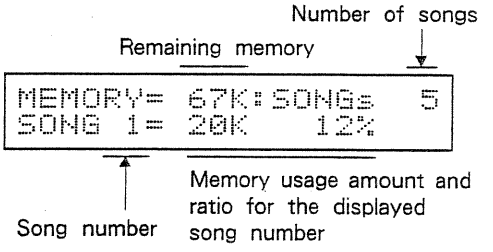
☐ Check internal memory (Available Memory)

① Move to the Available Memory display, and check each item.

Hold [SHIFT] and press [AVAIL]

Alpha - dial / Numeric keys (select song numbers)

＊If you are in standby condition, and select a song number for which there is no song data, a framework for creating song data will be created for that song number. This framework uses 1 Kbyte of memory, so even if there is no song data, the display will show "1K". If a song file was not read when you started up SUPER-MRC, a framework will automatically be created for song number 1.



● To exit this function, press [STOP].

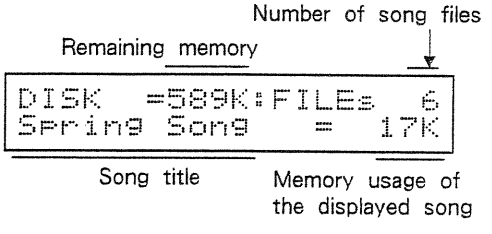
☐ Check disk (Available Disk)

① Insert a disk.

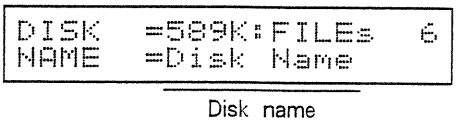
② Move to the Available Disk display, and check each item.

Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]

Alpha - dial (select song files)



If you wish to check the Disk Name, press [FUNC]. To return to the previous display, press [FUNC] once again.



● To exit this function, press [STOP].

Saving and Loading a Song (Current Load / Current Save)

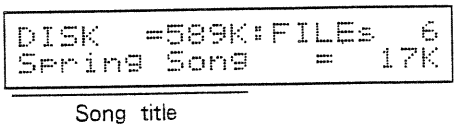
☐ **Explanation** Mode 2 allows you to save and load song data, but mode 1 allows you to save or load just one song from disk.

☐ Loading a song file (Current Load)

● From Mode 1 standby

① Select the Song number you wish to load.

② Insert the disk, and move to the Available Disk display.
Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]



Song title

③ Select the Song file you wish to load, and execute loading.
Alpha - dial → [LOAD]

● When loading is completed, you will return to the standby display.

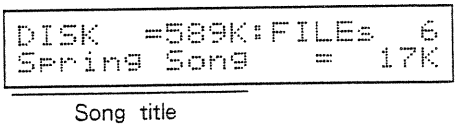
☐ Saving a song file (Current Save)

* You must give a name to a song before you can save it to disk. To name a song, refer to "FUNC 3: Song title" (☞P.64).
* Note! If the disk already contains another song file of the same name, it will be overwritten without a warning display.

● From Mode 1 standby

① Select the Song number into which you want to save the song data.

② Insert the disk, and move to the Available Disk display.
Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]



Song title

③ Execute saving.
Hold [SHIFT] and press [SAVE]

● When saving is completed, you will return to the standby display.

MIDI

These settings determine how MIDI messages are transmitted and received. Changes you make in these settings will be lost when you turn the power off. If you wish to keep your settings, save them to disk as a Configuration file (☞ P.164, "3: Save a Configuration data").
If you wish to use the settings of a Configuration file, refer to "Play" (☞ P.14) or "2: Load a Configuration file" (☞ P.163).

MIDI 1 : Select the Receive Channel

☐ Explanation

Here you can select the MIDI channels to receive. Use this to specify the receive channel when you wish to rerecord only a specified MIDI channel in Replace Recording (☞P.28) or Punch In Recording (☞P.34, 35). Normally, you will set this to receive all MIDI channels (ALL).

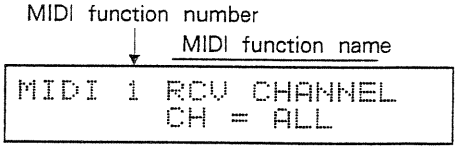
* This setting also applies to the MIDI messages re - transmitted by Soft Thru (☞P.58).
* If you wish to receive only a specific type of MIDI message, refer to the following item.
* System messages (exclusive, common, realtime, etc.) will be received regardless of this setting.

☐ Procedure

● From Mode 1 standby

① Move to the Receive Channel display.

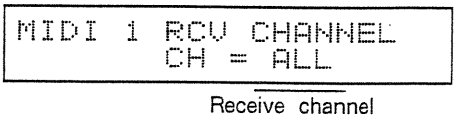
[MIDI] → (Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Receive channel.

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



● To exit this setting, press [STOP].

* The actual receive channel will not be changed until you exit this setting.

MIDI 2 : Select the MIDI Messages to receive

(Receive Status)

☐ Explanation

This selects the MIDI messages that will be received. Normally you will leave this set so that all MIDI messages are received, but if you want a specific type of MIDI message to not be recorded, you can turn off the reception for that message.

For example when you are recording in realtime, Aftertouch messages may be transmitted from your keyboard and recorded even if you do not wish to record them. In such cases, you can set the MC - 50 so that it will not receive Aftertouch messages.

You can select the following types of MIDI status (types of MIDI message).

Display	MIDI status
PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
CCa	Control Change 0—63
CCb	Control Change 64—120, Local On/Off
PG	Program Change
CAf	Channel Aftertouch (Channel Key Pressure)
PB	Pitch Bend
EX	Exclusive

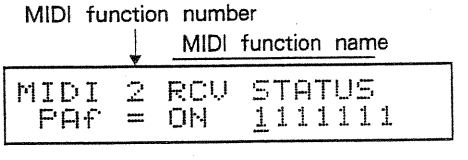
*These settings also apply to the MIDI messages re - transmitted by the Soft Thru function (☞P.58).

☐ Procedure

● From Mode 1 standby

① Move to the Receive Status display.

[MIDI] → (Numeric key [2] / Alpha - dial) → [ENTER]

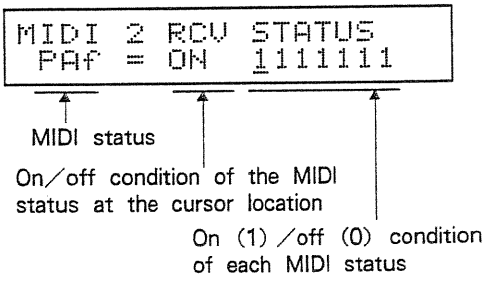


② Turn reception on/off for each MIDI status.

Alpha - dial / Numeric keys (modify the value)

[◄] [►] (select a MIDI status)

*When you use the Numeric keys to specify the value, the value will be finalized immediately.



● To exit this function, press [STOP].

MIDI 3 : Specify how MIDI Messages are transmitted (Transmit Condition)

☐ **Explanation** You can specify how messages are transmitted from MIDI OUT for the following five categories.

◆ THRU (Soft Thru)

Initial value: OUT2

Soft Thru determines how the MIDI messages received at MIDI IN will be re - transmitted from MIDI OUT. Here you can specify the MIDI OUT from which the messages will be re - transmitted.

*While data is being written to or read from disk, MIDI messages recieved at MIDI IN will not be re-transmitted from MIDI OUT even if the Soft Thru function has been turned on.

◆ CLK (Timing Clock)

Initial value: 1 + 2

This specifies the MIDI OUT from which the MIDI messages Start / Continue / Stop / Song Position Pointer / Song Select will be transmitted.

◆ AOff (All Notes Off)

Initial value: OFF

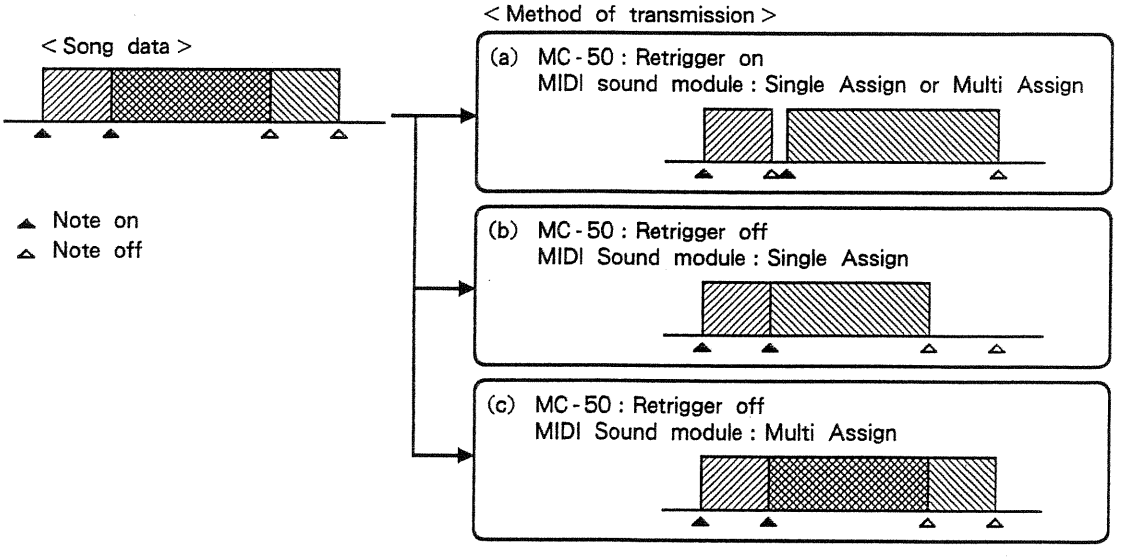
This specifies the MIDI OUT from which the All Notes Off message (a message which turns all notes off) will be transmitted. If you are using a MIDI sound module which is not set to mode 3 (Omni Off, Poly), turn this off.

◆ RTRG (Retrigger)

Initial value: 1 + 2

Retrigger specifies how Note messages will be transmitted when more than one Note message of the same note number and same MIDI channel are recorded overlapping. This specifies only the method of transmission, and has no effect on the song data itself.

Normally, you will set Retrigger On (figure a), but if your MIDI sound module processes notes in Multi Assign mode, set this on (figure a) or off (figure c) as appropriate.



If your MIDI sound module is in Single Assign mode and receives two or more Note messages of the same note number on the same MIDI channel, it will play only one note at a time. If your MIDI sound module is in Multi Assign mode and receives two or more Note messages of the same note number on the same MIDI channel, it will play the notes overlapping.

*If your MIDI sound module is in Single Assign mode, the sounded note length may be shortened, so do not turn Retrigger Off (see figure b).

*The Retrigger setting also applies to the MIDI messages transmitted by Soft Thru.

◆ ActS (Active Sensing)

Initial value: 1 + 2

Active Sensing messages are transmitted at regular intervals from MIDI OUT. This prevents stuck notes on the sound module in the event that MIDI messages are cut off, such as when a MIDI cable is broken or disconnected. Here you can specify the MIDI OUT from which Active Sensing messages will be transmitted. To prevent problems, you should normally transmit Active Sensing messages.

*Some MIDI sound modules cannot correctly process Active Sensing messages. In such cases, turn off Active Sensing.

You can choose from the following settings.

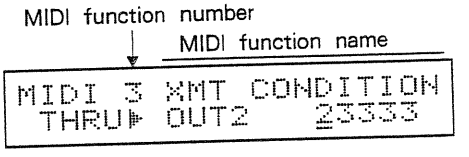
Numeric key input	Value (display)	Function	Retrigger operation
0	OFF (0)	Not transmitted	Not retriggered
1	OUT 1 (1)	Transmitted from MIDI OUT 1	MIDI OUT 1 is retriggered
2	OUT 2 (2)	Transmitted from MIDI OUT 2	MIDI OUT 2 is retriggered
3	1 + 2 (3)	Transmitted from both MIDI OUTs	Both MIDI OUTs are retriggered

☐ Procedure

● From Mode 1 standby

① Move to the Transmit Condition display.

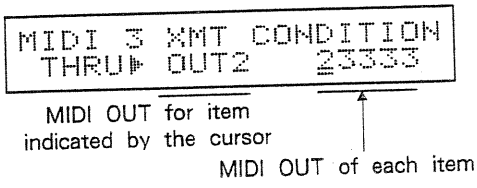
[MIDI] → (Numeric key [3] / Alpha - dial) → [ENTER]



② Set the MIDI OUT for each item.

Alpha - dial / Numeric keys (modify values)

[◀] [▶] (select items)



*When you specify a value using the Numeric keys, it will be finalized immediately.

● When you finish making settings, press [STOP].

FUNCTION

The MC-50 provides 14 functions, which can be set independently for each song, and are handled as part of the Song data. This means that when you save Song data, the Function settings for the song are also saved.

FUNC 1:	Synchronization	(Sync Clock)
FUNC 2:	Using the Metronome	(Metronome)
FUNC 3:	Name a Song	(Song Title)
FUNC 4:	Specify Velocity Codes	(Rhythm Velocity)
FUNC 5:	Assign Drum Sounds	(Rhythm Instruments)
FUNC 6:	Specify the recording area for Auto Punch In Recording	(Punch Point)
FUNC 7:	Specify the area to be repeated for Block Repeat Play	(Block Repeat)
FUNC 8:	Automatically Stop Playback/Recording	(Auto Stop)
FUNC 9:	Set Basic Tempo	(Basic Tempo)
FUNC 10:	Set Locate Point	(Locate Point)
FUNC 11:	Set MIDI OUT for each Track	(Output Assign)
FUNC 12:	Convert Transmit Channels	(Transmit Channel)
FUNC 13:	Specify Note Name display for Black Keys	(Note Name)
FUNC 14:	Write a Memo for a Song	(Song Log)

*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞ P.128, "Copy function settings").

FUNC 1 : Synchronization (Sync Clock)

☐ Explanation

When playing back or recording in synchronization with another sequencer or MTR (multitrack recorder), you must set the Sync clock to an appropriate setting.

Numeric key input	Value	Operation
1	INTERNAL	Select this when using the MC-50 clock to synchronize external devices. (sequencer, etc.)
2	MIDI	The MC-50 will synchronize to MIDI Clock messages from an external MIDI device. It can also be controlled by Start/Continue/Stop messages, and will respond to Song Position Pointer and Song Select messages.
3	TAPE	The MC-50 will synchronize to a tape sync signal (FSK signal) recorded on an MTR.

If this has been set to other than "INTERNAL", the Tempo indication in the standby display will be as follows.

Sync clock : MIDI

```
SONG 1 Spring Song
M=   1  MIDI   REAL
```

Sync clock : TAPE

```
SONG 1 Spring Song
M=   1  TAPE   REAL
```

*If you are not synchronizing the MC-50 to an external device, select "INTERNAL". If "MIDI" or "TAPE" is selected, the MC-50 can not operate by itself.

*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Sync Clock display.

[FUNC] → (Numeric key [1] / Alpha - dial) → [ENTER]

Function number

Function name

```
FUNC 1 SYNC CLOCK
       INTERNAL
```

② Select the Sync clock.

Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

```
FUNC 1 SYNC CLOCK
       INTERNAL
```

Sync clock

● Press [STOP] to complete settings.

FUNC 2 : Using the Metronome

☐ Explanation

This setting determines how the metronome will sound the beat. You can adjust the volume of the metronome using the Metronome Volume knob on the rear panel. (The output level of the METRONOME OUTPUT jack will also change.)

Select one of the following metronome beats. The panel Beat Indicator will blink according to this setting. Normally you will set this to "AUTO".

Numeric key input	Value	Operation
0	AUTO	The metronome will sound according to the beat of the Song data.
1	𝅘𝅥𝅯	The metronome will sound at the specified beat, regardless of the beat of the Song data.(However when the measure changes, the metronome will be reset.)
2	♪	
3	♩	
4	♩.	
5	𝅗𝅥	

Select one of the following ways for the metronome to sound. Normally you will set this to "REC only" or "REC&PLAY".

Numeric key input	Value	Operation
0	OFF	Does not sound
1	REC only	Sounds during recording
2	REC & PLAY	Sounds during recording and playback
3	Always	Sounds during standby mode, playback, and recording

* The Metronome Volume knob will also adjust the volume of the warning signal. If you turn the volume too low, you will not be able to hear the warning signal.
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

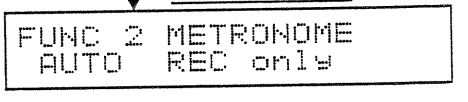
● From Mode 1 standby

① Move to the Metronome display.

[FUNC] → (Numeric key [2] / Alpha - dial) → [ENTER]

Function number

Function name

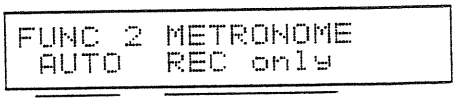


② Specify how the beat will be sounded.

Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◄] [►] (move the cursor)



Beat

Sounding condition

● Press [STOP] to complete settings.

FUNC 3 : Name a Song (Song Title)

☐ Explanation

You can assign a name (Title) to the song in MC - 50 memory. You must assign a Song Title before saving song data to disk. It is not possible to save an unnamed song.

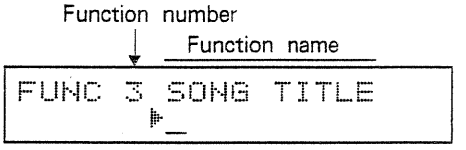
*It is not possible to save two or more songs of the same Song Title on a single disk. However, identically spelled names are considered different if the case (upper or lower) of one or more characters is different.

☐ Procedure

● From Mode 1 standby

① Move to the Song Title display.

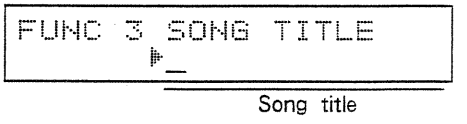
[FUNC] → (Numeric key [3] / Alpha - dial) → [ENTER]



② Assign a Song Title.

Alpha - dial / Numeric keys (select characters)

[◀][▶] (move the cursor)



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

● Press [STOP] to complete settings.

FUNC 4 : Specify Velocity Codes (Rhythm Velocity)

☐ Explanation

These settings determine the Velocity values used when creating a Rhythm pattern. Set a velocity value for each of the Velocity codes 1—8. Set values that are appropriate for your MIDI rhythm sound module.

The Velocity value of each Velocity code is initially set as follows.

Velocity code	1	2	3	4	5	6	7	8
Velocity value	16	32	48	64	80	96	112	127

*When creating a Rhythm track, you can use Bias settings to adjust the overall Velocity values of each Rhythm pattern (☞P.48, "Rhythm track recording").

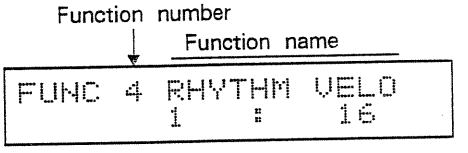
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Rhythm Velocity display.

[FUNC] → (Numeric key [4] / Alpha - dial) → [ENTER]

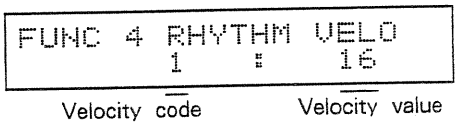


② Specify the Velocity value for each Velocity code.

Alpha - dial / Numeric keys (modify the values)

[ENTER] (finalize the value / select Velocity Codes)

[◀] [▶] (move the cursor)

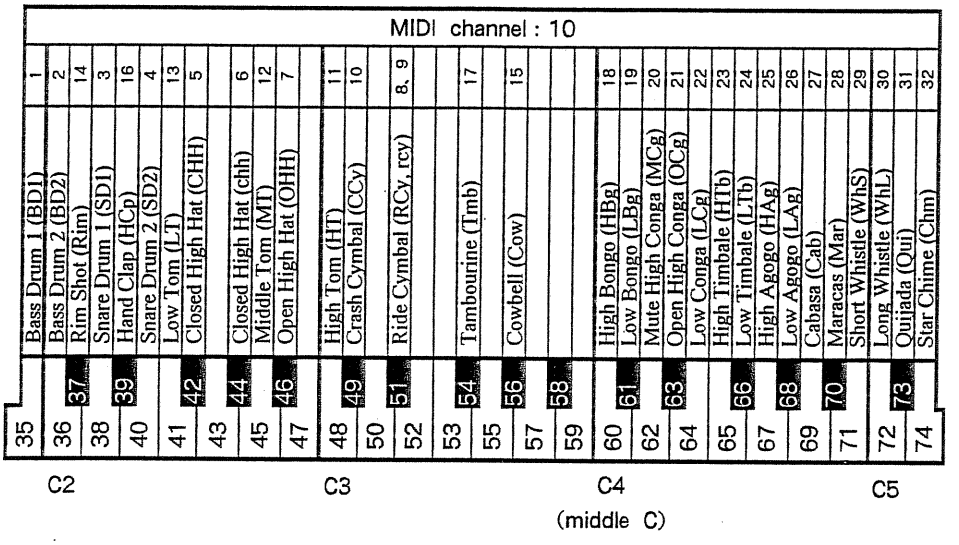


● Press [STOP] to complete settings.

FUNC 5 : Assign Drum Sounds (Rhythm Instruments)

☐ Explanation

These settings determine the drum sound assignments used when you create a Rhythm pattern. For each instrument number (1—32), you can specify an Instrument Name (three characters), MIDI Channel, and Key Number (note number). Make settings as appropriate for your MIDI rhythm sound module.



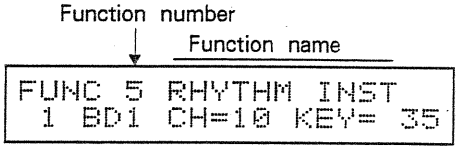
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Rhythm Instrument display.

FUNC → (Numeric key 5 / Alpha - dial) → ENTER



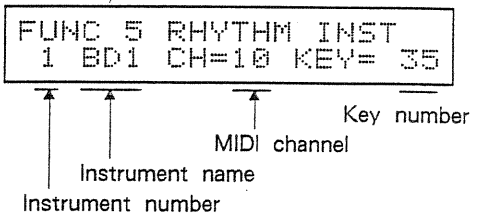
*When you press PLAY, the displayed Note message will be transmitted from MIDI OUT to play the drum sound of the connected MIDI sound module, allowing you to check the assignment.

② For each Instrument number (1—32), specify the Instrument Name, MIDI channel, and Key number.

Alpha - dial / Numeric keys (modify values / select characters)

ENTER (finalize a value)

◀ ▶ (move the cursor)



You can use the following characters in an Instrument name.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Move to the next Instrument number	[SKIP]
Move to the previous Instrument number	[RESET]

● Press [STOP] to complete settings.

FUNC 6 : Specify the recording area for Auto Punch In Recording (Punch Point)

☐ Explanation

These settings specify the area which will be recorded (Punch In point and Punch Out point) when you use Auto Punch In Recording (☞P.34). You can use Measures or Locate points to specify the area to be recorded.

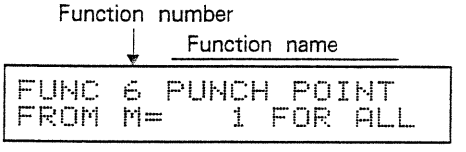
*If you wish to use Locate points to specify the recording area, you must first set the Locate points (☞P.18 or P. 72).

☐ Procedure

● From Mode 1 standby

① Move to the Punch Point display.

[FUNC] → (Numeric key [6] / Alpha - dial) → [ENTER]

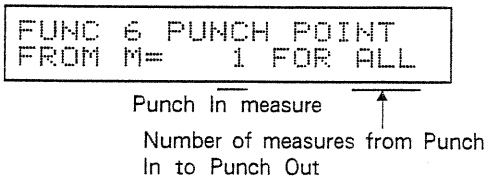


② Set the recording area.

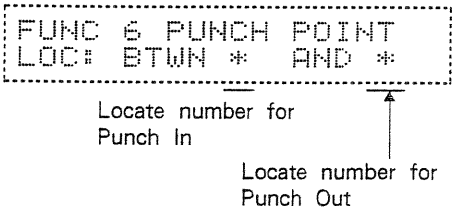
Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◄][►] (move the cursor>



If you wish to use Locate points to specify the area to be recorded, press [LOC] to get the Punch point "LOC" display. Each time you hold [SHIFT] and press [LOC], the two Punch point displays will alternate.



*It is not possible to use both Measures and Locate points to specify an area to be recorded. The last-selected one will be used.

*When using Locate points to specify the area to be recorded, if the position of the Punch Out is before (or the same as) the Punch In point, it will not be possible to Auto Punch Out when you use Auto Punch In Recording.

● Press [STOP] to complete settings.

■ FUNC 7 : Specify the area to be repeated for Block Repeat Play (Block Repeat)

☐ Explanation

These settings determine the area which will be repeated when you use the Block Repeat Play function (☞ P.16). The Block Repeat Play function repeatedly plays back the specified area. You can specify the area by Measure or by Locate point.

*If you wish to use Locate points to specify the repeated area, you must first set the Locate points (☞ P.18 or P. 72).

☐ Procedure

● From Mode 1 standby

① Move to the Block Repeat display.

[FUNC] → (Numeric key [7] / Alpha - dial) → [ENTER]

Function number

Function name

```
FUNC 7 BLOCK REPEAT
FROM M=    1 FOR ALL
```

② Specify the area to be repeated.

Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◄][►] (move the cursor>

```
FUNC 7 BLOCK REPEAT
FROM M=    1 FOR ALL
```

Measure from which to begin repeating

Number of measures to repeat

If you wish to use Locate points to specify the repeated area, press [LOC] to get the Block Repeat "LOC" display. Each time you hold [SHIFT] and press [LOC], the two Block Repeat displays will alternate.

```
FUNC 7 BLOCK REPEAT
LOC: BTWN *   AND *
```

Locate number from which to begin repeating

Locate number from which to end repeating

*It is not possible to specify a Block Repeat area using both Measures and Locate points. The last - selected one will be used.

*When using Locate points to specify a Block Repeat area, if the position of the beginning point is before (or the same as) the ending point, Block Repeat Play will begin at the starting point, but will not repeat.

● Press [STOP] to complete settings.

FUNC 8 : Automatically Stop Playback/ Recording (Auto Stop)

☐ Explanation

These settings determine whether or not playback or recording will automatically stop at a specified location (Stop point). You can use Measures or Locate points to specify the Stop point. If you have specified the Stop point as a Measure, recording or playback will stop at the beginning of that measure.

You can set Auto Stop in the following ways.

Numeric key input	Value	Operation
0	OFF	Auto Stop will not occur
1	PLAY	Auto Stop at the specified point only for playback
2	REC	Auto Stop at the specified point only for recording
3	REC & PLAY	Auto Stop at the specified point for both playback and recording

*If you have selected "REC" or "REC & PLAY", it will not be possible to use Count In Recording from the Stop Point. In such cases, turn the Stop Mode "OFF".

*If you wish to use Locate points to specify the Auto Stop point, you must first set the Locate points (☞P.18 or P. 72).

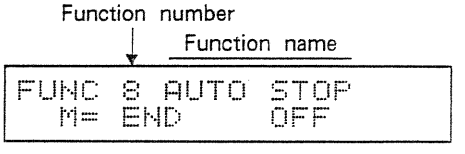
*If you wish to stop recording or playback at the beginning of the measure following the Stop point, refer to "CNFG 1: Locate mode" (☞P.156).

☐ Procedure

● From Mode 1 standby

① Move to the Auto Stop display.

[FUNC] → (Numeric key [8] / Alpha - dial) → [ENTER]

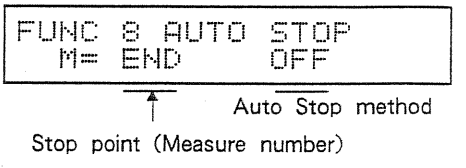


② Specify the Stop point and the Auto Stop method.

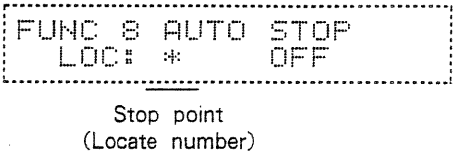
Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◄][►] (move the cursor)



If you wish to use a Locate point to specify the Stop point, press [LOC] to get the "LOC" display. Each time you hold [SHIFT] and press [LOC], the setting displays will alternate.



*It is not possible to specify the Stop point using both Measures and Locate points. The last - specified one will be used.

● Press [STOP] to complete settings.

FUNC 9 : Set Basic Tempo

☐ Explanation

This setting determines the Basic tempo of a song. The Basic tempo is shown in the standby display immediately after a song has been loaded from disk.

You may freely change the Basic tempo during playback, but these changes are temporary. Once you have changed the Basic tempo, you can restore the original Basic tempo specified by the song by holding [SHIFT] and rotating the Alpha - dial. The initial Basic tempo setting is 120.

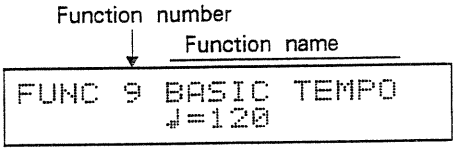
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Basic Tempo display.

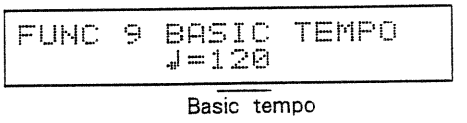
[FUNC] → (Numeric key [9] / Alpha - dial) → [ENTER]



② Specify the Basic tempo.

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



● Press [STOP] to complete settings.

FUNC 10 : Set Locate Point

☐ Explanation

Locate points specify a location by Measure/Beat/Clock. In the standby condition and in the Microscope display, you can move quickly to a previously set Locate point (☞ P.18, "Locate Jump"). Also, Locate points can be used to specify areas and positions in the following functions. Locate points allow you to specify a position more precisely than by using Measures.

EDIT 1 : Erase	P. 80
EDIT 2 : Delete	P. 82
EDIT 5 : Extract	P. 85
EDIT 6 : Transpose	P. 88
EDIT 7 : Change Velocity	P. 90
EDIT 8 : Change MIDI Channel	P. 92
EDIT 9 : Quantize	P. 94
EDIT 10 : Copy	P. 96
EDIT 11 : Change Gate Time	P. 98
EDIT 12 : Shift Clock	P. 100
EDIT 13 : Data Thin	P. 102
EDIT 15 : Multi Edit	P. 105

FUNC 6 : Punch Point	P. 68
FUNC 7 : Block Repeat	P. 69
FUNC 8 : Auto Stop	P. 70

UTIL 2 : Time Calculation	P. 127
UTIL 6 : Data Check	P. 131

There are nine Locate points (0—9). You may freely set the position of Locate points 1—8.

Locate number	Type of Locate point	Remarks
0	System Locate point	This is set automatically where recording begins.
1—8	User Locate point	These can be set at any location in the song.
9	System Locate point	This is set automatically where recording ends.

* Locate points are renewed each time they are set.
* To easily set or cancel Locate points, refer to page 18 "Locate point settings" and page 19 "Locate point delete".
* The position of a Locate point is not affected when you modify the song data. Also, it is possible to set a Locate point which does not exist in the song.
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞ P.128, "Copy function settings").

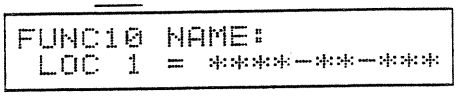
☐ Procedure

● From Mode 1 standby

① Move to the Locate point display.

FUNC → (Numeric key 1 → 0 / Alpha - dial) → ENTER

Function number



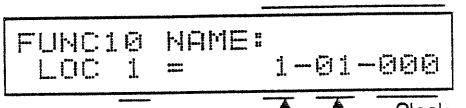
② Specify the Measure / Beat / Clock / Name for each Locate point.

Alpha - dial / Numeric keys (modify values / select characters)

ENTER (finalize the value)

◄ ► (move the cursor)

Locate point name



Locate number

Measure

Beat

Clock

You can use the following characters.

Space A···Z a···z 0···9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will cycle through the characters printed on that key. To input lower case characters, hold SHIFT and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold PAUSE and press ►
Delete the character at the cursor position	Hold PAUSE and press ◄
Delete all characters after the cursor position	Hold SHIFT and press SKIP
Move to the next Locate number	SKIP
Move to the previous Locate number	RESET

● Press STOP to complete settings.

FUNC 11 : Set MIDI OUT for each Track

(Output Assign)

☐ Explanation

These settings determine how song data of each track (except the Tempo track) will be output from the two MIDI OUT connectors. For example, if tracks 1 and 2 each contain 16 channels of song data, you can assign track 1 to MIDI OUT 1, and track 2 to MIDI OUT 2, for a performance using 32 MIDI sound modules.

Select one of the following Output Assignments. Normally you will select 1+2, but if you are using more than 16 sound modules, you should split the two MIDI OUTs.

Numeric key input	Value (display)	Operation
0	OFF (0)	Not transmitted
1	OUT 1 (1)	Transmitted from MIDI OUT 1
2	OUT 2 (2)	Transmitted from MIDI OUT 2
3	1 + 2 (3)	Transmitted from both MIDI OUTs

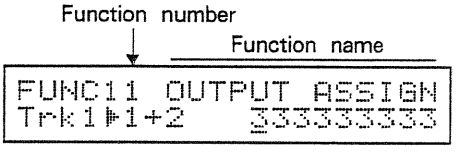
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").
* The MIDI OUT for the messages retransmitted by the Soft Thru function is determined by "MIDI 3: Transmit condition" (☞P.58), and is not affected by this FUNC 11 setting.

☐ Procedure

● From Mode 1 standby

① Move to the Output Assign display.

[FUNC] → (Numeric key [1] → [1] / Alpha - dial) → [ENTER]

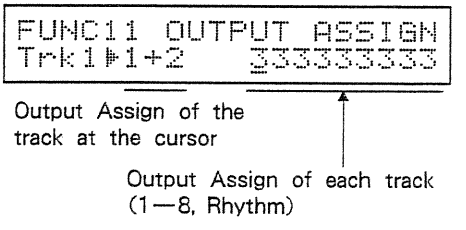


② Specify the Output assignment for each track.

Alpha - dial / Numeric keys (modify the value)

[◀][▶] / Track keys (select tracks)

* When you use the Numeric keys to enter a value, it will be finalized immediately.



● Press [STOP] to complete settings.

FUNC 12 : Convert Transmit Channels

☐ Explanation

These settings specify how each MIDI channel 1—16 of data in each track will be converted to another MIDI channel as it is transmitted. (Converting the transmitted data will not affect the MIDI channel of the actual song data.) This allows you to transmit song data on a different channel from when it was recorded, allowing the same data to be used to play a different sound module without having to change the settings of the sound module.
You can also specify that a certain MIDI channel of song data not be transmitted.

* If you wish to modify the MIDI channel of the actual song data, refer to "EDIT 8: Change MIDI channel" (☞P.92).
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").
* The transmit channel of MIDI messages retransmitted by Soft Thru will not be converted.

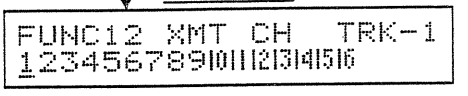
☐ Procedure

● From Mode 1 standby

① Move to the Transmit Channel display.

FUNC → (Numeric key 1 → 2 / Alpha - dial) → ENTER

Function number
Function name

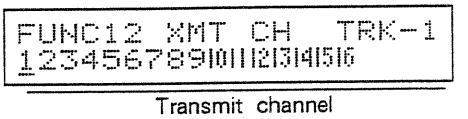


From left to right, the lower line of the display shows the MIDI channel 1—16 into which each channel of song data will be converted for transmission.

② Select a Phrase track (1—8), and modify the transmit channels.

Alpha - dial / Numeric keys (modify the value)
ENTER (finalize the value)
◀ ▶ (move the cursor)

Track



Transmit channel

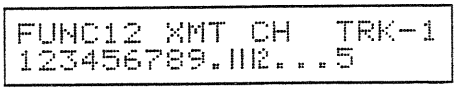
< Using the Numeric keys to enter the transmit channel >

To specify a channel 1—9	Numeric keys 1—9
To specify a channel 10—16	Hold SHIFT and press Numeric keys 0—6
To turn transmission off	Numeric key 0

* When you specify a transmit channel using the Numeric keys, it will be finalized immediately.

< Example of settings >

The display at right shows channels 10 and 13—15 turned off, and channel 16 converted into channel 5.



● Press STOP to complete settings.

FUNC 13 : Specify Note Name display for Black Keys

☐ Explanation

These settings determine whether the black keys will be displayed as # or ♭ note names when you use the Microscope function. Make settings as appropriate for your song. For example if the song is in E flat major (or C minor), set them all to ♭ .

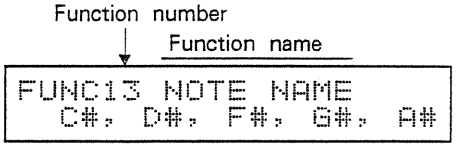
* This function affects only the display, and has no effect on input methods.
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

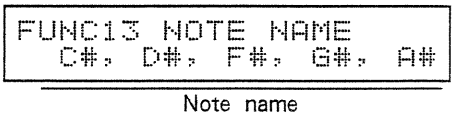
① Move to the Note Name display.

[FUNC] → (Numeric key [1] → [3] / Alpha - dial) → [ENTER]



② Select #/ ♭ for each note name.

Alpha - dial / Hold [SHIFT] and
press Numeric key [7] (♭) or [8] (#) (modify values)
[ENTER] (finalize the setting)
[◄] [►] (move the cursor)



● Press [STOP] to complete settings.

FUNC 14 : Write a Memo for a Song (Song Log)

Explanation

This function allows you to write a memo for the song in memory. You have 16 characters × 99 lines to write in. This is a convenient way to remember the names and settings of the equipment used in this song.

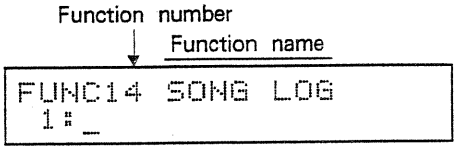
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

Procedure

● From Mode 1 standby

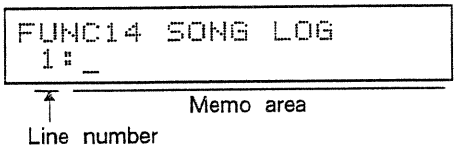
① Move to the Song Log display.

[FUNC] → (Numeric key [1] → [4] / Alpha - dial) → [ENTER]



② Write the memo.

Alpha - dial / Numeric keys (select line numbers / characters)
[ENTER] (finalize the setting)
[◀][▶] (move the cursor)



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will cycle through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]
Move to the next line	[SKIP]
Move to the previous line	[RESET]

● Press [STOP] to complete settings.

EDIT

Fifteen types of editing operation are provided, allowing you to edit and modify song data in various ways. After you execute an editing operation, it may not always be possible to recover the previous data. Be sure to save the original song data to disk.

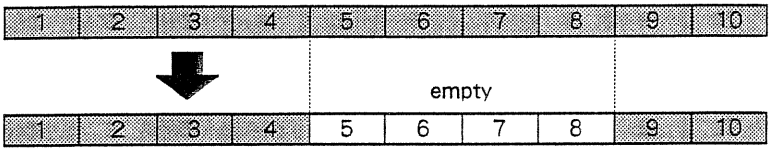
EDIT 1:	Erase Song Data	(Erase)
EDIT 2:	Delete Song Data	(Delete)
EDIT 3:	Insert Blank Measures	(Insert Measure)
EDIT 4:	Combine the Song Data of two Phrase Tracks	(Merge)
EDIT 5:	Transfer Song Data	(Extract)
EDIT 6:	Transpose Song Data	(Transpose)
EDIT 7:	Change Velocity	(Change Velocity)
EDIT 8:	Change MIDI Channels	(Change MIDI Channel)
EDIT 9:	Correct Note Timing	(Quantize)
EDIT 10:	Copy Song Data	(Copy)
EDIT 11:	Change Gate Time	(Change Gate Time)
EDIT 12:	Shift Timing	(Shift Clock)
EDIT 13:	Thin out MIDI Messages	(Data Thin)
EDIT 14:	Exchange Phrase Tracks	(Track Exchange)
EDIT 15:	Convert MIDI Messages	(Multi Edit)

EDIT 1 : Erase Song Data

☐ Explanation

This operation erases a specified area of song data. You can erase specified types of MIDI status (MIDI messages). Use this operation to erase MIDI messages you recorded or input by mistake.

Example : If all song data of Phrase tracks 1—8, measures 5—8 were erased blank



＊The erased area of the Rhythm track will be replaced with rest patterns.

You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	---
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	---
Hold [SHIFT] and press 4	PB (Pitch Bend)	---
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	---

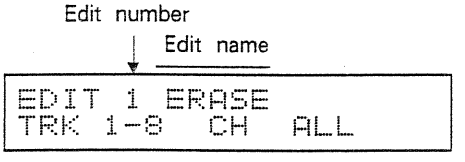
＊If you wish to use Locate points to specify the area, you must first set the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Erase display.

[EDIT] → (Numeric key [1] → Alpha - dial) → [ENTER]



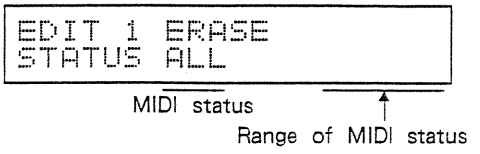
② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to erase.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

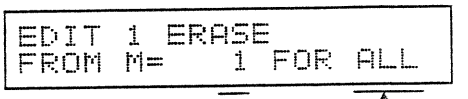
[◄] [►] (move the cursor)



＊If you are erasing the Rhythm track, it is not possible to specify the MIDI channel.

If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

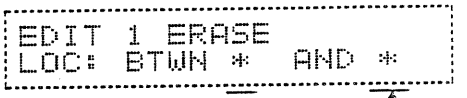
Area to erase



Starting measure

Number of measures from starting measure

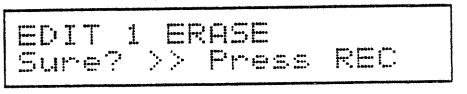
*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Starting Locate number

Ending Locate number

Execute display



③ Execute the Erase operation from the Execute display.

[REC]

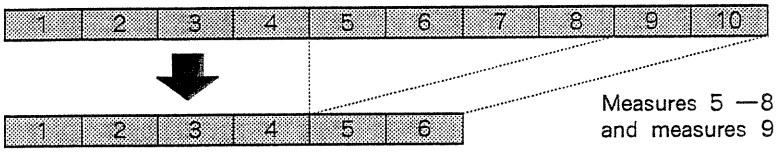
● Press [STOP] to end the procedure.

EDIT 2 : Delete Song Data

☐ Explanation

This operation deletes a specified area of the song data. Use it to remove unwanted song data. You can specify the area to be deleted either by Measure number or by Locate point. However, Rhythm patterns can be deleted only in units of whole measures. This means that they cannot be deleted using a Locate point which is in the middle of a measure.

Example : Delete measures 5—8



Measures 5 —8 of the original data are deleted, and measures 9 and 10 are moved forward.

* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).
* If you use this Delete operation on the Rhythm track so that it becomes shorter than the Phrase tracks, it will no longer be possible to play the Phrase tracks beyond the end of the Rhythm track. If you wish to play to the end of the Phrase tracks, you must lengthen the Rhythm track. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞ P.133).

☐ Procedure

● From Mode 1 standby

① Select the Delete display.

[EDIT] → (Numeric key [2] → Alpha - dial) → [ENTER]

Edit number / Edit name

```
EDIT 2 DELETE
TRK ALL
```

② Specify the Track / Area you wish to delete.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)

```
EDIT 2 DELETE
TRK ALL
```

Track

If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

Area to delete

```
EDIT 2 DELETE
FROM M=    1 FOR ALL
```

Starting measure / Number of measures from starting measure

* It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT 2 DELETE
LOC: BTWN *   AND *
```

Starting Locate number / Ending Locate number

Execute display

```
EDIT 2 DELETE
Sure? >> Press REC
```

③ Execute the Delete operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

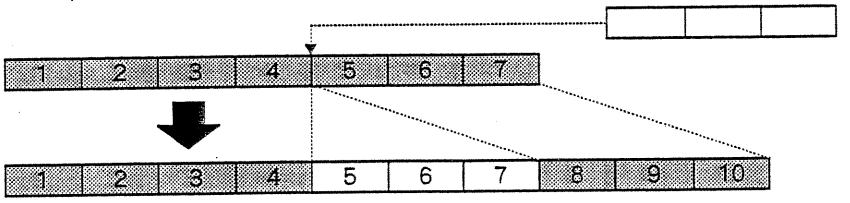
EDIT 3 : Insert Blank Measures

☐ Explanation

This operation inserts blank measures at the specified location. Blank measures will be inserted into the Phrase tracks, but rest patterns will be inserted into the Rhythm track. If you wish to insert blank measures into the Rhythm patterns, you must specify the time signature of the rest patterns.

If you wish to add song data into the middle of a song, use this Insert Measure operation to insert blank measures into all tracks at the desired location, and then record the new song data into the blank measures.

Example : Inserting 3 blank measures at measure 5



*If you use this operation to insert blank measures only into the Phrase tracks, and they become longer than the Rhythm track, it will no longer be possible to play the Phrase tracks beyond the end of the Rhythm track. If you want to play to the end of the Phrase tracks, you must lengthen the Rhythm tracks. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞P.133).

☐ Procedure

● From Mode 1 standby

① Select the Insert Measure display.

[EDIT] → (Numerical Key [3] / Alpha - Dial) → [ENTER]

Edit number
Edit name

```
EDIT 3 INSERT MEAS
TRK ALL
```

② Specify the Track / Measure number / Number of measures you wish to insert, and the Time signature of the rest patterns.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◄] [►] (move the cursor)

```
EDIT 3 INSERT MEAS
TRK ALL
```

Track

*The setting for Time signature of rest patterns will be displayed if you select tracks "ALL" or "R".

```
EDIT 3 INSERT MEAS
TIME SIGN  1/4
```

Time signature of rest patterns

```
EDIT 3 INSERT MEAS
FROM M=   1 FOR    1
```

Measure number to insert
Number of blank measures

Execute display

```
EDIT 3 INSERT MEAS
Sure? >> Press REC
```

③ Execute the Insert Measure operation from the Execute display.

[REC]

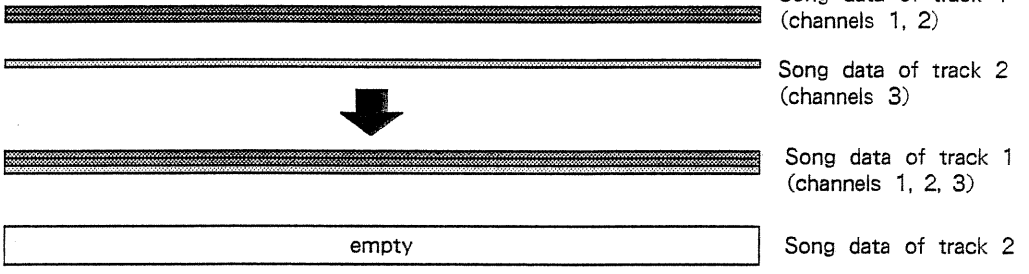
● Press [STOP] to end the procedure.

EDIT 4 : Combine the Song Data of two Phrase Tracks (Merge)

☐ Explanation

This operation merges (combines) the song data of two Phrase tracks into one of the Phrase tracks, and erases the song data of the other Phrase track. This operation is convenient when you are organizing the song data of the various tracks.

Example : Merge tracks 1 and 2 into track 1



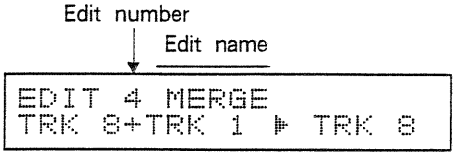
* If you merge song data which contains identical MIDI channels, the song data will be mixed.
* If you have made Transmit Channel settings (☞ P.75) to convert the transmit channels of a track, the playback may be different after being merged. If so, make the appropriate Transmit Channel settings again.

☐ Procedure

● From Mode 1 standby

① Select the Insert Measure display.

[EDIT] → (Numerical Key [4] / Alpha - Dial) → [ENTER]



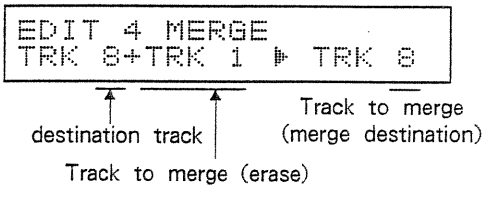
② Specify the two tracks you wish to merge.

Alpha - dial / Numeric keys (modify values)

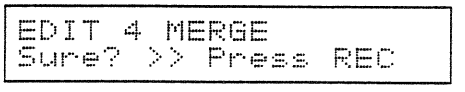
Track keys (select tracks)

[ENTER] (finalize values)

[◀][▶] (move the cursor)



Execute display



③ Execute the Merge operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

EDIT 5 : Transfer Song Data (Extract)

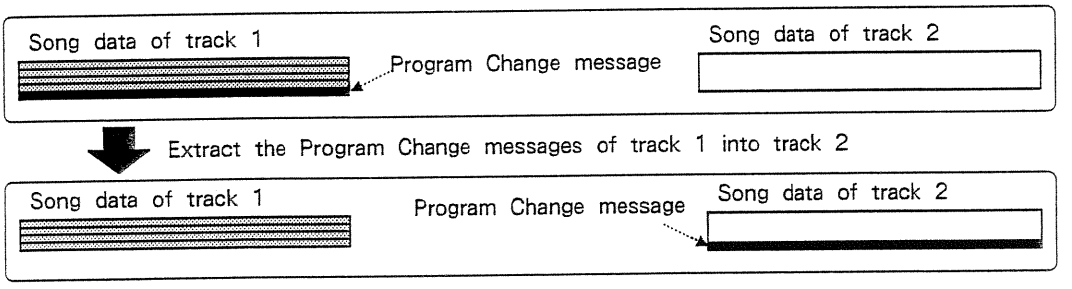
☐ Explanation

This operation extracts the specified song data from a Phrase track, and moves it to the same location in another Phrase track. The Extract operation can be performed individually for each MIDI status. Use it when you need to remove or separate a specific type of MIDI message.

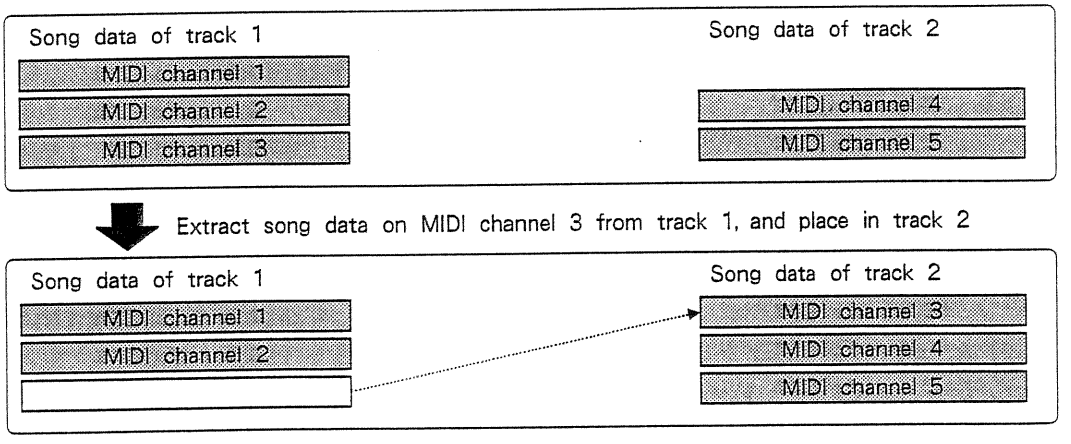
You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	– – –
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	– – –
Hold [SHIFT] and press 4	PB (Pitch Bend)	– – –
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	– – –

For example, if you want to temporarily prevent the sound programs of your MIDI sound module from changing, you can extract the Program Change messages, and mute the Phrase track which contains the Program Change messages.



If you need to move all song data of a specific MIDI channel to another Phrase track, you can do this by extracting all MIDI messages of that channel from the entire length of the track, and moving them into another Phrase track.



If song data already exists in the destination Phrase track, you can select what will happen to it (Replace/Mix). If you select Replace, the result will depend on the MIDI channel setting you select. If the destination Phrase track does not contain song data, this setting will make no difference.

Numeric key input	Transfer method	MIDI channel setting	Operation
1	REPLACE	ALL	Overwrite all song data in the destination with the extracted song data.
		1—16	If song data of the same MIDI channel is present both in the extracted data and in the destination track, only the song data of that channel will be overwritten.
2	MIX	ALL, 1—16	The extracted data will be combined into the destination track.

The Erase operation (☞P.80) is able to erase only one type of MIDI message in one operation. By using the Extract operation, you can leave only a specific type of MIDI message, and erase all other types at once. To do this, set the track to be extracted and the destination track to be the same, and select REPLACE as the transfer method. Next, select the type of MIDI message you wish to keep, and execute the Extract operation.

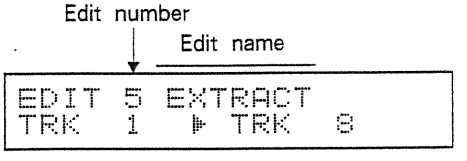
*If you wish to use Locate points to specify the area, you must first specify the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Extract display.

[EDIT] → (Numeric key [5] / Alpha - dial) → [ENTER]



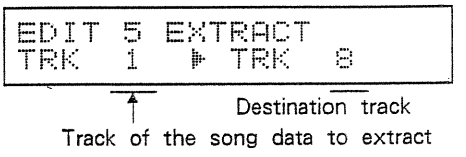
② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to extract, and the Transfer method.

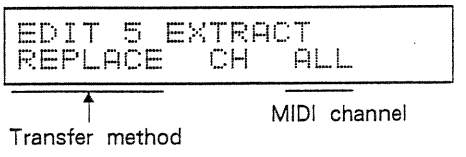
Alpha - dial / Numeric keys (modify values)

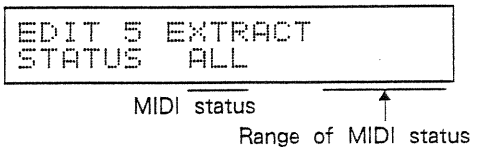
Track keys (select tracks)

[ENTER] (finalize values)

[◀][▶] (move the cursor)

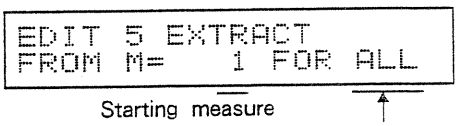






If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

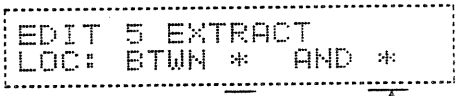
Area to extract



Starting measure

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

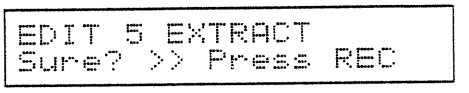


Starting Locate number

Ending Locate number

③ Execute the Extract operation from the Execute display.
[REC]

Execute display



● Press [STOP] to end the procedure.

EDIT 6 : Transpose Song Data

☐ Explanation

This operation transposes the specified note numbers of a Phrase track. You can specify a transposition of ± 2 octaves (± 24) in semitones. This operation can be used to transpose a song, or to modulate in the middle of a song.

* Note numbers are handled as 0 (C - 1)—127 (G9). If a Transpose operation would result in a Note number of less than 0 (or greater than 127), that note will be converted to 0 (127). In this case, even if you later perform the opposite transposition, the Note number will not return to its original value.
* Note numbers are used by Polyphonic Aftertouch messages as well as by Note messages, and these will be transposed in the same way.
* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Transpose display.

[EDIT] → (Numerical Key [6] / Alpha - Dial) → [ENTER]

Edit number
Edit name

```
EDIT 6 TRANSPOSE
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / Note range (Range of note numbers) / Amount of transposition / Area you wish to transpose.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◄][►] (move the cursor)

```
EDIT 6 TRANSPOSE
TRK 1-8  CH  ALL
```

Track MIDI channel

```
EDIT 6 TRANSPOSE
NOTE RANGE     0-127
```

Range of note numbers

```
EDIT 6 TRANSPOSE
BIAS    0
```

Amount of transposition

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to transpose

```
EDIT 6 TRANSPOSE
FROM M=    1 FOR ALL
```

Starting measure
Number of measures from starting measure

* It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT 6 TRANSPOSE
LOC: BTWN *   AND *
```

Starting Locate number
Ending Locate number

Execute display

```
EDIT 6 TRANSPOSE
Sure? >> Press REC
```

③ Execute the Transpose operation from the Execute display.

REC

● Press STOP to end the procedure.

EDIT 7 : Change Velocity

☐ Explanation

The Change Velocity operation converts the velocity values in the specified area of a Phrase track. Various ways to modify the velocity are provided. (Numbers below the decimal point are rounded up or down.)

$$V = (V_0 - 64) \times MAGNIFY + \{ KF \times (note\ \# - 64) + BIAS \} \times (\Delta t / SPAN)^N + 64$$

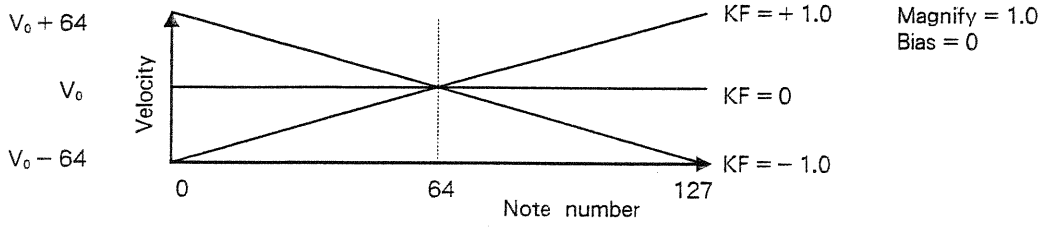
Meaning of symbol	Value
V : Resulting velocity after conversion	– – –
V_0 : Velocity before conversion	– – –
MAGNIFY : : Velocity conversion ratio	0.0—2.0
KF : Rate of velocity change relative to Note number	– 1.0—+ 1.0
note #	– – –
BIAS : Value added to velocity	– 99—+ 99
$(\Delta t / SPAN)^N$: Whether or not to modify velocity with time (N = conversion mode)	GRADUAL (modify with time) IMMEDIATE (don't modify with time)

These parameters allow you to use the following four types of effect in various combinations.

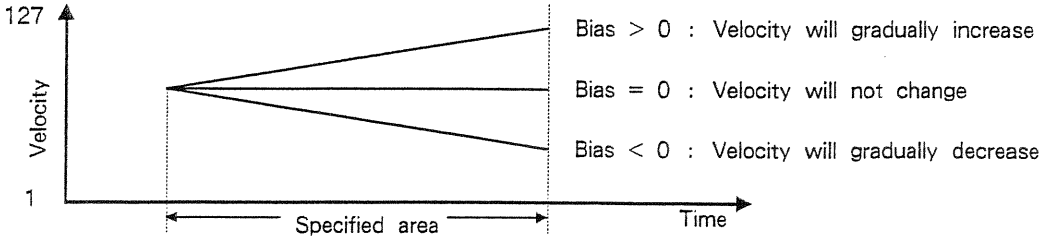
◆ Magnify expands or contracts the overall velocities around the central value of 64. This allows you to tighten up differences in velocity, or to broaden the differences in velocity to create wider variations in volume. For example if you wish to reduce the velocity differences between notes by one - half, set the Magnify parameter to 0.5.
Value of Magnify: less diversity < 1.0 (no change) < greater diversity

◆ Bias adjusts the overall volume (velocity). If you wish to increase all velocities by 10, set Bias to +10.

◆ KF lowers (or raises) the velocity by greater amounts for higher pitches (note numbers). The change in velocity around note number 64 (i.e., the slope) is determined by the KF value. When KF is set to 0, there will be no change.



◆ You can set the conversion mode to GRADUAL to create fade in/out effects by making the velocities gradually greater (or smaller). The Bias setting determines the slope of the change in velocity.



*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

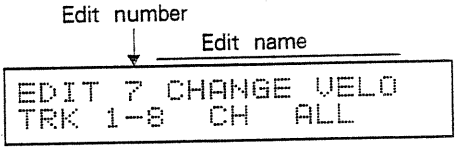
*Velocity values are limited to 1—127. If a Change Velocity operation would result in a velocity value outside this range, such notes will be given a velocity of 1 or 127. In such cases, even if you later execute the opposite Change Velocity operation, the original value will not be recovered.

☐ Procedure

● From Mode 1 standby

① Select the Change Velocity display.

[EDIT] → (Numeric key [7] / Alpha - dial) → [ENTER]



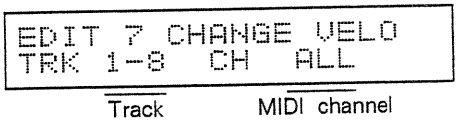
② Specify the Track / MIDI channel / Note range (Range of note numbers) / Area you wish to Change Velocity, and set the Magnify / KF / Bias / Conversion mode parameters.

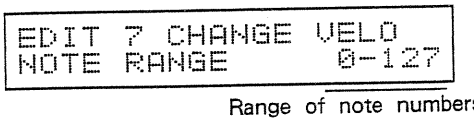
Alpha - dial / Numeric keys (modify values)

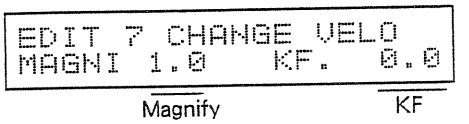
Track keys (select tracks)

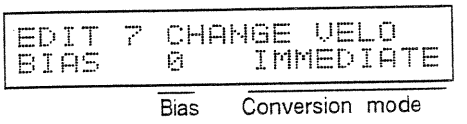
[ENTER] (finalize values)

[◀] [▶] (move the cursor)



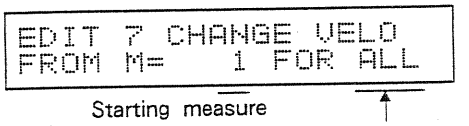






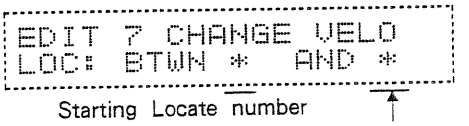
If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be converted

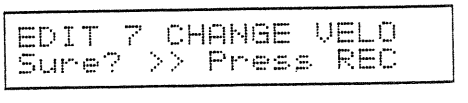


*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

Number of measures from starting measure



Execute display



③ Execute the Change Velocity operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

EDIT 8 : Change MIDI Channels

☐ Explanation

This operation converts a specified MIDI channel in the song data of a Phrase track into a different MIDI channel. You can specify individual types of MIDI status for channel conversion.

You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	– – –
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	– – –
Hold [SHIFT] and press 4	PB (Pitch Bend)	– – –
Hold [SHIFT] and press 5	EX (Exclusive)	ID number

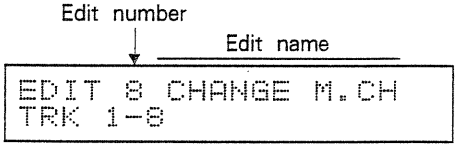
* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).
* If the Phrase track to which this operation is applied contains song data of the same MIDI channels as the newly converted data, the song data will be combined.
* If you wish to convert MIDI channels only during playback, refer to "FUNC 12: Transmit channel" (☞ P.75).

☐ Procedure

● From Mode 1 standby

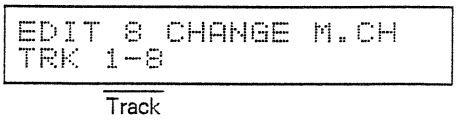
① Select the Change MIDI Channel display.

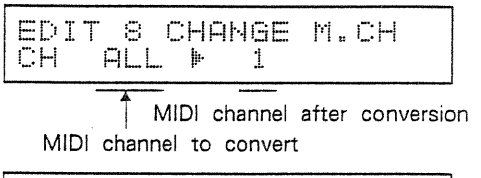
[EDIT] → (Numerical Key [8] / Alpha - Dial) → [ENTER]

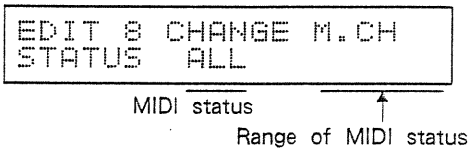


② Select the Track / MIDI status (Range) / Area / MIDI channel you wish to convert, and specify the MIDI channel to which it will be converted.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)

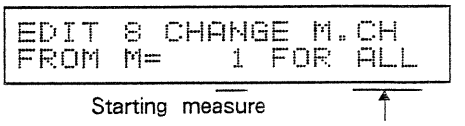






If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

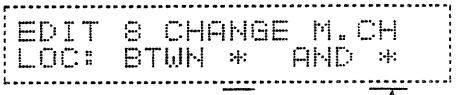
Area to be converted



Starting measure

Number of measures from starting measure

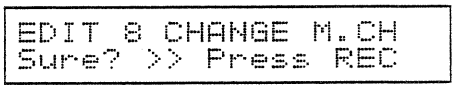
*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.



Starting Locate number

Ending Locate number

Execute display



③ Execute the Change MIDI Channel operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

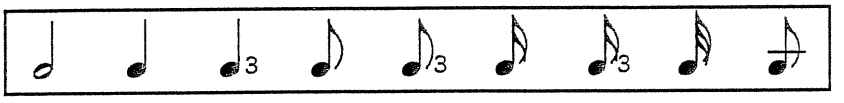
EDIT 9 : Correct Note Timing (Quantize)

☐ Explanation

This operation quantizes the timing of Note messages (i.e., adjusts them to the nearest specified interval). When data is recorded using Realtime Recording, the recorded data will sometimes be slightly off the beats of the Rhythm track. The Quantize operation corrects these deviations in timing.

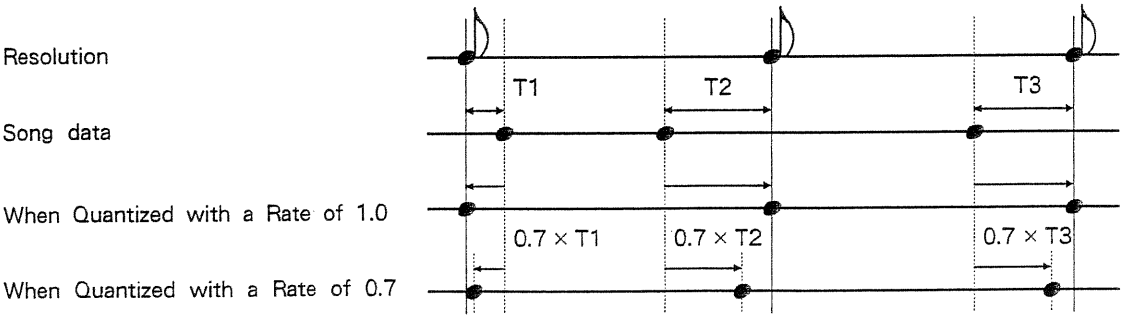
＊The Quantize operation corrects the timing of Note messages, but does not affect the timing of other MIDI messages. Be aware that if MIDI messages other than Note messages have been recorded, their timing relative to the notes will change.

The Resolution setting allows you to Quantize to the following note values. Select the smallest note value used in your song.

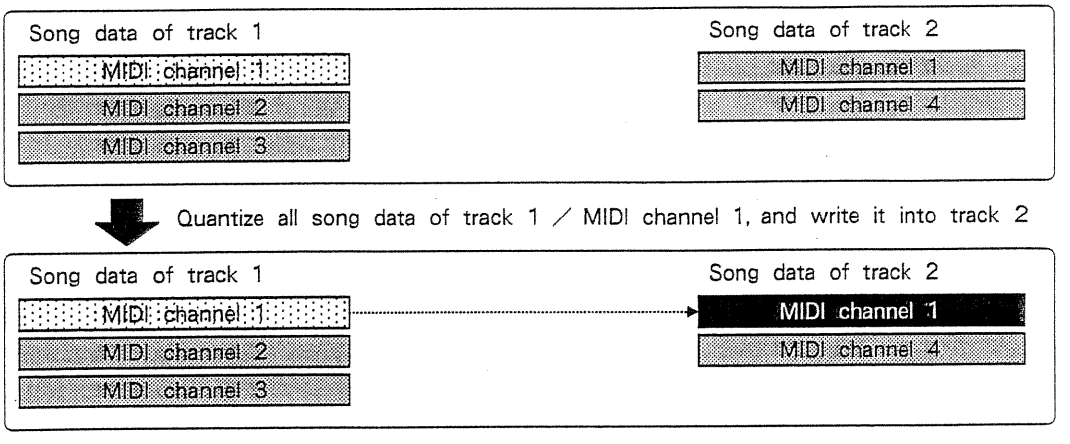


(64th note)

The Quantize Rate setting determines the relative amount of correction that will be applied to each note. The Quantize Rate can be set over a range of 0.0—1.0. For a Rate of 1.0, notes will be moved to the exact timing specified by the Resolution, which may result in a rather mechanical - sounding performance. By lowering the Rate below 1.0, you can Quantize the notes while preserving the natural variations in timing.



When quantizing a single specific Phrase track, you can write the song data being quantized into another Phrase track. In this case, the unquantized song data will be preserved, but all song data of the same MIDI channel and area in the destination track will be erased and overwritten.



＊It is not possible to restore Quantized song data to its previous state.

☐ Procedure

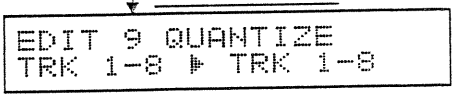
● From Mode 1 standby

① Select the Quantize display.

[EDIT] → (Numeric key [9] / Alpha - dial) → [ENTER]

Edit number

Edit name



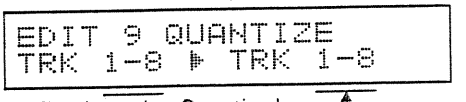
② Select the Track / MIDI channel / Area you wish to Quantize, and specify the Resolution / Rate.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

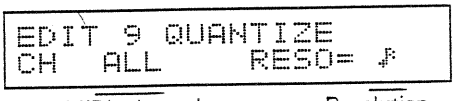
[ENTER] (finalize values)

[◀] [▶] (move the cursor)



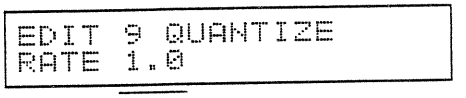
Track to be Quantized

Track after Quantization



MIDI channel

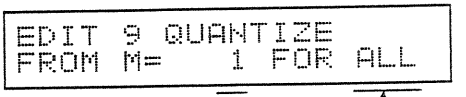
Resolution



Rate

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

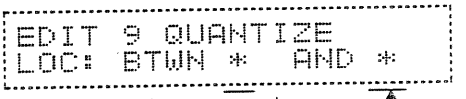
Area to be Quantized



Starting measure

Number of measures from starting measure

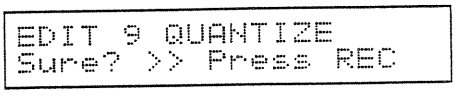
*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Starting Locate number

Ending Locate number

Execute display



③ Execute the Quantize operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

EDIT 10 : Copy Song Data

☐ Explanation

This operation copies a specified area of song data, and is convenient when you need to use the same phrase several times. You can also copy from another song.

It is also possible to replace song data in a Phrase track with song data from the Rhythm track. There are some restrictions on input methods for Rhythm patterns, and it is not possible to add subtle changes in timing and velocity. In order to add such touches, copy the data to a Phrase track and then modify it.

However even if you will be playing the drum part only from a Pattern track, do not erase the song data from the Rhythm track. In such cases, you can either mute the Rhythm track, or replace the Rhythm patterns of the Rhythm track with rest patterns.

Copy can be performed between the following tracks.

Copy source track	Copy destination track	Remarks
ALL	ALL	The song data of the specified area will be rewritten.
1—8	1—8	You can copy individual MIDI channels, and can specify the method of copying.
R	1—8, R	The song data of the specified area will be rewritten. It is not possible to copy the Rhythm track from another song. To copy the Rhythm track or Rhythm patterns from another song, refer to "UTIL 4 : Rhythm pattern copy" (☞P.129) or "MODE 3 : Link" (☞P.144). When the Rhythm track is copied into a Phrase track, the following data will be copied. MIDI channel and note numbers of each rhythm instrument (FUNC 5) Velocity values of each Velocity code (FUNC 4) Gate times of each Rhythm pattern (1/2 the resolution)
T	T	The tempo data of the specified area will be rewritten.

*If you copy only a Phrase track (or the Tempo track) so that it becomes longer than the Rhythm track, rest patterns will be added to the Rhythm track according to the new length of the track you copied. This means that you can playback to the end of the Phrase track without having to lengthen the Rhythm track later.

If song data exists in the copy destination Phrase track, you can select the method of copying (Replace or Mix). If you select Replace, the results will depend on the MIDI channel you specify. If the copy destination Phrase track does not contain song data, the copy method will make no difference.

Numeric key input	Copy method	MIDI channel setting	Operation
1	REPLACE	ALL	All song data in the copy destination will be replaced by the copied song data.
		1—16	If song data of the same MIDI channel is present in both the copy source and the copy destination, only the song data of that channel will be overwritten.
2	MIX	ALL, 1—16	The copied song data will be combined with the copy destination track.

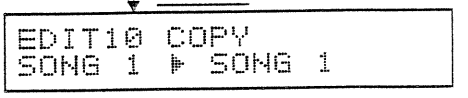
☐ Procedure

● From Mode 1 standby

① Select the Copy display.

EDIT → (Numeric key 1 → 0 / Alpha - dial) → ENTER

Edit number
Edit name



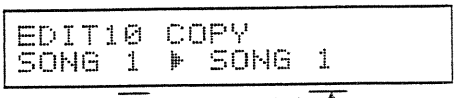
② Select the Song number / Track / MIDI channel / Area you wish to Copy, and specify the copy destination measure, the copy method, and the number of copies.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

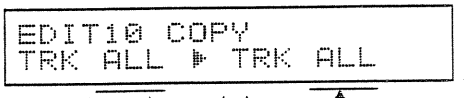
ENTER (finalize values)

◀ ▶ (move the cursor)



Song number to be copied

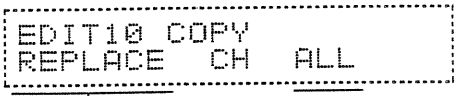
Copy destination song number
(the currently selected song)



Track to be copied

Copy destination track

*The setting displays for Copy Method and MIDI channel will appear when you specify that a Phrase track be copied.

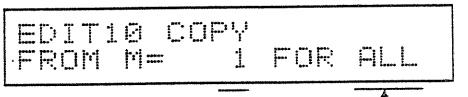


Copy method

MIDI channel

If you wish to use Locate points to specify the area, press LOC to change the selection display. Each time you hold SHIFT and press LOC, the selection display will alternate.

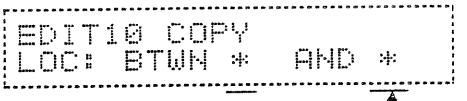
Area to be copied



Starting measure

Number of measures from starting measure

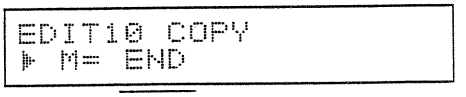
*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.



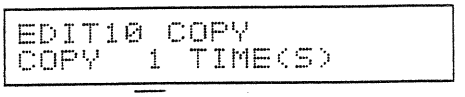
Starting Locate number

Ending Locate number

*You can use Locate points to specify the copy destination measure as well, just as when specifying the copy area.

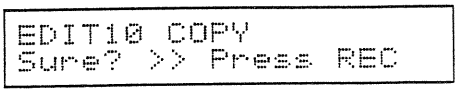


Copy destination measure



Number of copies

Execute display



③ Execute the Copy operation from the Execute display.

REC

● Press STOP to end the procedure.

EDIT 11 : Change Gate Time

☐ Explanation

The Change Gate Time operation converts the Gate time values in the specified area of a Phrase track. You can modify the Gate time in various ways. (Numbers below the decimal point will be rounded up or down.)

$$G = G_0 \times MAGNIFY + \{ KF \times (note\ \# - 64) + BIAS \} \times (\Delta t \,/\, SPAN)^N$$

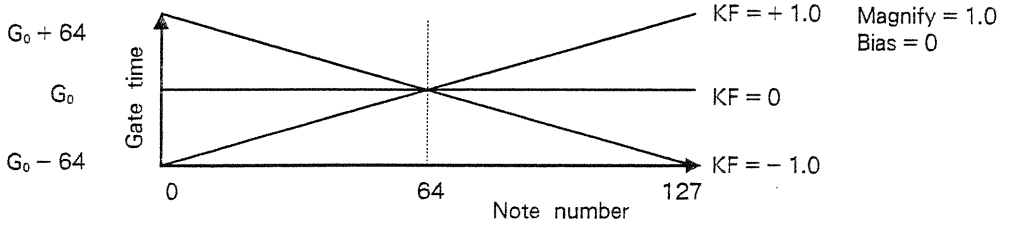
Meaning of symbol	Value
V : Resulting Gate time after conversion	– – –
V_0 : Gate time before conversion	– – –
MAGNIFY : Gate time conversion ratio	0.0—2.0
KF : Rate of gate time change relative to Note Number	– 1.0—+ 1.0
note #	– – –
BIAS : Value added to gate time	– 99—+ 99
$(\Delta t \,/\, SPAN)^N$: Whether or not to modify gate time with time (N = conversion mode)	GRADUAL (modify with time) IMMEDIATE (don't modify with time)

These parameters allow you to use the following four types of effect in various combinations.

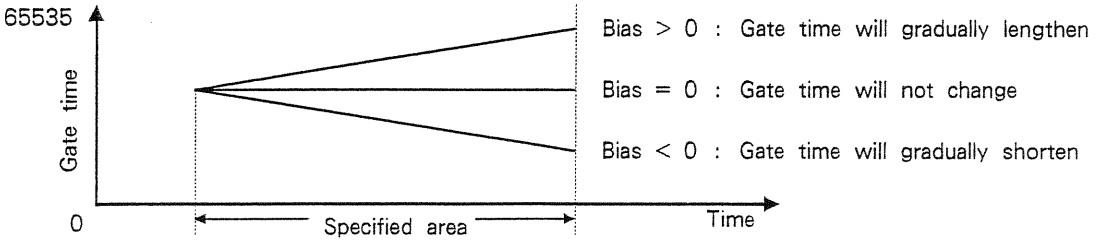
◆ Magnify expands or contracts the overall Gate times. This allows you to create staccato or slurs (ties), or to adjust the Gate time to suit the playback tempo. For example, if you wish to reduce the Gate time to a half, set the Magnify parameter to 0.5.
Value of Magnify: shorter Gate time < 1.0 (no change) < longer Gate time

◆ Bias lengthens (shortens) the Gate time by a fixed amount. If you wish to make all Gate times 10 clocks longer, set Bias to +10.

◆ KF lengthens (or shortens) the Gate time by greater amounts for higher pitches (note numbers). The change in Gate time around note number 64 (i.e., the slope) is determined by the KF value. When KF is set to 0, there will be no change. For example, the notes of a stringed instrument such as piano and guitar have shorter Gate times for higher notes. In such cases, you can set KF below 0 so that Gate times will decrease as the pitch increases. In this way, set KF to a value suitable for the sound data you are using.



◆ You can make the Gate time gradually become longer (or shorter) by setting the conversion mode to GRADUAL. The Bias setting will determine the slope of the change in Gate time.



*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

*Gate time values are limited to 1—65535. If a Change Gate Time operation would give a note a Gate time value outside this range, such notes will be given a Gate time of 1 or 65535. In such cases, even if you later execute the opposite Change Gate Time operation, the original value will not be recovered.

☐ Procedure

● From Mode 1 standby

① Select the Change Gate Time display.

[EDIT] → (Numeric key [1] → [1] / Alpha - dial) → [ENTER]

Edit number
Edit name

```
EDIT11 CHANGE G.T.
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / Note range (Range of note numbers) / Area you wish to Change Gate time, and set the Magnify / KF / Bias / Conversion mode parameters.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

```
EDIT11 CHANGE G.T.
TRK 1-8  CH  ALL
```
Track MIDI channel

```
EDIT11 CHANGE G.T.
NOTE RANGE    0-127
```
Range of note numbers

```
EDIT11 CHANGE G.T.
MAGNI 1.0   KF.  0.0
```
Magnify KF

```
EDIT11 CHANGE G.T.
BIAS   0   IMMEDIATE
```
Bias Conversion mode

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be changed

```
EDIT11 CHANGE G.T.
FROM M=   1 FOR ALL
```
Starting measure
Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT11 CHANGE G.T.
LOC: BTWN *  AND *
```
Starting Locate number
Ending Locate number

Execute display

```
EDIT11 CHANGE G.T.
Sure? >> Press REC
```

③ Execute the Change Gate Time operation from the Execute display.

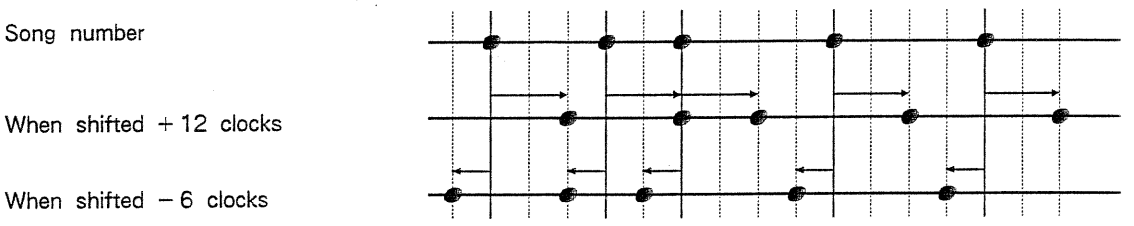
[REC]

● Press [STOP] to end the procedure.

EDIT 12 : Shift Timing (Shift Clock)

☐ Explanation

This operation shifts the timing of MIDI messages recorded in a Phrase track (or Tempo track), in units of one clock. For example if you are using a MIDI sound module that tends to be slow in responding to Note - on messages, you could slide the timing of the Note messages slightly forward in time, to keep the timing of each instrument together.



You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	− − −
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	− − −
Hold [SHIFT] and press 4	PB (Pitch Bend)	− − −
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	− − −

* If you shift MIDI messages to a point before the beginning of the song, the MIDI messages will pile up at the beginning of the song. If you wish to shift to a point before the beginning of the song, first insert some blank measures at the beginning (☞P.83, "EDIT 3: Insert measure").

* MIDI messages shifted to a point later then the end of the Rhythm track will no longer be playable. If you wish to play to the end of the data, you must lengthen the Rhythm track. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞P.133).

* If you wish to use Locate points to specify the area, you must first set the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Shift Clock display.

[EDIT] → (Numeric key [1] → [2] / Alpha - dial) → [ENTER]

Edit number
Edit name

```
EDIT12 SHIFT CLOCK
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to Shift clock, and Bias parameter.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)

```
EDIT12 SHIFT CLOCK
TRK 1-8  CH  ALL
```

Track MIDI channel

```
EDIT12 SHIFT CLOCK
STATUS  ALL
```

MIDI status Range of MIDI status

Bias is the number of clocks (− 99—+99) to shift the data. Negative values (−) will shift the data forward, and positive (+) values will shift the data backward.

```
EDIT12 SHIFT CLOCK
BIAS   0
```

Bias

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be shifted

```
EDIT12 SHIFT CLOCK
FROM M=   1 FOR ALL
```

Starting measure Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT12 SHIFT CLOCK
LOC: BTWN *  AND *
```

Starting Locate number Ending Locate number

Execute display

```
EDIT12 SHIFT CLOCK
Sure? >> Press REC
```

③ Execute the Shift Clock operation from the Execute display.

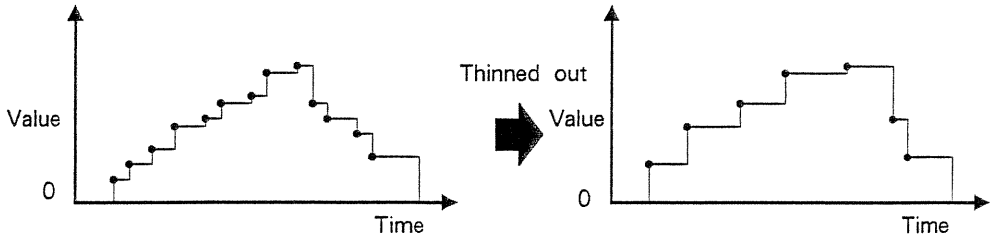
[REC]

● Press [STOP] to end the procedure.

EDIT 13 : Thin out MIDI Messages (Data Thin)

☐ Explanation

Using MIDI messages such as Aftertouch, Control Change, and Pitch Bend can result in unexpectedly large amounts of data, since these messages are transmitted each time the controller value changes. The Data Thin operation allows you to thin out such data in an unobtrusive way, reducing the amount of data yet preserving most of the expressiveness, and allowing you to make the best use of memory.



You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	– – –
Hold [SHIFT] and press 4	PB (Pitch Bend)	– – –

You can specify Value (0—99) and Time (0—99) to determine how the thinning process will take place. The initial settings of these parameters (Value = 6, Time = 6) are good guidelines.
For more drastic thinning out of MIDI messages that change abruptly, increase the Value.
For more drastic thinning out of MIDI messages that change smoothly, increase the Time.

* The best settings for this Data Thin operation will depend on the tempo and on the way in which the MIDI messages change, and are difficult to predict. We suggest that you make several copies of the song data, and experiment.

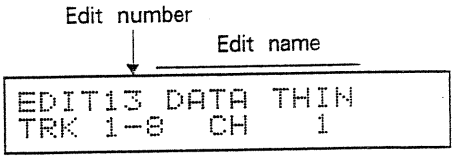
* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Data Thin display.

[EDIT] → (Numeric key [1] → [3] / Alpha - dial) → [ENTER]



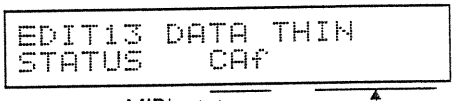
② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to thin out, and set the Value / Time parameters.

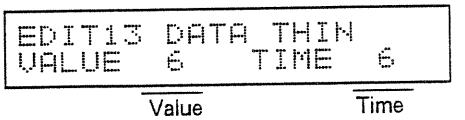
Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

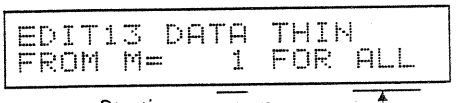
[◀] [▶] (move the cursor)



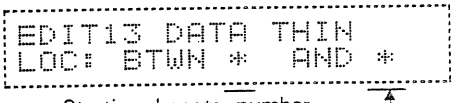


If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

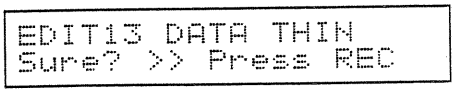
Area to be thinned



*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Execute display



③ Execute the Data Thin operation from the Execute display.

[REC]

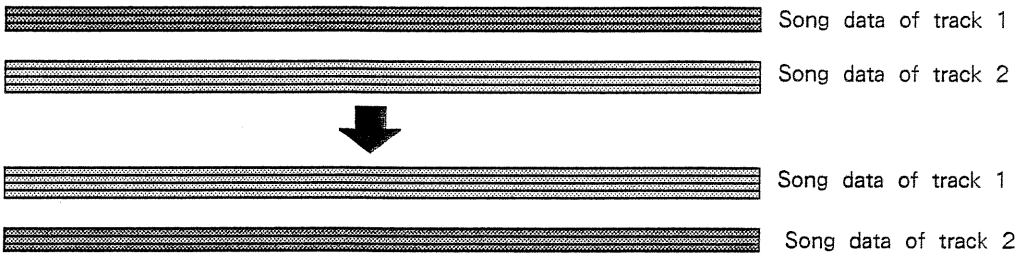
● Press [STOP] to end the procedure.

EDIT 14 : Exchange Phrase Tracks

☐ Explanation

This operation exchanges the song data of two Phrase tracks. The output assign (FUNC11) and transmit channel (FUNC 12) settings of each track are also exchanged. This operation is convenient when you need to organize the song data of various tracks.

Example : the result of exchanging tracks 1 and 2



☐ Procedure

● From Mode 1 standby

① Select the Track Exchange display.

[EDIT] → (Numeric key [1] → [4] / Alpha - dial) → [ENTER]

Edit number

Edit name

```
EDIT14 TRK EXCHANGE
       TRK 1 ◀▶ 8
```

② Select the Tracks you wish to exchange.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)

```
EDIT14 TRK EXCHANGE
       TRK 1 ◀▶ 8
```

Tracks to be exchanged

Execute display

```
EDIT14 TRK EXCHANGE
Sure? >> Press REC
```

③ Execute the Track Exchange operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

EDIT 15 : Convert MIDI Messages (Multi Edit)

☐ Explanation The Multi Edit operation converts the MIDI messages in a Phrase track. The Multi Edit operation has two modes: Modify and Shift Number.

< Modify > This allows you to Compand (compress/expand) or Reverse MIDI data in the specified area. You can specify the following types of MIDI status. Some types allow you to specify the range.

Numeric key input	MIDI message	Range
9	NOTE (Note number)	0—127
Hold [SHIFT] and press 9	VELO (Note On Velocity)	1—127
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch Value)	0—127
Hold [SHIFT] and press 1	CC (Control Change Value)	0—127
Hold [SHIFT] and press 3	CAf (Channel Aftertouch Value)	---
Hold [SHIFT] and press 4	PB (Pitch Bend Value)	---

The note numbers of Note On messages and Polyphonic Aftertouch will be converted using 64 as the basic value. MIDI data other than note numbers will be converted using minimum value as the basic value.

◆ Compand (compress/expand)

If you have selected Compand, you can specify the Magnify parameter (the conversion ratio: 0.0—2.0). To double the values, set Magnify to 2.0. (Values below the decimal point will be rounded up or down.)

When transforming data other than note numbers, you can increase (expand) or decrease (compress) the changes in data value. For example by expanding Velocity, you can increase the changes in volume (i.e., create a wider dynamic range).

The result of transforming note numbers will unexpected. By taking advantage of this when you have run out of ideas, you may find something which you can use.

* If you compress an "on/off" Control Change message (such as Hold pedal), it will not longer perform correctly. Also, expanding it will have no effect.
* Values which would exceed their range as a result of being expanded (or compressed) will be limited to their maximum (or minimum) value. In such cases, applying the opposite operation afterwards will not restore the data to its original state.

◆ Reverse

This operation will invert the values of the MIDI message in the specified area. Reversing note numbers has little musical meaning, but as with Companding, may result in interesting ideas or effects.

< Shift Number >

The Shift Number operation converts a specified type of MIDI message into another type of MIDI message. You can specify the following types of MIDI message.

Numeric key input	MIDI message	Range
9	NOTE (Note number)	0—127
Hold [SHIFT] and press 9	ALL Oct. (Note numbers in each octave)	0—127
Hold [SHIFT] and press 1	CC (Control number)	0—127
Hold [SHIFT] and press 2	PG (Program number)	1—128

Select "NOTE" if you wish to convert a specified note number into a different note number. If you wish to convert a specified note number and all notes at octave intervals from it into different note numbers, select "ALL Oct". This can be used for modal conversions (major/minor).

Setting example	Conversions
Use NOTE # to convert A4 (57) into A # 4 (58)	A4→A # 4
Use ALL Oct. to convert A4 (57) into A # 4 (58)	A −→A # −, A0→A # 0, A1→A # 1, A2→A # 2, A3→A # 3, A4→A # 4, A5→A # 5, A6→A # 6, A7→A # 7, A8→A # 8

Select CC (Control Change) if you wish to convert a specified control function into a different control function. For example you might convert Expression messages into Volume messages.
By selecting PG (Program Change), you can convert all occurrences of a specified Program Change message to a Program Change message of a different number.

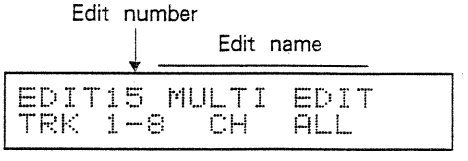
＊If you wish to use Locate points to specify the area, you must first specify the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

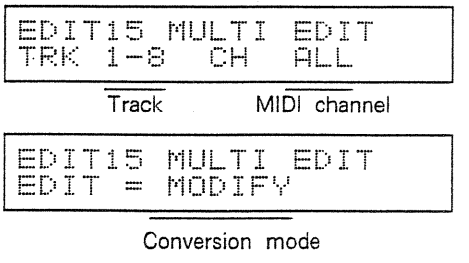
① Select the Multi Edit display.

[EDIT] → (Numerical Key [1] → [5] / Alpha - Dial) → [ENTER]



② Select the Track / MIDI channel you wish to edit, and specify the Conversion mode.

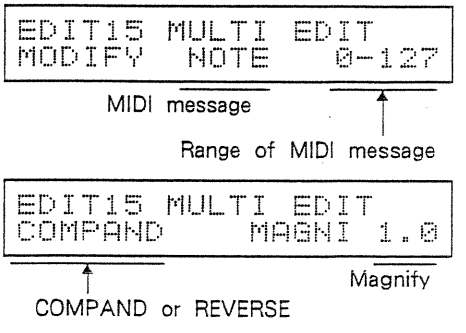
Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)



【Step ③ when MODIFY is selected】

③ Select the MIDI Message / Range to be converted, and select COMPAND or REVERSE. If you have selected COMPAND, set the Magnify value.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize the value)
[◀] [▶] (move the cursor)



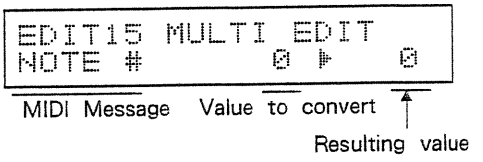
[Step ③ when SHIFT # (Shift Number) is selected]

③ Select the MIDI Message / Value to be converted, and specify the value to which it will be converted.

Alpha - dial / Numeric keys (modify values)

ENTER (finalize the value)

◀ ▶ (move the cursor)

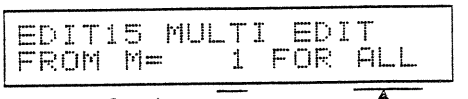


④ Specify the area to be converted

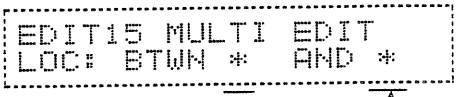
Alpha - dial / Numeric keys (modify values)

ENTER (finalize values)

◀ ▶ (move the cursor)

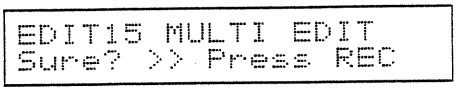


If you wish to use Locate points to specify the area, press LOC to switch the display. Each time you hold SHIFT and press LOC, the display will alternate.



*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

Execute display



⑤ Execute the Multi Edit operation from the Execute display.

REC

● Press STOP to end the procedure.

MICROSCOPE

Microscope mode allows you to check or modify individual MIDI messages in the song data of a Phrase track or the Tempo track. Microscope mode provides five Micro editing operations and three Step editing operations.

Micro Edit: These operations modify only the specified MIDI message, and have no effect on other MIDI messages.

μ EDIT 1:	Modify a MIDI Message	(Change Event)
μ EDIT 2:	Erase a MIDI Message	(Erase Event)
μ EDIT 3:	Create a MIDI Message	(Create Event)
μ EDIT 4:	Move a MIDI Message	(Move Event)
μ EDIT 5:	Memorize and Copy a MIDI Message	(Event Memory / Place Event)

Step Edit: When these operations are used to modify a MIDI message, subsequent MIDI messages will be moved forward or back in time.

sEDIT 1:	Modify the Step Time	(Change Step)
sEDIT 2:	Delete a MIDI Message	(Delete Step)
sEDIT 3:	Insert a MIDI Message	(Insert Step)

View a MIDI Message (View Field)

Explanation

In Microscope mode, the display will show the settings of individual MIDI messages in a Phrase track (or the Tempo track). The MIDI channels and MIDI messages displayed in Microscope mode are determined by the View Field settings. Initially, these will be set to display all MIDI messages (except Tune Request) of all MIDI channels.

You can specify the following types of MIDI status.

Display	MIDI status
NOTE	Note
PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
CC	Control Change (0—120), Channel Mode message
PG	Program Change
CAf	Channel Aftertouch (Channel Key Pressure)
PB	Pitch bend
EX	Exclusive

*When you are using the Step Edit function, all MIDI messages will be displayed, regardless of the View Field setting.

*Tempo data in the Tempo track will be always be displayed, regardless of the View Field setting.

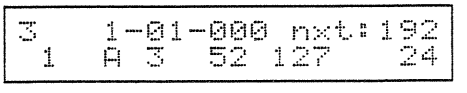
*Changes you make to the View Field settings will be lost when the power is turned off. If you wish to keep your modified settings, save them to disk in a configuration file. (☞P.164, "3: Saving a configuration data"). If you wish to use the settings from a configuration file, refer to "Play" (☞P.14) or "2: Loading a configuration file" (☞P.163).

View Field settings

● From standby

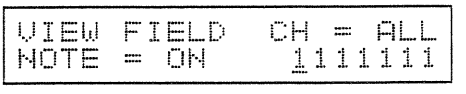
① Move to the Microscope display.

[MICROSCOPE]



② Move to the View Field display.

Hold [SHIFT] and press [MICROSCOPE]

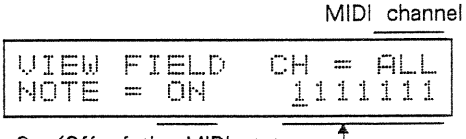


③ Select the MIDI channel and MIDI status you wish to view.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄][►] (move the cursor)



*If you use the Numeric keys to specify On (1) / Off (0), the value will be finalized immediately.

● To move to the Microscope display, press [ENTER] or [MICROSCOPE].

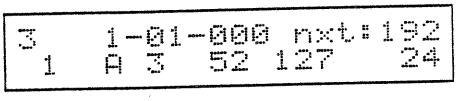
● To return to the standby display, press [STOP].

☐ Display MIDI messages

● From standby, or from a Microscope editing display

① Move to the Microscope display.

[MICROSCOPE]



② Select the Track / Measure / Beat / Clock to display the MIDI message.

Alpha - dial / Numeric keys (modify values)

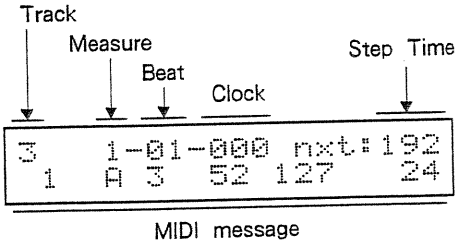
[ENTER] (finalize values)

Track keys (select tracks)

[◄] [►] (move the cursor)

[SKIP] (move to the next MIDI message)

[RESET] (move to the previous MIDI message)



* The track keys allow you to select tracks regardless of the cursor position.

< Locate Jump >

You can use the Locate Jump function to display the MIDI message at a Locate point. Press [LOC] and use the Alpha - dial / Numeric keys to select a Locate number, and then press [ENTER]. For details, refer to "The Locate function" (☞P.18).

< About the display >

Depending on the type of MIDI status, the display will show the following.

MIDI status	Display
Note	MIDI channel/Note name/Note number/Velocity/Gate time
Polyphonic Aftertouch	MIDI channel/PAf/Note number/Value
Control Change	MIDI channel/CC/Control number/Value
Program Change	MIDI channel/PG/Program number
Channel Aftertouch	MIDI channel/CAf/Value
Pitch Bend	MIDI channel/PB/Value
Exclusive	EX/F0—(hexadecimal)—F7
Tune Request	TU
Rest Data	CH. REST

Step time is the number of clocks until the next MIDI message. If this is greater than 999, the display will show "FAR". If the message is the last message in the track, the display will show "END".

A "*" displayed at the left of the MIDI status name (or note name) indicates that other MIDI messages exist at the same location (measure / beat / clock).

* If you wish to display Tune Request messages, hold [SHIFT] and rotate the Alpha - dial to select the measure / beat /clock. You can use the same operation to see all MIDI messages of all MIDI channels regardless of the View Field setting.

*For Exclusive messages, only the first five bytes will be displayed. If you wish to see the rest of the data, refer to the following function " μ EDIT 1: Change Event".

*If you use the Microscope to make a large number of modifications, the measure / beat / clock movement may become slower. In such cases, execute the Data Reduce operation (☞P.133).

< Transmitting a MIDI message >

When you press [PLAY], the currently selected MIDI message will be transmitted from MIDI OUT as determined by the settings of "FUNC 11: Output Assign" (☞P.74) and "FUNC 12: Transmit Channel" (☞P.75).

● Press [STOP] to exit the function.

μ EDIT 1 : Modify a MIDI Message (Change Event)

☐ Explanation

This operation allows you to modify a MIDI message. However it is not possible to change the type of MIDI message, such as changing a Program Change message into a Control Change message.

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After the last data (right-most) value in the MIDI message has been finalized, you will return to the Microscope display.
Continuous mode	After the last data (right-most) value in the MIDI message has been finalized, you will advance to the next MIDI message. Use this mode when you wish to modify two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to modify.

② Move to the Change Event display.

[EDIT] → [1] → [ENTER] (Single mode)

[EDIT] → [1] → Hold [SHIFT], and press [ENTER] (Continuous mode)

```
MEDIT 1 CHANGE Event
 1   C 4   60   64    86
```

Displayed to indicate Continuous mode

```
1     1-01-000 *CHANGE
 1   C 4   60   64    86
```

③ Modify the MIDI message.

Alpha-dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄] [►] (move the cursor)

To change a Note message to a rest (CH.REST), place the cursor on the note number, and hold [SHIFT] and press Numeric key [9].

< When Continuous mode is selected >

[SKIP] (finalize the modified values, and display the next MIDI message)

[RESET] (finalize the modified values, and display the previous MIDI message)

< Modifying Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.

Hold [SHIFT] and press Numeric keys [0]—[5] (enter A—F)

Hold [PAUSE] and press [►] (insert a value of 00)

Hold [PAUSE] and press [◄] (delete)

You can add data by entering a value at the position of F7.

* Exclusive message can be entered only from the Numeric keys.

* It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

μ EDIT 2 : Erase a MIDI Message (Erase Event)

☐ Explanation

This operation erases a MIDI message.

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After Erase has been executed, you will return to the Microscope display.
Continuous mode	After Erase has been executed, you will advance to the next MIDI message. Use this mode when you wish to erase two or more MIDI messages.

*An erased MIDI message (except for an Exclusive message) will be temporarily stored as event memory 0. If you wish to restore an erased MIDI message, refer to "μ EDIT 5: Place Event" (☞P.119).

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to erase.

② Move to the Erase Event display.

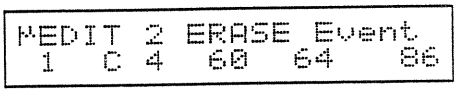
[EDIT] → [2] → [ENTER] (Single mode)

[EDIT] → [2] → Hold [SHIFT] and press [ENTER] (Continuous mode)

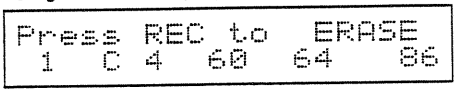
< When Continuous mode is selected >

[SKIP] (display the next MIDI message)

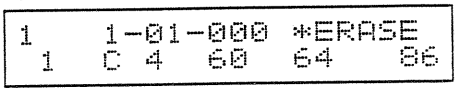
[RESET] (display the previous MIDI message)



Single mode display



Continuous mode display



③ Execute the Erase operation.

*Even if you have selected Continuous mode, you will return to the Microscope display when you erase the last MIDI message in a track.

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

μ EDIT 3 : Create a MIDI Message (Create Event)

☐ Explanation

This operation allows you to create a new MIDI message. To create a chord, you can insert Note messages at the same location (measure / beat / clock).

You can make settings for each type of MIDI message as follows.

Numeric key input	MIDI status	Setting items
9	NOTE	MIDI channel/Note name (Note number) / Velocity/Gate time
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	MIDI channel/PAf/Note number/Value
Hold [SHIFT] and press 1	CC (Control Change)	MIDI channel/CC/Control number/Value
Hold [SHIFT] and press 2	PG (Program Change)	MIDI channel/PG/Program number
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	MIDI channel/CAf/Value
Hold [SHIFT] and press 4	PG (Pitch Bend)	MIDI channel/PB/Value
Hold [SHIFT] and press 5	EX (Exclusive)	EX/F0—(hexadecimal)—F7
Hold [SHIFT] and press 6	TU (Tune Request)	TU

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After the last data (right-most) value in the MIDI message has been finalized, you will return to the Microscope display.
Continuous mode	After the last data (right-most) value in the MIDI message has been finalized, you will be able to enter the next MIDI message. Use this mode when you wish to create two or more MIDI messages.

☐ Procedure

● From the Microscope display

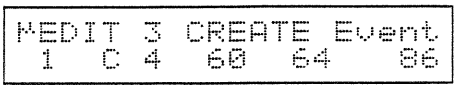
① Move to the location where you wish to create the MIDI message.

＊If MIDI messages exist at that location, the newly created MIDI message will be added to them.

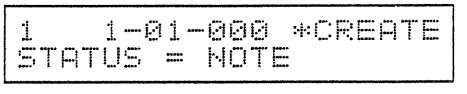
② Move to the Create Event display.

[EDIT] → [3] → [ENTER] (Single mode)

[EDIT] → [3] → Hold [SHIFT] and press [ENTER] (Continuous mode)

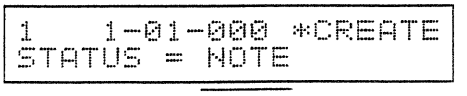


Displayed to indicate Continuous mode



③ Select the MIDI status.

(Numeric keys / Alpha - dial) → [ENTER]



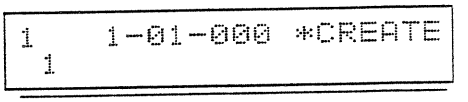
MIDI status

④ Create the MIDI message.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄] [►] (move the cursor)



MIDI message

To enter a rest (CH.REST), move the cursor to the Note number, and hold [SHIFT] and press Numeric key [9].

* To change the MIDI status, press [MIDI] to return to the display of step ③.

< When Continuous mode is selected >

To continue inputting while changing values only as necessary, use [SKIP]. For example if you press [SKIP] after specifying only the Note number, the previously input Velocity and Gate time values will be used, and the MC - 50 will wait for you to enter data for the next message. To modify the previous input values, press [RESET] and re-enter the data.

< Creating Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.

Hold [SHIFT] and press Numeric keys [0]—[5] (enter A—F)

Hold [PAUSE] and press [►] (insert a value of 00)

Hold [PAUSE] and press [◄] (delete)

You can add data by entering a value at the position of F7.

* Exclusive message can be entered only from the Numeric keys.

* It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

μ EDIT 4 : Move a MIDI Message (Move Event)

☐ Explanation

This operation moves a specified MIDI message to another location in the same track.

＊To move or copy a MIDI message to another track, refer to the following operation " μ EDIT 5: Place Event".

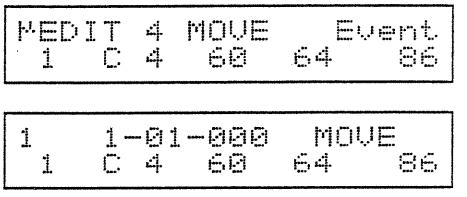
☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to move.

② Move to the Move Event display.

[EDIT] → [4] → [ENTER]

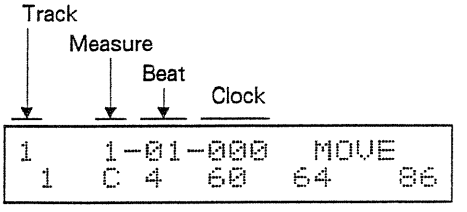


③ Specify the destination Measure / Beat / Clock, and execute the Move operation.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)



To change the Measure / Beat, move the cursor. When you finalize the Clock, the displayed MIDI message will be moved, and you will return to the Microscope display.

μ EDIT 5 : Memorize and Copy a MIDI Message (Event Memory / Place Event)

☐ Explanation

This operation temporarily stores a MIDI message in an Event Memory. MIDI messages stored in this way can be copied to another specified location. This is especially convenient when you wish to copy the same MIDI message to several locations. MIDI messages stored in Event Memories are preserved even when you move to another song, so you can use this operation to copy MIDI messages to other songs.

Event Memories are numbered 0—9, and each memory can store the following MIDI messages. Event Memory settings are renewed each time you store a new message into a memory.

Memory number	MIDI messages that can be stored
0	The MIDI message last erased by the Erase Event function is stored here. However, neither Exclusive messages nor Tempo data will be stored.
1—8	Each of these memories 1—8 can store any MIDI message (other than Exclusive messages or Tempo data).
9	This memory can store only an Exclusive message (within 600 bytes).

＊The contents of the Event Memories are preserved until you turn the power off.

When copying MIDI messages, you can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you copy a MIDI message, you will return to the Microscope display.
Continuous mode	After you copy a MIDI message, you will not return to the Microscope display. Use this mode when you wish to copy two or more MIDI messages.

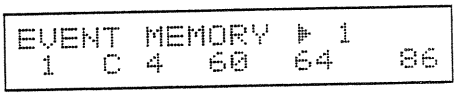
☐ Storing an event into an Event Memory

● From the Microscope display

① Display the MIDI message you wish to store.

② Move to the Event Memory display.

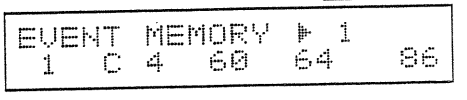
REC



③ Select the Memory Number, and store.

Alpha - dial / Numeric keys → ENTER

Memory number



When the MIDI event has been stored, you will return to the Microscope display.

☐ Copying a stored MIDI message (Place Event)

● From the Microscope display

① Move to the location (Track / Measure / Beat / Clock) where you wish to copy the MIDI message.

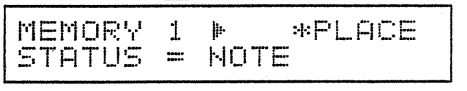
② Move to the Place Event display.

[EDIT] → [5] → [ENTER] (Single mode)

[EDIT] → [5] → Hold [SHIFT] and press [ENTER] (Continuous mode)

Displayed to indicate Continuous mode

Memory number



③ Select the Memory number of the MIDI message you wish to copy, and copy the message.

Alpha - dial / Numeric keys → [ENTER]

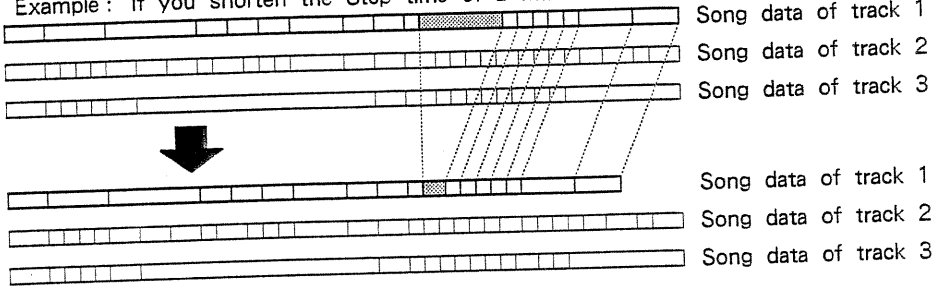
● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

sEDIT 1 : Modify the Step Time (Change Step)

☐ Explanation

This operation modifies the Step time of a MIDI message (the time until the next MIDI message). When you modify the Step time, all MIDI messages (only in the specified track) will move forward or backward according to the change in the Step time. For example if you have created a Rest data at the beginning of a track, and modify its Step time, all MIDI messages in that track will be moved forward or backward.

Example : If you shorten the Step time of a MIDI message in track 1



You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you finalize the Step time, you will return to the Microscope display.
Continuous mode	After you finalize the Step time, you will advance to the next MIDI message. Use this mode when you wish to modify the Step time of two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message whose Step time you wish to change.

*It is not possible to change a Step time which is displayed as "FAR" or "END". In such cases, move the MIDI message to a location where the Step time will be 999 or less.

② Move to the Change Step display.

Hold [SHIFT] and press [EDIT] → [1] → [ENTER] (Single mode)

Hold [SHIFT] and press [EDIT] → [1] → Hold [SHIFT] and press [ENTER] (Continuous mode)

```
sEDIT 1 CHANGE Step
 1   C 4   60   64    86
```

Displayed to indicate continuous mode

```
1     1-01-000 *ST=  96
 1    C 4   60   64    86
```

< When Continuous mode is selected >

[SKIP] (finalize the modified value, and display the next MIDI message)

[RESET] (finalize the modified value, and display the previous MIDI message)

*When using a Step Edit operation, all MIDI messages will be displayed, regardless of the View Field setting.

③ Modify the Step time, and finalize.

Alpha - dial / Numeric keys → [ENTER]

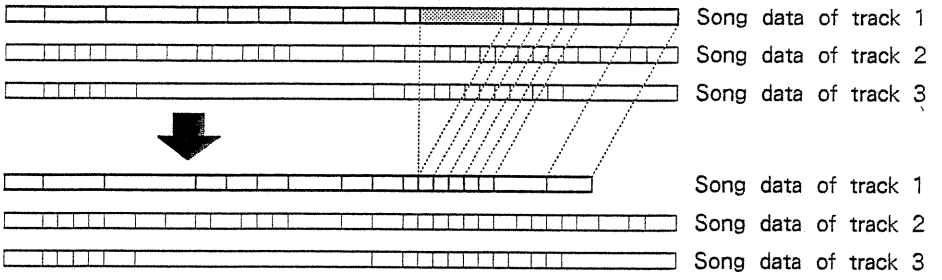
● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

sEDIT 2 : Delete a MIDI Message (Delete Step)

☐ Explanation

This operation deletes a specified MIDI message. When you delete a MIDI message, all MIDI messages (only of the specified track) will move forward according to the Step time of the deleted message.

Example : If you delete a MIDI message in track 1



You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you delete the MIDI message, you will return to the Microscope display.
Continuous mode	After you delete the MIDI message, you will advance to the next MIDI message. Use this mode when you wish to delete two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to delete.

② Move to the Delete Step display.

Hold [SHIFT] and press [EDIT] → [2] →
[ENTER] (Single mode)

Hold [SHIFT] and press [EDIT] → [2] →
Hold [SHIFT] and press [ENTER] (Continuous mode)

< When Continuous mode is selected >

[SKIP] (display the next MIDI message)

[RESET] (display the previous MIDI message)

```
sEDIT 2 DELETE Step
 1   C 4   60   64    86
```

Single mode display

```
Press REC to  DELETE
 1   C 4   60   64    86
```

Continuous mode display

```
1    1-01-000 *DELETE
 1   C 4   60   64    86
```

*When using a Step Edit operation, all MIDI messages will be displayed, regardless of the View Field setting.

③ Execute the Delete operation.

[REC]

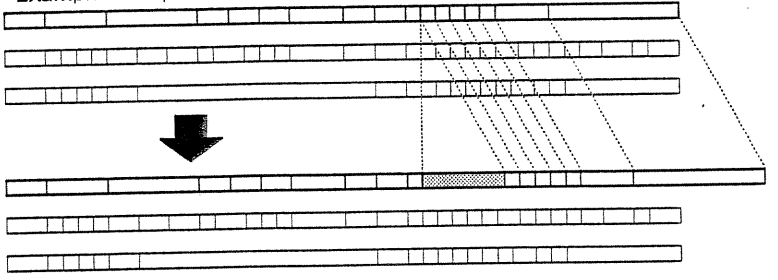
● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

sEDIT 3 : Insert a MIDI Message (Insert Step)

☐ Explanation

This operation inserts a MIDI message. When you insert a MIDI message, all MIDI messages (in the specified track) will move backwards according to the Step time of the inserted message. To enter a chord, you can create two or more Note messages at the same location (Measure / Beat / Clock).

Example : If you insert a MIDI message into track 1



You can choose either Single mode or Continuous mode.

Operation mode	Function
Single Mode	After you insert the MIDI message, you will return to the Microscope display.
Continuous Mode	After you insert the MIDI message, you will advance to the next MIDI message. Use this mode when you wish to insert two or more MIDI messages.

You can make settings for each type of MIDI message as follows.

Numeric key input	MIDI status	Setting items
9	NOTE	MIDI channel/Note name (Note number) / Velocity/Gate time
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	MIDI channel/PAf/Note number/Value
Hold [SHIFT] and press 1	CC (Control Change)	MIDI channel/CC/Control number/Value
Hold [SHIFT] and press 2	PG (Program Change)	MIDI channel/PG/Program number
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	MIDI channel/CAf/Value
Hold [SHIFT] and press 4	PG (Pitch Bend)	MIDI channel/PB/Value
Hold [SHIFT] and press 5	EX (Exclusive)	EX/F0—(hexadecimal)—F7
Hold [SHIFT] and press 6	TU (Tune Request)	TU

☐ Procedure

● From the Microscope display

① Move to the location where you wish to insert a MIDI message.

② Move to the Insert Step display.

Hold [SHIFT] and press [EDIT] → [3] → [ENTER] (Single mode)

Hold [SHIFT] and press [EDIT] → [3] → Hold [SHIFT] and press [ENTER] (Continuous mode)

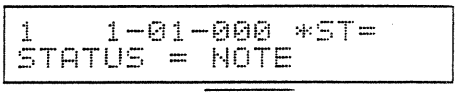
```
sEDIT 3 INSERT Step
 1   C 4   60   64    86
```

Displayed to indicate Continuous mode

```
1    1-01-000 *ST=
STATUS = NOTE
```

③ Select the MIDI status.

(Numeric keys / Alpha - dial) → [ENTER]



MIDI status

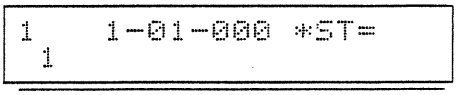
④ After you have created the MIDI message, specify the Step time, and finalize.

Alpha - dial / Numeric keys (set values)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)

Step time



MIDI message

To enter Rest data (CH.REST), move the cursor to the Note number, and hold [SHIFT] and press Numeric key [9].

*To change the MIDI status, press [MIDI] to return to the display of step ③.

< When Continuous mode is selected >

To continue inputting while changing values only as necessary, use [SKIP]. For example if you press [SKIP] after specifying only the Note number, the previously input Velocity, Gate time, and Step time values will be used, and the MC - 50 will wait for you to enter data for the next message.

To modify the previous input values, press [RESET] and re-enter the data.

< Creating Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.

Hold [SHIFT] and press Numeric keys [0]—[5] (enter A—F)

Hold [PAUSE] and press [▶] (insert a value of 00)

Hold [PAUSE] and press [◀] (delete)

You can add data by entering a value at the position of F7.

*Exclusive message can be entered only from the Numeric keys.

*It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

UTILITY

Utility mode allows you to edit entire songs, calculate playing times, tune external MIDI sound modules, and perform other convenient functions.

UTIL 1 : Delete a Song

Explanation

This operation deletes a song from internal memory. You can also delete two or more songs at once.

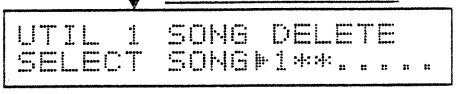
Procedure

● From Mode 1 standby

① Select the Song Delete display.

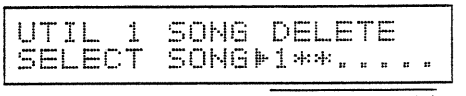
Hold [SHIFT] and press [UTIL] →
(Numeric key [1] / Alpha - dial) → [ENTER]

Utility number
Utility name



② Select the Song number you wish to delete.

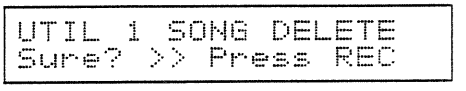
Numeric keys (Each time you press the Numeric key corresponding to the song number you wish to delete, the number and "⁜" symbol will alternate.) → [ENTER]



Song number to be deleted

*To select all song numbers for deletion, press Numeric key [0].

Execute display



< Song number display >

From left to right, the display will show the specified condition of each song number. When you select the Song Delete display, the song number of the standby display will initially be specified.

Display	Meaning
number	will be deleted
⁜	will not be deleted
.	song data does not exist

③ Execute the Song Delete operation in the Execute display.

[REC]

● Press [STOP] to end the operation.

UTIL 2 : Check Playing Times (Time Calculation)

☐ Explanation

This function allows you to check the playing time of the currently selected song. You can check not only the entire playing time, but also the playing time between specified points.

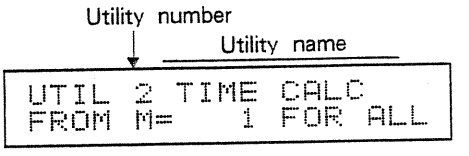
*If you wish to specify an area using Locate points, you must first set the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

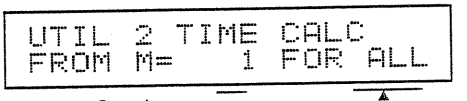
① Select the Song Delete display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [2] / Alpha - dial) → [ENTER]

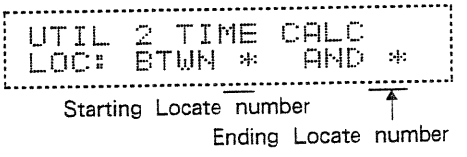


② Specify the Area for which to calculate playing time, and check the playing time.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)



If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

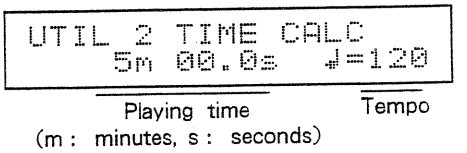


*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

*The calculation will be performed even if the Locate points are reversed.

Use [◀] [▶] to move between the area-specifying display and the time - viewing display.

The time - viewing display shows the playback time for the displayed tempo. You can use the Alpha - dial / Numeric keys to modify the tempo.



*Tempo changes in the Tempo track are included in the playing time calculation.

● Press [STOP] to end the procedure.

UTIL 3 : Copy Function Settings

☐ Explanation

This copies the function settings of another song. Use it when you want to use the same function settings as another song.

The following function settings will be copied. The settings of other functions will not be copied.

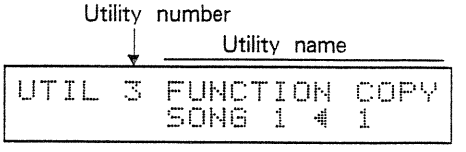
FUNC 1	Sync Clock
FUNC 2	Metronome
FUNC 4	Rhythm Velocity
FUNC 5	Rhythm Instrument
FUNC 9	Basic Tempo
FUNC 10	Locate Point
FUNC 11	Output Assign
FUNC 12	Transmit Channel
FUNC 13	Note Name
FUNC 14	Song Log

☐ Procedure

● From Mode 1 standby

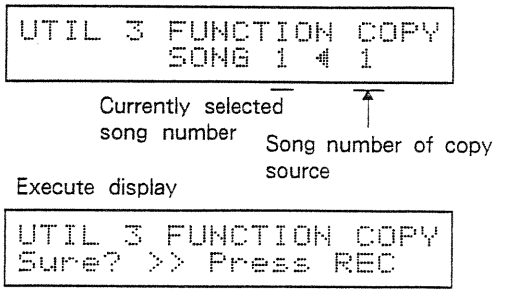
① Select the Function Copy display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [3] / Alpha - dial) → [ENTER]



② Select the Song number to copy from.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀][▶] (move the display)



③ Execute the Function Copy operation in the Execute display.

[REC]

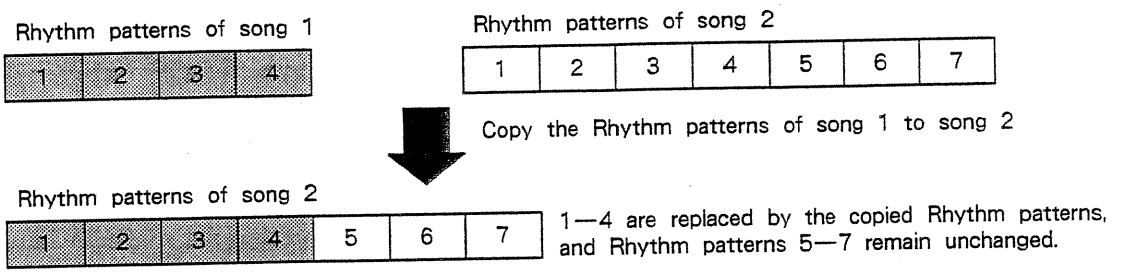
● Press [STOP] to end the procedure.

UTIL 4 : Copy Rhythm Patterns

☐ Explanation

This copies all Rhythm patterns from another song into the currently selected song. Use this operation when you wish to create a Rhythm track which uses the same Rhythm patterns as another song.

If Rhythm patterns already exist in the copy destination song, copying will be performed as follows.

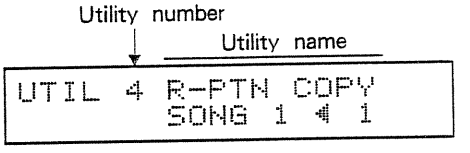


☐ Procedure

● From Mode 1 standby

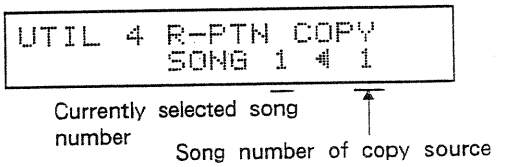
① Select the Rhythm Pattern Copy display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [4] / Alpha - dial) → [ENTER]

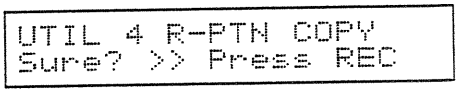


② Select the Song number to copy from.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀] [▶] (move the display)



Execute display



③ Execute the Rhythm Pattern Copy operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

UTIL 5 : Exchange Song Numbers

Explanation

This exchanges the currently selected song with another song. Use it when you wish to change the order of the songs.

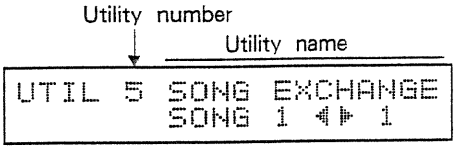
Procedure

● From Mode 1 standby

① Select the Song Exchange display.

Hold [SHIFT] and press [UTIL] →

(Numeric key [5] / Alpha - dial) → [ENTER]

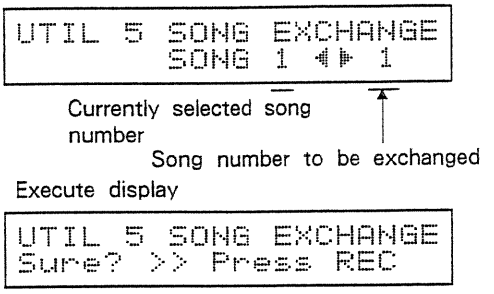


② Select the Song number to exchange with.

Alpha - dial / Numeric keys (specify values)

[ENTER] (finalize values)

[◀][▶] (move the display)



③ Execute the Song Exchange operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

UTIL 6 : Check Song Data (Data Check)

☐ Explanation

This allows you to check the type of MIDI messages that are recorded in each Phrase track. You can specify the area to be checked.

The length of Phrase tracks and the Rhythm track is also compared. If the Phrase tracks are longer than the Rhythm track, it is not possible to playback beyond the end of the Rhythm track. If you wish to playback to the end, you must lengthen the Rhythm track. To shorten Phrase tracks to match the Rhythm track, refer to the following item "UTIL 7: Data Reduce".

You can check the following items.

Numeric key input	Checked item	Content checked/display
0	WHOLE (every MIDI messages)	The MIDI channel numbers 1—16 on which the data is recorded
9	NOTE	
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	
Hold [SHIFT] and press 1	CC (Control Change)	
Hold [SHIFT] and press 2	PG (Program Change)	
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	
Hold [SHIFT] and press 4	PB (Pitch Bend)	
Hold [SHIFT] and press 7	MODE (Mode message)	
Hold [SHIFT] and press 5	EX (Exclusive)	Included (these messages have been recorded) Not found (these messages have not been recorded)
Hold [SHIFT] and press 6	TU (Tune Request)	
Hold [SHIFT] and press 8	SPAN	Comparison of the length (Phrase tracks and Rhythm track) Normal (normal) Longer than TRK-R (the Phrase tracks are longer)

*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

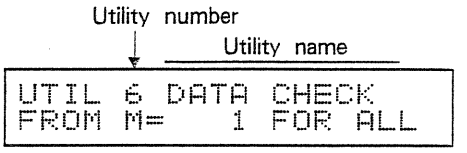
☐ Procedure

● From Mode 1 standby

① Select the Data Check display.

Hold [SHIFT] and press [UTIL] →

(Numeric key [6] / Alpha - dial) → [ENTER]



② Specify the Area in which you wish to check the data, and execute the Data Check operation.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄] [►] (move the cursor)

Starting measure

Number of measures from starting measure

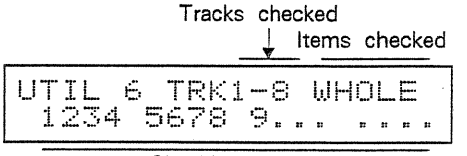
If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

Starting Locate number

Ending Locate number

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

When you finalize the area, the checking results will appear in the lower line of the display



Checking results

③ Select the Track and Items you wish to check, and view the results.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◄] [►] (move the cursor)

● Press [STOP] to end the procedure.

UTIL 7 : Erase Rest Data/Align Track Lengths (Data Reduce)

☐ Explanation

Data Reduce includes the following two functions.

◆ Data Reduce will erase Rest data that was input in Step Recording or Microscope mode, and converts them into blanks. This gets rid of excess data, and makes memory usage more efficient. To execute this, turn on "REDUCE CH.REST".

◆ If Phrase tracks are longer than the Rhythm track, the length beyond the end of the Rhythm track cannot be played. In such cases, you must either lengthen the Rhythm track, or shorten the Phrase tracks. Data Reduce will delete song data from the end of Phrase tracks that exceed the length of the Rhythm track, to make them the same length. To execute this, turn on "ADJUST LENGTH".

* If you have made many modifications while in Microscope mode, measure / beat / clock movement may become slower. To regain normal movement speed, execute Data Reduce (☞P.133). In this case, the desired result will be gained even if both the functions are turned off.

☐ Procedure

● From Mode 1 standby

① Select the Data Reduce display.

Hold [SHIFT] and press [UTIL] →

(Numeric key [7] / Alpha - dial) → [ENTER]

Utility number

Utility name

```
UTIL 7 DATA REDUCE
REDUCE CH.REST   ON
```

② Specify whether or not to execute the two functions.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄] [►] (move the cursor)

```
UTIL 7 DATA REDUCE
REDUCE CH.REST   ON
```

```
UTIL 7 DATA REDUCE
ADJUST LENGTH    ON
```

Execute display

```
UTIL 7 DATA REDUCE
Sure? >> Press REC
```

③ Execute the Data Reduce operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

UTIL 8 : Tune MIDI Sound Modules

☐ Explanation

This function will transmit a Tune Request message and Note Messages (all MIDI channels, note name A4, velocity 64) from both MIDI OUT connectors. You can use this function to tune your MIDI sound modules, to check the connections of MIDI cables or audio cables, or when adjusting mixing levels.

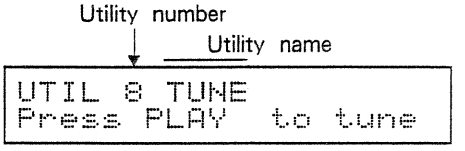
☐ Procedure

● From Mode 1 standby

① Select the Tune display.

Hold [SHIFT] and press [UTIL] →

(Numeric key [8] / Alpha - dial) → [ENTER]



② Transmit the Tune Request message and the Note messages.

[PLAY] (transmit a continuous note)

Hold [SHIFT] and press [PLAY] (transmit intermittent notes)

③ Stop transmission.

[PAUSE]

● Press [STOP] to end the procedure.

MODE 2 : DISK

In this mode you can save song data to disk, or load a song file from disk. A new disk or a disk which has been used by other devices must be formatted before you can use it to save song data (☞ P.148).

1: Load Song Files ..... (Load)
2: Save Song Data ..... (Save)
3: Delete a Song File ..... (Delete)
4: Rename a File ..... (Rename)
5: Compare Internal and Disk Data ..... (Verify)

1 : Load Song Files

☐ Explanation

This operation loads one or more song files from disk into MC - 50 memory.

＊If you wish to load only one song file, you can also use the Mode 1 function "Current Load" (☞P.53).

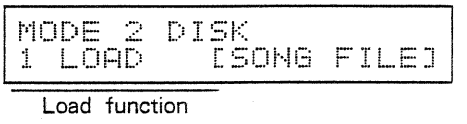
☐ Procedure

● From Mode 1 standby

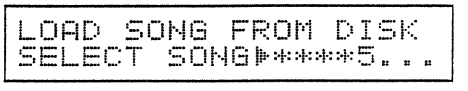
① Insert the disk (with the protect tab ON < PROTECT >).

② Move to the Mode 2 Load display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



Load function



③ Select the Song numbers you wish to load.

Numeric keys (Press the Numeric key for the song numbers you wish to load. Each time you press the key, the display will alternate between the number and a symbol.) → [ENTER]

Song numbers to be loaded

The lower line of the display will show the specified status of each song number, from left to right. The meaning of the display is as follows.

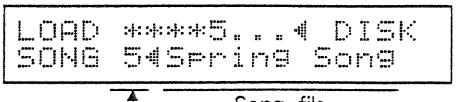
Display	Meaning
number	will be loaded
＊	will not be loaded (the MC - 50 contains song data)
.	will not be loaded (the MC - 50 does not contain song data)

＊To select all song numbers, hold [SHIFT] and press Numeric key [0]. To select all song numbers for which the MC - 50 does not contain data, press Numeric key [0].

④ For each song number, select a Song file from which to load, and execute loading.

Alpha - dial (select song files)
[ENTER] (finalize the song file, and move to the next song number)
[◀] [▶] (finalize the song file / select the song number / move between displays)
[LOAD] (execute loading)

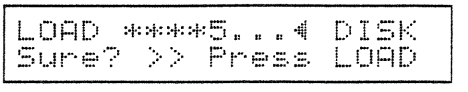
Song number to load into



Song file

Song number

Execute display



＊If you press [LOAD] when not in the Execute display, the finalized song files and the currently selected song file will be loaded.

● When loading ends, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

2 : Save Song Data

☐ Explanation

This operation lets you assign a name to the song data in the MC - 50, and save it onto disk. It is not possible to save more than one song file of the same name on a single disk. (However, identically spelled names with differences in upper and lower case characters are considered different names, and are handled as separate song files.) If the disk already contains a song file with a name identical to the song data you are saving, the song file will be overwritten.

＊If you wish to save only one song file, you can also use the Mode 1 function "Current Save" (☞P.53).
＊It you wish to assign a song title in Mode 1, refer to "FUNC 3: Song Title" (☞P.64).

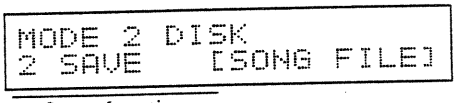
☐ Procedure

● From Mode 1 standby

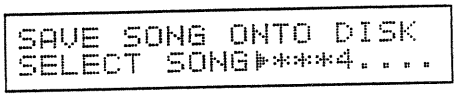
① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 2 Save display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]

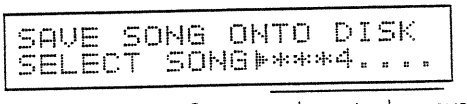


Save function



③ Select the Song numbers you wish to save.

Numeric keys (Press the Numeric key for the song numbers you wish to enter. Each time you press the key, the display will alternate between the number and a symbol.) → [ENTER]



Song numbers to be saved

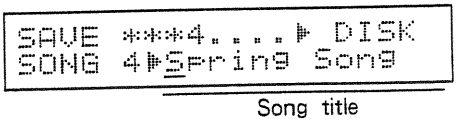
The lower line of the display will show the specified status of each song number, from left to right. The meaning of the display is as follows.

Display	Meaning
number	will be saved
＊	will not be saved
.	the MC-50 does not contain song data

＊To select all song numbers for which the MC - 50 contains data, press Numeric key [0].

④ Specify the Song title.

Alpha - dial (select characters)
[◀] [▶] (move the cursor)



Song title

You can use the following characters

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " ＊ + − ／ < = > () [] {} ^ _ | $ % @

< Inputting characters from the Numeric keys >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will alternate through the characters, and they will be finalized immediately. To enter lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

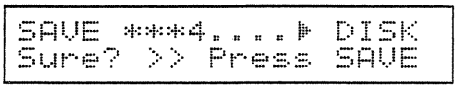
< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

* If you do not assign a Song Title (all spaces), you will not be able to save to disk.

⑤ Finalize the Song Title, and execute saving.

[ENTER] → [SAVE]



● When saving is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

3 : Delete a Song File

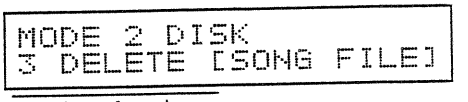
☐ **Explanation** This function lets you delete a song file from disk.

☐ **Procedure** ● From Mode 1 standby

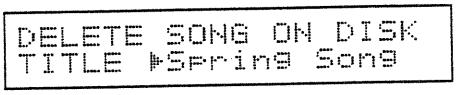
① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 2 Delete display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]

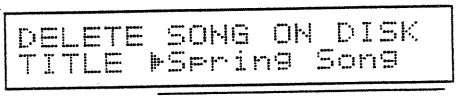


Delete function



③ Select the Song file you wish to delete.

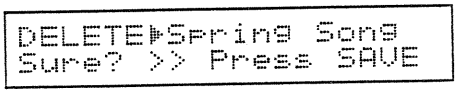
Alpha - dial → [ENTER]



Song file

④ Execute the Delete function.

[SAVE]



● When deletion is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4 : Rename a File

☐ Explanation

This function lets you rename a song file on disk.

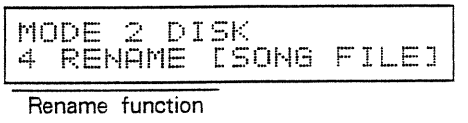
☐ Procedure

● From Mode 1 standby

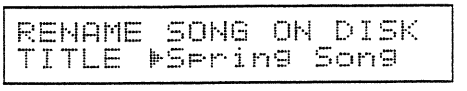
① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 2 Rename display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]

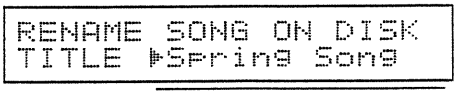


Rename function



③ Select the Song file you wish to rename.

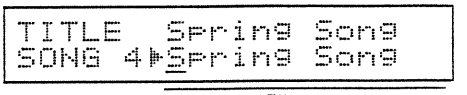
Alpha - dial → [ENTER]



Song file

④ Modify the Name.

Alpha - dial (select characters)
[◀] [▶] (move the cursor)



Filename

You can use the following characters

Space A···Z a···z 0···9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Inputting characters from the Numeric keys >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will alternate through the characters, and they will be finalized immediately. To enter lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

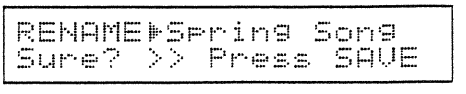
< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

* Rename is not possible if the disk already contains a song file with that name.

⑤ Finalize the name, and execute renaming.

[ENTER] → [SAVE]



● When renaming is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

5 : Compare Internal and Disk Data (Verify)

☐ Explanation

This function checks whether the song data in internal memory is the same (except for the name) as the song data in a song file on disk

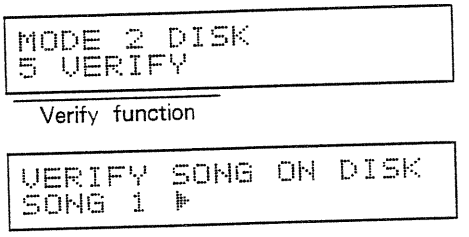
☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab ON < PROTECT >).

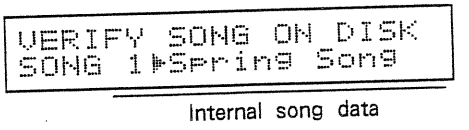
② Move to the Mode 2 Verify display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]



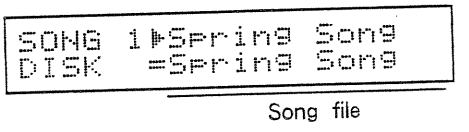
③ Select the internal Song data you wish to compare.

Alpha - dial / Numeric keys → [ENTER]



④ Select the disk Song file you wish to compare, and execute the Verify function.

Alpha - dial → [ENTER]



The lower line of the display will show the checking results.

Display	Checking results
SONG VERIFIED	The data is the same.
SONG DIFFERS	The data is different.

● Press [STOP] to end the procedure and return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

MODE 3 : SONG LINK

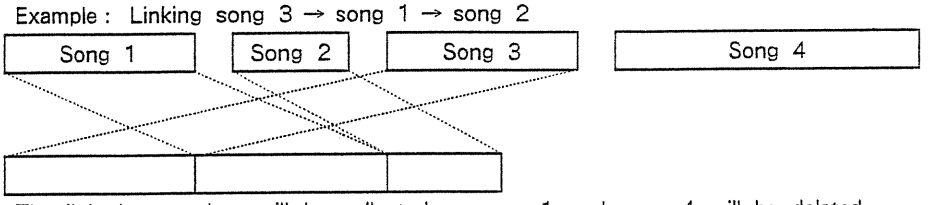
Using this function, two or more songs in internal memory can be linked together into a single song.

Linking Song Data

☐ Explanation

When this function is used, two or more songs in internal memory will be linked together into a single song (song number 1). Song data you did not specify will be deleted. You can link the same song more than once, for up to 20 songs in a single operation.

Example : Linking song 3 → song 1 → song 2



The linked song data will be collected as song 1, and song 4 will be deleted.

The Rhythm patterns of each song you link will be arranged automatically. Rhythm patterns with the same data will be collected into one, and the Rhythm patterns will be rearranged.

You can link song data within the following limits.

Notes	Approximately 40,000 notes (this will differ depending on the amount of MIDI messages other than notes)
Rhythm pattern	240 or less
Length	9999 measures (or quarter notes × 87381) or less

* If the Rhythm Velocity (☞P.65) and Rhythm Instrument (☞P.66) settings of each song are different, they cannot be linked.
* If you move to a mode other than mode 3 before executing Link, the link settings will be lost.

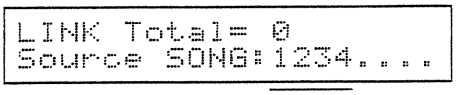
☐ Procedure

● From Mode 1 standby

① Load the Song files you wish to link (☞P.136).

② Move to the Link display.

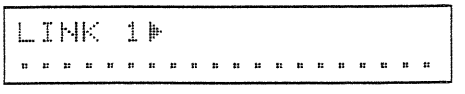
Hold [SHIFT] and press [MODE] →
(Numeric key [3] / Alpha - dial) → [ENTER]



Song number which contain song data

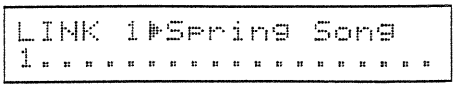
③ Move to the Link Program display.

[REC]



④ Specify the order in which to link the songs.

Numeric keys (specify song numbers)
[ENTER] (move the cursor to the right)
[◀] [▶] (move the cursor)



< Key functions >

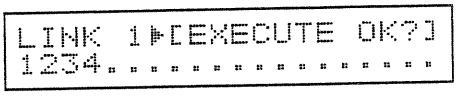
Delete the song number at the cursor location	Hold [PAUSE] and press [◀] → [ENTER] (press [CANCEL] to abort)
Insert a song number at the cursor location	Hold [PAUSE] and press [▶] → numeric keys (song number) → [ENTER] (press [CANCEL] to abort)
Delete the song numbers after the cursor location	Hold [SHIFT] and press [SKIP] → [ENTER] (press [CANCEL] to abort)
Delete all song numbers	Hold [SHIFT] and press [RESET] → [ENTER] (press [CANCEL] to abort)

⑤ Check whether or not linking is possible.

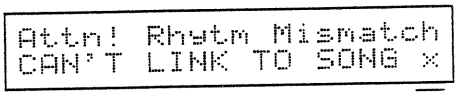
[EDIT]

When you press [EDIT], the checking results will appear as follows.

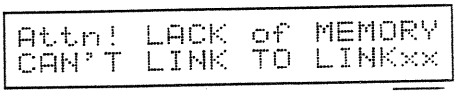
Linking is possible.



Linking is not possible, because the song of the displayed number has different Rhythm Velocity (FUNC 4) or Rhythm Instrument (FUNC 5) settings.

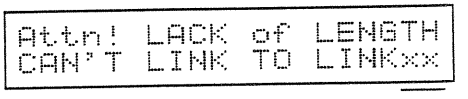


Linking is not possible, because the amount of data is too large. Reduce the number of songs to be linked.



Linking is not possible, because the total number of Rhythm patterns would exceed 240. You can either not link the displayed song, or can delete unneeded Rhythm patterns.

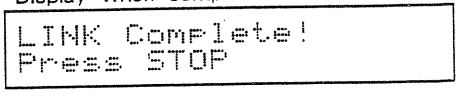
Linking is not possible, because the song length would exceed 9999 measures (or quarter notes × 87381). Reduce the number of songs to be linked.



⑥ Execute linking.

[ENTER]

Display when completed



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

MODE 4 : DISK UTILITY

This mode provides disk - related functions, such as initializing a disk or copying a disk.

1: Initialize a Disk ..... (Initialize)
2: Copy a Disk ..... (Backup)
3: Copy Song Files between Disks ..... (Transfer)
4: Convert a Song File ..... (Convert)
5: Name a Disk ..... (Disk Name)
6: Start up another System ..... (Restart)

1 : Initialize a Disk

☐ Explanation

This function initializes a new disk or a disk which has been used by another device, so that it can be used by the MC - 50.

☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 4 Initialize display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]

```
MODE 4 DISK UTILITY
1 INITIALIZE  [DISK]
```

```
Insert New DISK
>>Press ENTER [INIT]
```

③ Execute the Initialize function.

[ENTER]

If the disk has already been used, the display shown at right will appear. If you are sure you want to initialize the disk, press [ENTER] once again. To quit without initializing, press [STOP].

```
Clear DISK data?
Yes:ENTER    No:STOP
```

When the disk has been initialized, the display shown at right will appear. If you wish to initialize another disk, exchange disks, and press [ENTER].

```
INIT Complete! Cont?
Yes:ENTER    No:STOP
```

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

2 : Copy a Disk (Backup)

☐ Explanation

This function creates backup copies of a disk. When you copy a song disk, configuration, sequence files, and disk name will also be copied. As a precaution, use this function to make backup copies of important disk.

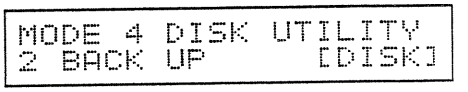
*When you use this function, all internal song data will be erased. Be sure to save important song data to disk before using this function.

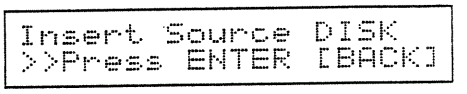
☐ Procedure

● From Mode 1 standby

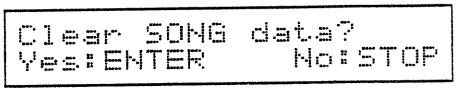
① Move to the Mode 4 Backup display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]



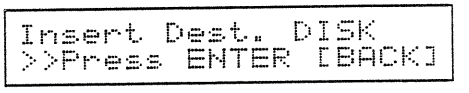


If the internal memory of the MC - 50 contains data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.



② Insert the copy source disk (with the protect tab ON < PROTECT >), and copy the disk data into internal memory.

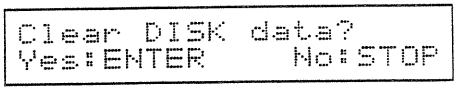
[ENTER]



③ Insert the copy destination disk (with the protect tab OFF < WRITE >), and copy the internal data onto the disk.

[ENTER]

If the copy destination disk has already been used, the display shown at right will appear. If you are sure you want to copy, press [ENTER] once again. To quit without copying, press [STOP].



If the amount of data is large and cannot be copied in a single pass, you will be returned to step ①. Repeat steps ② and ③ until the display shows "BACK UP Complete!".

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

3 : Copy Song Files between Disks (Transfer)

☐ Explanation

This function copies all song files from a disk to another disk. The Disk Backup function explained in the previous page deletes all song files from the copy destination before copying, but this Transfer function adds song files without erasing the song files that were originally on the copy destination disk.

*When you use this function, all MC - 50 internal song data will be erased. Be sure to save important song data to disk before using this function.

☐ Procedure

● From Mode 1 standby

① Move to the Mode 4 Transfer display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]

```
MODE 4 DISK UTILITY
3 XFER    [SONG FILE]
```

```
Insert Source DISK
>>Press ENTER [XFER]
```

If the internal memory of the MC - 50 contains song data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.

```
Clear SONG data?
Yes:ENTER     No:STOP
```

② Insert the copy source disk (with the protect tab ON < PROTECT >), and copy the song files from disk into internal memory.

[ENTER]

```
Insert Dest. DISK
>>Press ENTER [XFER]
```

③ Insert the copy destination disk (with the protect tab OFF < WRITE >), and copy the internal song files onto the disk.

[ENTER]

```
XFER Complete!
Press STOP
```

If the amount of data is large and cannot be copied in a single pass, you will be returned to step ①. Repeat steps ② and ③ until the display shows "XFER Complete!".

If the copy source and the copy destination contain song files of the same name, the display shown at right will appear. If you wish to overwrite the file, press [ENTER]. If you don't wish to copy that specific song file, press [SKIP].

```
RENEW? SONG TITLE
Yes:ENTER     No:SKIP
```

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4 : Convert a Song File

☐ Explanation

This function converts song files from a disk created by the MRC - 500/300 into a form that can be used by the MC - 50. A song file converted in this way cannot be used by the MRC - 500/300. If you will want to use a song file with the MRC - 500/300 later, make a copy of that song file on another disk before converting it.

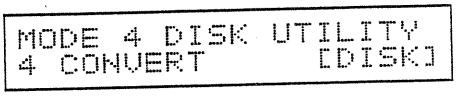
*When you use this function, all MC - 50 internal song data will be erased. Be sure to save important song data to disk before using this function.

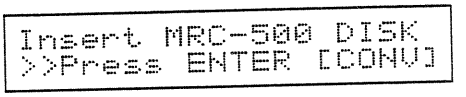
☐ Procedure

● From Mode 1 standby

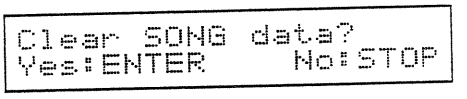
① Move to the Mode 4 Convert display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]



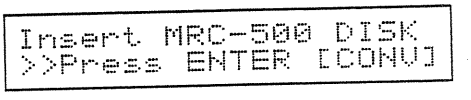


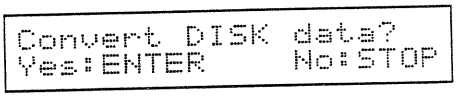
If the internal memory of the MC - 50 contains song data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.



② Insert the disk to be converted (with the protect tab OFF < WRITE >), and specify Convert.

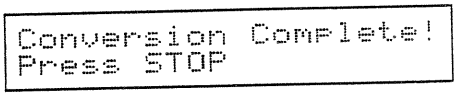
[ENTER]





③ Execute the Convert function.

[ENTER]



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

5 : Name a Disk (Disk Name)

☐ Explanation

This function allows you to assign a 13 - character name to a disk. Normally, you tell disks apart by attaching a label to the outside of the disk, and this Disk Name function lets you store the same type of label inside the disk as data. The Disk Name you assign here will be displayed when you use the function Available Disk (mode 1), and when you load or save configuration data (mode 5).

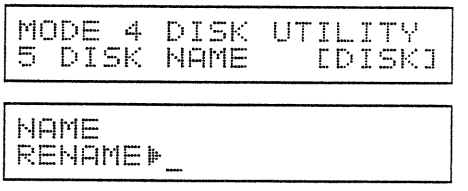
☐ Procedure

● From Mode 1 standby

① Insert the disk to be converted (with the protect tab OFF <WRITE>).

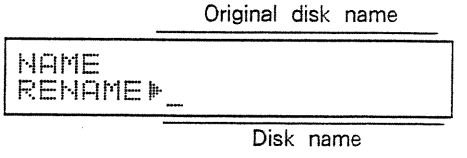
② Move to the Mode 4 Disk Name display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]



③ Specify the Disk name.

Alpha - dial / Numeric keys (select characters)
[◀][▶] (move the cursor)



*If a name has already been assigned to the disk, the original name will be shown in the upper line of the display.

You can use the following characters.

Space A···Z a···z 0···9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

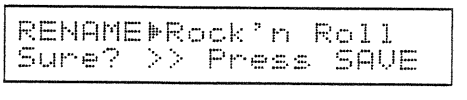
You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

④ Finalize the Disk name, and write it onto the disk.

[SAVE]



When the Disk name has been written onto the disk, you will return to the mode menu display.

● Return to Mode 1.

Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

6 : Start up another System (Restart)

☐ Explanation

This function lets you start up another system program from SUPER - MRC.

Numeric key input	Value	Operation
1	SUPER - MRC	Restart SUPER - MRC
2	SUPER - MRP	Start up SUPER - MRP
3	DISK	Start up a system program from a system disk. Select this when using the separately sold MRB - 500 (bulk librarian), etc.

*When you execute this Restart function, all song data in MC - 50 internal memory will be erased. Be sure to save important song data to disk before using this function.

☐ Procedure

● From Mode 1 standby.

① Move to the Mode 4 Restart display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [6] / Alpha - dial) → [ENTER]

```
MODE 4 DISK UTILITY
6 RESTART
```

```
1>SUPER-MRC 3 DISK
2 SUPER-MRP
```

If song data exists in MC - 50 internal memory, the display shown at right will appear. Press [ENTER] and all song data will be erased.

```
Clear SONG data. OK?
Yes:ENTER     No:STOP
```

② Specify which system you wish to start up, and execute Restart.

(Numeric keys / Alpha - dial) → [ENTER]

*If you are restarting from a system disk, insert the system disk before you execute Restart.

MODE 5 : SYSTEM CONFIGURATION

The following information can be stored in each song disk as a Configuration File; six types of configuration setting, three MIDI function settings, View Field settings for the Microscope, and Auto Load filename (the name of the file which is automatically loaded when the system is started up). By inserting that disk when the system is started up, you can immediately begin working in the environment set up for you by the Configuration File.

1: Modify Configuration Data ..... (Change)
- CNFG 1: Stopping and Locate Jumping ..... (Locate Mode)
- CNFG 2: Step Recording Settings 1 ..... (Step/Gate)
- CNFG 3: Step Recording Settings 2 ..... (Gate Time Ratio)
- CNFG 4: Settings for Playing a Song from the middle ..... (MIDI Update)
- CNFG 5: Modify Recording Settings ..... (Rewrite Mode)
- CNFG 6: Tempo Recording and Modify Recording Settings ..... (MIDI Control)

2: Load a Configuration File ..... (Load)

3: Save Configuration Data ..... (Save)

4: Initialize the Configuration Data ..... (Initialize)

*Set the three MIDI function settings on page 56—58.

*Set the View Field for the Microscope on page 110.

CNFG 1 : Stopping and Locate Jumping

(Locate Mode)

☐ Explanation

These settings determine what happens when you press [STOP] during recording or playback, and also determine the actual movement caused by the Locate Jump function.

Item	Numeric key input	Value	Operation
STOP (Stop mode)	0	JUST	When you press [STOP] during recording or playback, you will stop right there.
	1	MEAS	When you press [STOP] during recording or playback, you will stop at the beginning of the next measure.
JUMP (Locate Jump mode)	0	JUST	When you use the Locate Jump function, you will move to the position of the Locate Point.
	1	MEAS	When you use the Locate Jump function, you will move to the beginning of the measure where the Locate Point is.

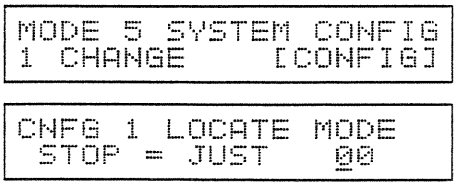
*When the MC - 50 is synchronized to a clock signal from an external device, these Stop Mode settings have no effect.

☐ Procedure

● From Mode 1 standby

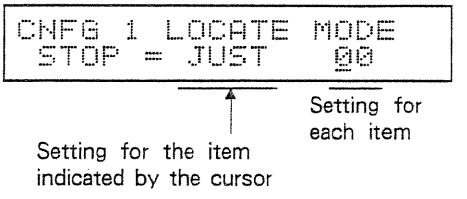
① Move to the Mode 5 Locate Mode display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Set the Stop mode and the Locate Jump mode.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

CNFG 2 : Step Recording Settings 1 (Step/Gate)

☐ Explanation

These settings determine the number of clocks that correspond to each note symbol you use to specify the Step time and Gate time in Step Recording (☞P.39). In addition to specifying Step time and Gate time as note symbols, you can also specify these directly, so you should set these note symbols to basic values.

Note symbol	Step time	Gate time
𝅘𝅥𝅯	6	4
𝅘𝅥𝅰	12	9
𝅘𝅥𝅰₃	16	12
𝅘𝅥𝅯	24	19
𝅘𝅥𝅯₃	32	26
♪	48	41
♩₃	64	56
♩	96	86
𝅗𝅥	192	178

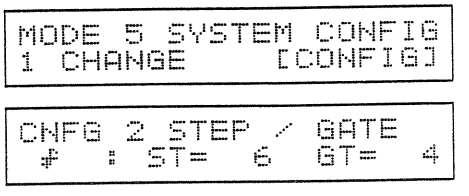
* Step time and Gate time can be given a value of up to 999 clocks.

☐ Procedure

● From Mode 1 standby

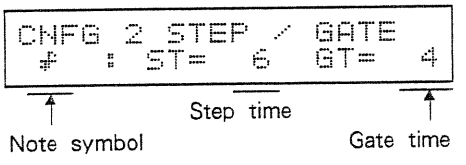
① Move to the Mode 5 Step/Gate display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]



② Set the Step time and Gate time for each note symbol.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

CNFG 3 : Step Recording Settings 2

(Gate Time Ratio)

☐ Explanation

When you specify a Step time as a number in Step Recording (☞ P.39), this setting determines how long the Gate time will be, as a percentage of the specified Step time. Since you can modify the value later, you should set this to a basic value.

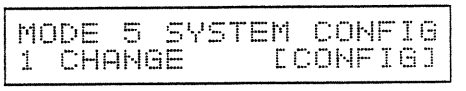
＊This can be set over a range of 1—200%. The initial value is 75%.

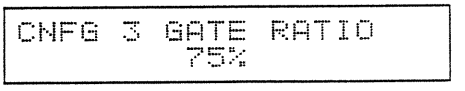
☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 Gate Time Ratio display.

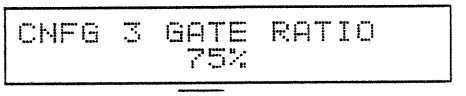
Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]





② Set the Gate time ratio.

Alpha - dial / Numeric keys (modify values)



Gate time ratio

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

CNFG 4 : Settings for Playing a Song from the middle (MIDI Update)

☐ Explanation

When you simply move to another measure, the changing values of the song data you passed over will not be transmitted to your MIDI sound module. For example even if the area you passed over contained a MIDI Program Change message, your MIDI sound module will not change sounds. This means that when you start playback from the new location, the correct sound will not be used.

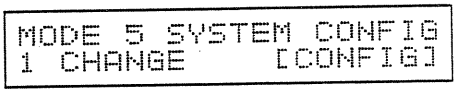
In the standby condition, you can hold [PAUSE] and press [MIDI] to make all changing messages in the song data (except for Note messages) up to the new location be transmitted from MIDI OUT. If you wish to automatically transmit these changes in song data which precede the point newly moved to in response to a Song Position Pointer message, set MIDI Update to "SPP".

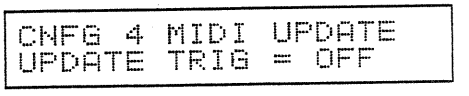
☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 MIDI Update display.

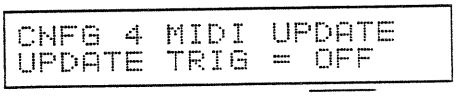
Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]





② If you wish to automatically transmit the changing values of the song data, set this to "SPP".

Alpha - dial / Numeric keys (modify values)



SPP : transmitted/OFF : not transmitted

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

CNFG 5 : Modify Recording Settings

(Rewrite Mode)

☐ Explanation

This setting specifies whether Gate time and Velocity will be modified simultaneously when you use the Rewrite Step operation (☞P.36) of Modify Recording.

Item	Numeric key input	Value	Operation
GATE TIME	0	OFF	Gate time will not be modified
	1	ON	Gate time will also be modified
VELOCITY	0	OFF	Velocity will not be modified
	1	ON	Velocity will also be modified

☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 Rewrite Mode display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]

```
MODE 5 SYSTEM CONFIG
1 CHANGE     [CONFIG]
```

```
CNFG 5 REWRITE MODE
GATE TIME = ON   11
```

② Specify whether Gate time and Velocity are to be modified together.

Alpha - dial / Numeric keys (modify values)

```
CNFG 5 REWRITE MODE
GATE TIME = ON   11
```

Setting of item at cursor location

Setting of each item

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

CNFG 6 : Tempo Recording and Modify Recording Settings (MIDI Control)

☐ **Explanation** This selects the type of MIDI message that will be received from an external MIDI device to control the MC - 50 when you use Tempo Recording and Modify Recording (Rewrite Velocity) .

You can select the follwing types of MIDI message.

MIDI message	Tempo recording	Modify recording (Rewrite Velocity)
NOTE # (Note number) 36 (C2)—84 (C6)	Higher note numbers will make the tempo faster. To select the Basic tempo, play note number 60 (C4). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—484. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher note numbers will increase the velocity. Range of variation : 4—124
VELO (Velocity) 1—127	Higher velocity will make the tempo faster. To select the Basic tempo, play a note with a velocity of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher velocities will increase the velocity. Range of variation : 1—127
CC (Control Change) the value (0—127) of any one specified control number	Higher values will make the tempo faster. To select the Basic tempo, transmit a value of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher values will increase the velocity. Range of variation : 1—127
PB (Pitch Bend) −128—+128	As the pitch is raised the tempo will become faster, and as the pitch is lowered the tempo will become slower. To select the Basic tempo, move the pitch bender to the center position (0). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Raising the pitch will increase the velocity above 64. Lowering the pitch will decrease the velocity below 64. (Pitch Bend 0 = Velocity 64) Range of variation : 1—127

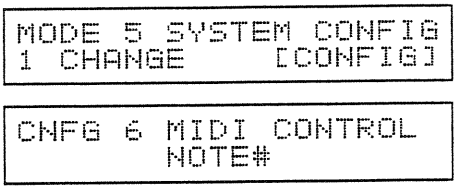
* In Tempo Recording, the tempo will change in relation to the Basic tempo.

☐ Procedure

● From Mode 1 standby

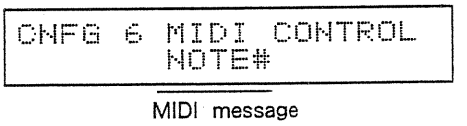
① Move to the Mode 5 MIDI Control display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [6] / Alpha - dial) → [ENTER]



② Select the MIDI message to be controlled by.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)



If you have selected Control Change messages, you can also select the Control number.

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

2 : Load a Configuration File

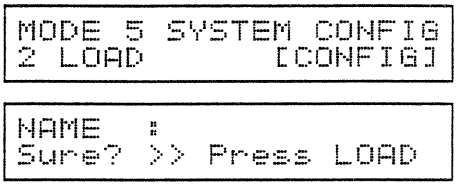
☐ Explanation This function loads the Configuration File from a song disk into internal memory, overwriting the previous Configuration data that was in internal memory.

☐ Procedure ● From Mode 1 standby

① Insert a Song disk (with the protect tab ON < PROTECT >).

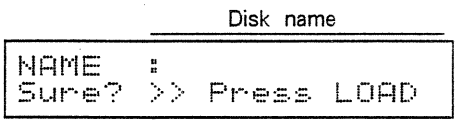
② Move to the Mode 5 Load display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER] →



③ Load the Configuration file into internal memory.

[LOAD]



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

3 : Save Configuration Data

☐ Explanation

This function saves the Configuration data from internal memory to a song disk.

You can specify whether or not to save each of the following items: Auto Load Filename, MIDI functions (☞P.56—58), and Microscope View Field (☞P.110). If you are saving Configuration data to a song disk for the first time, set all items ON. If the song disk already contains a Configuration file, set the items as needed.

Item	Numeric key input	Value	Operation
A-LOAD (Auto Load Filename)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	erase the disk settings
MIDI (MIDI 1/2/3)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	initialize the disk settings
μ-VIEW (Microscope View Field)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	initialize the disk settings

If you set A - LOAD "ON", the names of all internal song data will be saved to disk as Auto Load Filenames. By saving the Auto Load Filenames to the disk which contains the song data from internal memory, you can automatically load those songs into the MC - 50 whenever the system is started up with that disk inserted.

☐ Procedure

● From Mode 1 standby

① Insert a Song disk (with the protect tab OFF < WRITE >).

② Move to the Mode 5 Save display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER] →

```
MODE 5 SYSTEM CONFIG
3 SAVE          [CONFIG]
```

```
SETUP UPDATE
A-LOAD = OFF    000
```

③ Specify whether or not to save each item.

Alpha - dial / Numeric keys (specify values)
[◀][▶] (move the cursor)

```
SETUP UPDATE
A-LOAD = OFF    000
```

Setting of each item

Setting of item at cursor position

④ Save the Configuration file to the song disk.

[SAVE]

Disk name

```
NAME  :
Sure? >> Press SAVE
```

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4 : Initialize the Configuration Data

☐ Explanation

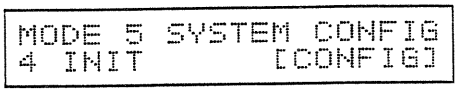
This function initializes the configuration data of internal memory.

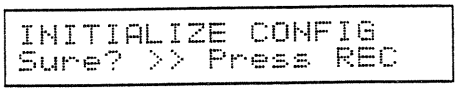
☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 Initialize display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]





② Execute initialization.

[REC]

● End the procedure and return to Mode 1.

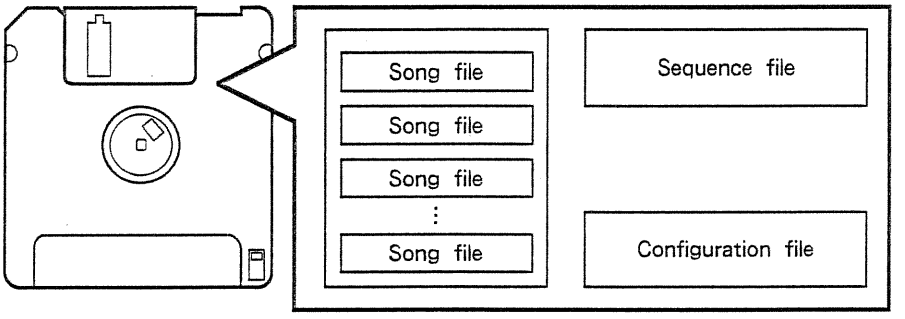
[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

SUPER – MRP (PERFORMANCE SYSTEM)

The SUPER - MRP system (Performance System) lets you specify the order in which the song files of a song disk will be played. If you specify the song order of your stage performance, SUPER - MRP will play your entire set automatically, and you won't have to load a song file for each song. In addition to specifying the order of songs, you can also make two or more songs playback continuously, and replay a specified section of the songs as many times as desired.
If you have saved your SUPER - MRP settings to disk, you can reproduce the same automatic performance at any time.

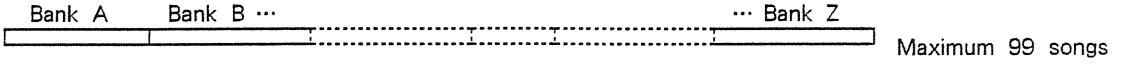
1. How SUPER-MRP is organized

SUPER - MRP determines the order in which the song files saved in a disk are played. The settings for SUPER - MRP are stored in a song disk as a "**Sequence file**". When SUPER - MRP runs, it uses the song file functions and part of the configuration file, but you make these settings from SUPER - MRC.

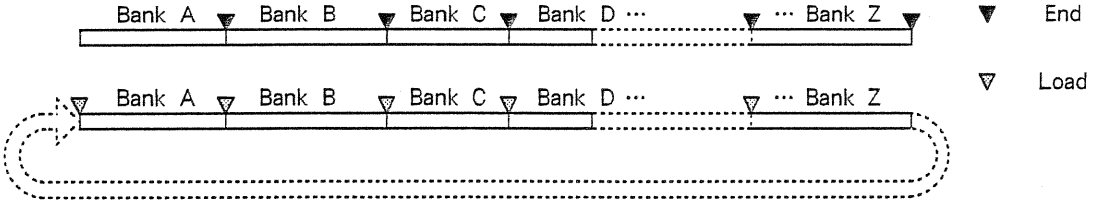


If, when SUPER - MRP is started up, you insert a song disk that contains a sequence file, the sequence file / song files (Bank A) / configuration file will be loaded into memory automatically. Then simply press PLAY and the songs will playback as specified by the SUPER - MRP settings. Of course even after SUPER - MRP is started up, you can exchange disks and play.

Song files that are to be loaded together as a unit are called "**Banks**". You can create 26 Banks, arranged in alphabetical order from A to Z. One Bank can specify the order of 32 song files, but if you make the same song file repeat two or more times, a single Bank can specify up to 99 songs. However, the total memory requirements of all song files can not exceed the capacity of internal memory. Also, the total of all song files used in all Banks must be 99 or less.



Normally you will playback only the song files of the Bank that was loaded, but by using the "**Ring play**" function, you can continuously playback the song files of all the Banks you specify.



The "**Sequence number**" determines the position of a song file in a Bank. This does not assign the song file itself, but assigns the Song Title that distinguishes the song file.

As you arrange song files in sequence, a Pause mark will be inserted between each Sequence number. The Pause mark automatically stops playback when the previous song ends. If you want to playback songs in succession, defeat the Pause marks.

You can also make the following settings for each song as necessary.

Function	Operation
Interval Time	When you defeat the Pause marks and playback in succession, this specifies the amount of time inserted before playing the next song.
Count In Mark	This inserts a two-measure count before playing the next song. If the metronome has been turned on, it will give you the beat.
Loop Mark	The specified area of the song will be repeated. Specify the repeated area from SUPER-MRC (☞P.69, "FUNC 7 : Block Repeat").

2. Three Modes

The operations of SUPER-MRP are broadly divided into three modes. Each mode is subdivided further.

◆ Mode 1: Play

Play the song files according to the sequence data settings.

Play	Play the song files of the specified bank.
Ring Play	Continuously play the song files of all banks.
Load	Load the sequence file and the SUPER-MRC configuration file into internal memory.

◆ Mode 2: Configuration

Make settings for sequence data.

CNFG 1 (Sequence)	Specify the order in which to play song files, and settings for Pause mark defeat, Interval times, Count In marks, and Loop marks.
CNFG 2 (Remote control)	Specify how an external MIDI device will control Start/Stop or song selection, etc.
Load	Load the sequence file and the SUPER-MRC configuration file into internal memory.
Save	Save sequence data settings to disk.

◆ Mode 3: Utility

Disk name	Assign a name to the disk. The procedure is the same as for SUPER-MRC "Mode 4 : Disk name" (☞P.152).
Restart	Start up a system program such as SUPER-MRC, etc. from SUPER-MRP.

3. Preparations before using SUPER - MRP

When SUPER - MRP plays songs, it will operate and playback according to the settings of the Configuration file and the Function settings in each Song file. It is not possible to change these settings while using SUPER - MRP. To change the settings, you must start up SUPER - MRC and make settings.

The following settings are used by SUPER - MRP.

FUNC 1 : Sync Clock	P.62
FUNC 2 : Metronome	P.63
FUNC 3 : Song Title	P.64
FUNC 4 : Rhythm Velocity	P.65
FUNC 5 : Rhythm Instrument	P.66
FUNC 7 : Block Repeat	P.69
FUNC 8 : Auto Stop	P.70
FUNC 9 : Baisc Tempo	P.71
FUNC 10 : Locate Point	P.72
FUNC 11 : Output Assgin	P.74
FUNC 12 : Transmit Channel	P.75

CFNG 1 : Locate Mode	P.156
CFNG 4 : MIDI Update	P.159
MIDI 1 : Receive Channel	P.56
MIDI 2 : Receive Status	P.57
MIDI 3 : Transmit Condition	P.58

*The repeat area of Block Repeat (FUNC 4) is used by SUPER - MRP as the Loop area for Loop playback.

4. Basic Procedure for SUPER - MRP

Use the following procedure to operate SUPER - MRP.

① Insert the song disk you wish to play using SUPER - MRP.

② Start up SUPER - MRP.

③ In Mode 2, set the playback order of the Song Files. As necessary, defeat Pause marks, and set Interval marks / Count In marks / Loop marks.

④ Move to Mode 1.

When you move to Mode 1, the song files for the Bank displayed in Mode 2 will automatically be loaded, and the MC - 50 will enter standby condition.

⑤ Press [PLAY] to begin playback.

⑥ Save the newly created sequence data to disk.

Starting the System

This section explains how to start SUPER - MRP, and how to start SUPER - MRC from SUPER - MRP. You can start SUPER - MRP either when you turn the power on, or from SUPER - MRC.

☐ Starting SUPER - MRP when the power is turned on

① Turn the power on while pressing Numeric key [2], and SUPER - MRP will be started.

② Insert a Song disk, and press [ENTER].

☐ Starting SUPER - MRP from SUPER - MRC (Restart)

To start SUPER - MRP from SUPER - MRC, use the Restart (Mode 4) procedure.

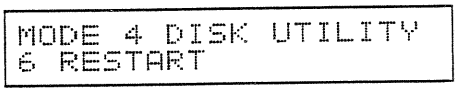
*When you restart, all internal data will be erased. Be sure to save important data to disk before you restart.

● From Mode 1 standby

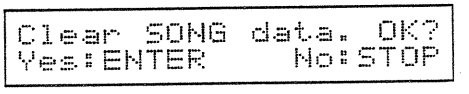
① Insert a Song disk.

② Move to the Restart display of Mode 4.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha dial) → [ENTER] →
(Numeric key [6] / Alpha dial) → [ENTER]



If song data exists in internal memory, the display shown at right will appear. Press [ENTER] and all song data will be cleared.



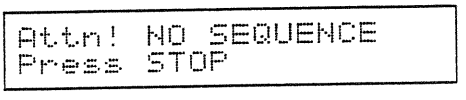
③ Select "SUPER - MRP" and execute.

(Numeric key [2] / Alpha - dial) → [ENTER]

< The startup condition of SUPER - MRP >

◆If there is a Sequence file on the song disk, you will enter the Play condition of Mode 1. Press [PLAY] and playback will begin as specified.

◆If there is no Sequence file on the song disk, the following display will appear.



Press [STOP] to get the mode select display (Mode 2 display). To create sequence data, press [ENTER] (☞P.175).

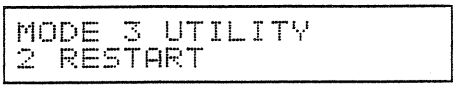
☐ Starting SUPER - MRC from SUPER - MRP (Restart)

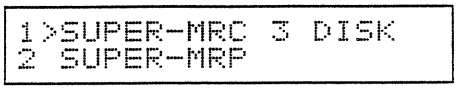
To start SUPER - MRC from SUPER - MRP, use the Restart procedure of Mode 3.

*When you restart, all internal sequence data will be erased. Be sure to save important data to disk before you restart.

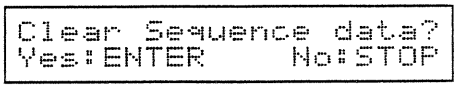
① Move to the Restart display of Mode 3.

Hold [SHIFT] and press [MODE] →
(Numeric key [3] / Alpha dial) → [ENTER] →
(Numeric key [2] / Alpha dial) → [ENTER]





If sequence data exists in internal memory, the display shown at right will appear. Press [ENTER] and all sequence data will be cleared.



② Select "SUPER - MRC" and execute.

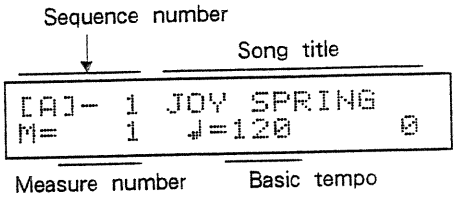
(Numeric key [1] / Alpha - dial) → [ENTER]

Mode 1 : Playback Methods

In Mode 1 you can make sequence file settings, and can playback according to the settings of Mode 2.

☐ Moving to Mode 1 from another mode

Hold [SHIFT] and press [MODE] (move to the Mode select display) → (Alpha - dial / Numeric key [1]) → [ENTER]



* When you move from Mode 2 to Mode 1, the song files of the Bank that was displayed in Mode 2 will automatically be loaded into internal memory.

☐ Song playback

◆When you press [PLAY], the songs will be played back as specified.
When the last song of the Bank, playback will stop. If there is a Pause mark at the beginning of the next Bank, the song files of the next Bank will be loaded.

* If the Pause mark has been turned off, playback will continue immediately after the previous song. If the Interval time is other than 0, the lower right of the display will show a countdown for the Interval time.

◆To use Ring play, hold [SHIFT] and press [PLAY]. During Ring play, Pause marks and Loop marks are ignored, and the Count In mark and Interval time settings will be used.

* Song files are reloaded when a Bank is selected, and this will require some time.

◆If a Loop mark has been set, connect a pedal switch (DP - 2) to the PUNCH IN/OUT jack. The loop area will be repeated endlessly until you press the pedal. If you press the pedal when not in the loop, you will move to the beginning of the loop and begin loop playback.

◆If the Sync Clock (FUNC 1) of the song has been set to "MIDI" or "TAPE", use an external device to control playback. In this case, Ring play cannot be used.

◆If Remote control is turned on, you can control Start/Stop and select songs etc. from an external MIDI device.

* During playback, Song Select and Song Position Pointer messages are not received.

☐ Adjusting the Basic tempo

The Basic tempo can be temporarily adjusted during standby or during playback. However when another song is selected, the Basic tempo of that song will be used.

[◄][►] (move the cursor to tempo) → Alpha - dial (or Numeric keys → [ENTER])

☐ Selecting the sequence number

[◀][▶] (move the cursor to sequence number) → Alpha - dial, or Numeric keys (select Banks: hold [SHIFT] and press a Numeric keys) → [ENTER] (finalize)

< Key functions >

Select the next sequence number (in the same bank)	Hold [SHIFT] and press [SKIP]
Select the previous sequence number (in the same bank)	Hold [SHIFT] and press [RESET]
Select the next Bank	Hold [SHIFT] and press [▶]
Select the previous Bank	Hold [SHIFT] and press [◀]

*When you select a Bank, the song files of the selected Bank will be automatically loaded into the MC - 50.

☐ Moving to another measure

[◀][▶] (move the cursor to measure number) → (Alpha - dial, or Numeric keys → [ENTER])

< Key functions >

Move to the last measure	[SKIP]
Move to the first measure	[RESET]
Move to the next measure	Hold [PAUSE] and press [SKIP]
Move to the previous measure	Hold [PAUSE] and press [RESET]

☐ Other functions

Locate Jump	[LOC] → Numeric keys/Alpha - dial → [ENTER]
Metronome on/off	[FUNC]
Playback tracks on/off	Track keys
Track monitor	[TRACK MONITOR]
MIDI monitor	Press [TRACK MONITOR], then press [MIDI]

*The metronome can be turned on/off regardless of the function setting of each song (FUNC 2). However the metronome on/off setting is temporary, and when another song is selected, the function setting of that song will be used.

☐ Exchanging a different song disk (containing a sequence file)

① Exchange the song disks.

② Hold [SHIFT] and press [LOAD], and the sequence file / song files (Bank A) / configuration file will be loaded into the MC - 50.

Mode 2 : Playback Settings

1. Creating Sequence Data

Song files that are to be loaded together as a unit are called "**Banks**". You can create 26 Banks, arranged in alphabetical order from A to Z. One Bank can specify the order of 32 song files, but if you make the same song file repeat two or more times, a single Bank can specify up to 99 songs. However, the total memory requirements of all song files can not exceed the capacity of internal memory. Also, the total of all song files used in all Banks must be 99 or less.

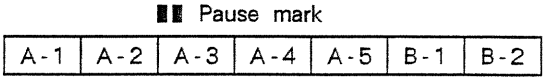
Song files must be arranged in order from sequence number A - 1. Skipping (for example) from A to E, or 1 to 4 is not possible.

< Pause marks >

A Pause mark causes playback to automatically stop when a song file finishes playback. When you assign a song file to a sequence number, a Pause mark will automatically be added. If you wish to playback the song in succession with the previous song, turn off the Pause mark.

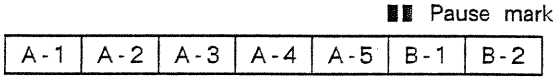
When a Pause mark is added to the first sequence number in a Bank, it acts differently. When the previous Bank finishes playback, the song files of the Bank which was given the Pause mark will be loaded into the MC - 50.

If a Pause mark were added to A - 3



A - 1 → A - 2 → Stop → [PLAY] → A - 3 → A - 4 → A - 5 → Stop

If a Pause mark were added to B - 1



A - 1 → A - 2 → A - 3 → A - 4 → A - 5 → Load → Stop → [PLAY] → B - 1 → B - 2

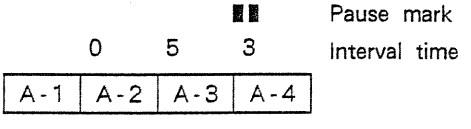
*If Ring play is selected, playback will be continuous, and all Pause marks will be ignored.

< Interval time/Count In mark/Loop mark >

The following will explain the Interval time / Count In mark / Loop mark which can be set for each song.

◆ Interval time: 0—240 seconds

When the Pause mark has been turned off for continuous playback, this specifies the length of time waited before playing back the song. If the Pause mark has not been turned off, this setting has no effect.

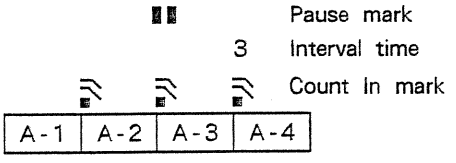


A - 1 → A - 2 → Interval time : 5 → A - 3 → Stop → [PLAY] → A - 4

*If Ring play is selected, playback will ignore Pause marks, so the Interval time setting will apply.

◆ Count In mark

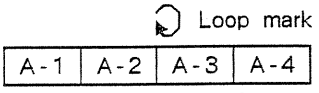
If you add a Count In mark, If you add a Count In mark, the song will be played back after a two-measure metronome count. When playing back in succession with the previous song, the count will begin after the Interval time.



A-1 → Count In → A-2 → Stop → PLAY → Count In → A-3
→ Interval time : 3 → Count In → A-4

◆ Loop mark

If a song has been given a Loop mark, its specified area will playback repeatedly. Control Loop play using a pedal switch connected to the PUNCH IN/OUT jack. Set the loop area in SUPER-MRC (☞ P.69, "FUNC 7: Block Repeat").

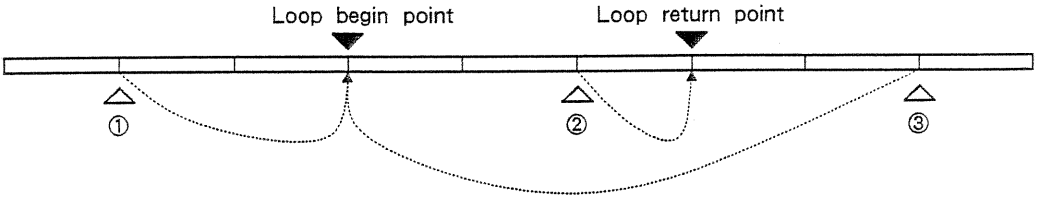


The specified area of song file A-3 will be looped.

*When Ring play is used, Loop marks will be ignored.

< Loop play operation >

When playback of the looping area begins, it will continue looping until you press the pedal. When you press the pedal within the looping area (at location ②), looping will end, and playback will continue from the loop return point.(If the end of the loop is at the end of the song, playback will stop when you press the pedal.) If you press the pedal while outside of the loop area (at locations ① , ③), you will move to the beginning of the loop and begin looping.



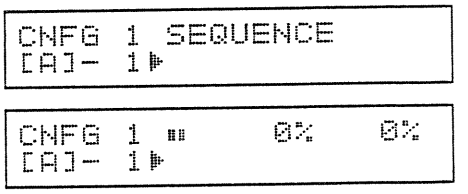
The result of pressing the pedal will depend on the setting of the Stop mode (☞ P.156, "CNFG 1: Locate Mode").

Stop mode	Operation
JUST	Move immediately from the place where you pressed the pedal.
MEAS	Move after playing to the end of the measure where you pressed the pedal.

☐ Creating sequence data

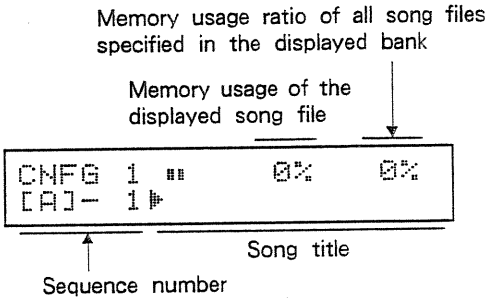
① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select Song files in the order of playback, and make settings as necessary.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)



* If selecting a song file results in more than 100% of the Bank memory being used, assign that song file to the next Bank. (If 100% is exceeded, playback will not be possible.)

To select a new Bank, move the cursor to the sequence number, and with the last sequence number displayed, hold [SHIFT] and press [ENTER].

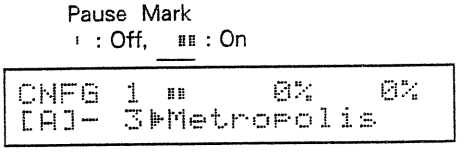
* By holding [SHIFT] and pressing [ENTER] while a sequence number in the middle of the Bank is displayed, you can split/join Banks. For details, refer to the following item.

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀] [▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

Turning off the Pause mark

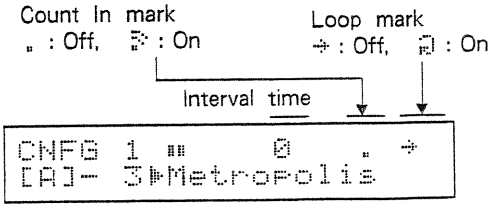
Each time you press [PAUSE], the Pause mark will be turned on/off.
The on/off condition is indicated by the symbol in the upper line of the display. When the Pause mark is turned off, the song will playback in succession with the previous song file.



Inputting Interval time / Count In mark / Loop mark

Press [▶] to select the setting display, and set each item.

Alpha - dial (modify values)
[◀] [▶] (move the cursor)
[ENTER] (finalize all values, and select the next sequence number)



● End the procedure and return to Mode 1.

Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

＊When you select Mode 1, the song files of the Bank displayed in Mode 2 will be loaded into the MC - 50.

＊After playing back in Mode 1 and checking that playback is correct, save the sequence data to the song disk (☞P.182).

2. Splitting and joining Banks

The song files assigned to each Bank can be split or joined at any sequence number. This is useful when you are organizing song files into Banks.

◆ Splitting a Bank

You can split the song files of a Bank at any location. When you split a Bank, subsequent Banks will be moved backward one Bank.

Example : Splitting at A - 4

A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	C-1	C-2

A-1	A-2	A-3	B-1	B-2	C-1	C-2	C-3	D-1	D-2

＊It is not possible to split a Bank at the beginning. Nor is it possible to split a Bank if Banks already exist all the way to Z.

◆ Joining Banks

You can join the song files of two Banks into one Bank. When you join Banks, subsequent Banks will be moved forward one Bank.

Example : Joining at B - 1

A-1	A-2	A-3	B-1	B-2	C-1	C-2	C-3	D-1	D-2

A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	C-1	C-2

＊Joining is not possible unless the first of the Banks is selected. Nor is it possible to join at A - 1.

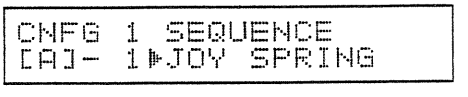
□ Procedure for splitting/joining Banks

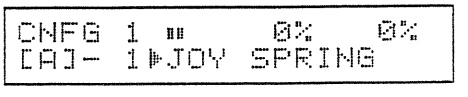
① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →

(Numeric key [2] / Alpha - dial) → [ENTER] →

(Numeric key [1] / Alpha - dial) → [ENTER]





② Select the sequence number at which you wish to split (or join) the Bank.

Alpha - dial, or Numeric key (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◄][►]
	Hold [SHIFT] and press a Numeric key → [ENTER]

③ Execute join (split).

Move the cursor to the sequence number, and hold [SHIFT] and press [ENTER] (alternates each time you press the key).

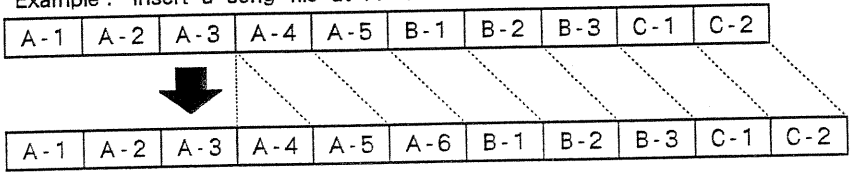
● End the procedure and return to Mode 1.

Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

3. Edit the order of Songs (Insert/Delete)

You can insert song files, or delete unwanted song files. It is also possible to successively insert/delete two or more song files.

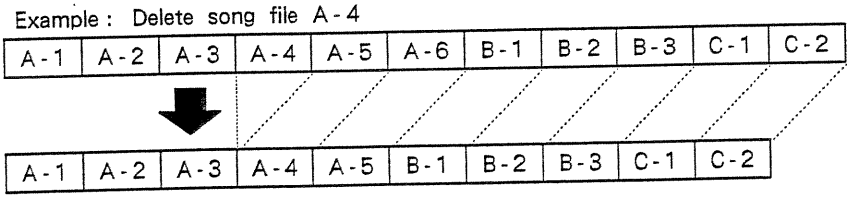
Example : Insert a song file at A-4



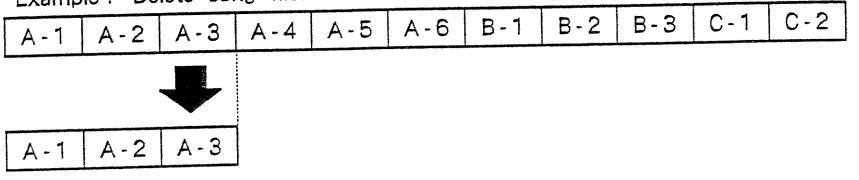
*When you insert a song file, make sure that the total data size of all song files assigned to the Bank does not exceed 100%.

You have two ways to delete; delete only the specified song file, or delete all song files following the specified song file.

Example : Delete song file A-4



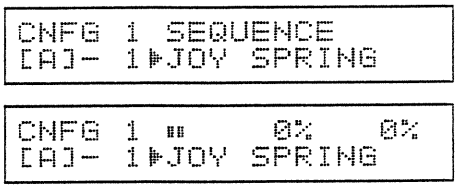
Example : Delete song files A-4 and following



☐ Insert a song file

① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Sequence number at which you wish to insert a song file.

Alpha - dial, or Numeric keys (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

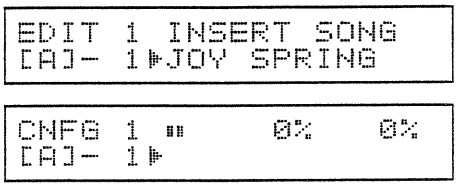
Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

③ Move to Insert mode.

[EDIT] → [1] → [ENTER]

If you are inserting a file at the end of the Bank, or after the displayed sequence number, use the following procedure.

[EDIT] → [1] → Hold [SHIFT] and press [ENTER]



④ Select the Song file you wish to insert, and execute the operation.

Alpha - dial → [ENTER]

When you press [ENTER], you will move to the next sequence number. If you wish to continue inserting other song files, repeat the above procedure.

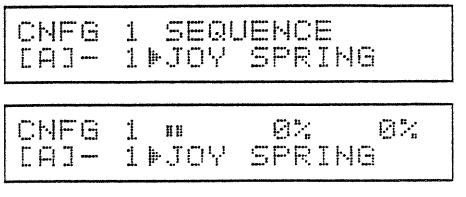
● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

☐ Delete a song file

① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Sequence number from which you wish to delete the song file.

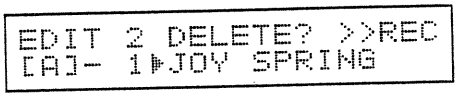
Alpha - dial, or Numeric keys (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

③ Move to Delete mode.

[EDIT] → [2] → [ENTER]



④ Execute the Delete operation.

[REC] (delete the displayed song file)

Hold [RESET] and press [REC] (delete the displayed song file and all following song files)

If you delete by pressing [REC], the song file of the next sequence number will be displayed. If you wish to continue deleting, repeat the above procedure.

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4. Remote Control on/off

The Remote Control function allows you to perform panel operations such as Start/Stop from external MIDI devices. MIDI keyboard controllers such as the A - 50 or A - 80 have Start/Stop control functions. If you wish to use such MIDI devices to control the MC - 50, turn Remote Control on.

The following functions can be remotely controlled.

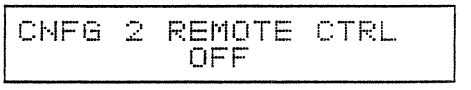
MIDI message		Operation
Realtime messages	Start	Playback from the beginning of the song
	Continue	Playback from the current position in the song
	Stop	Stop playback
Common messages	Song Position Pointer	Specify the current position
	Song Select	Select a sequence number

*Remote Control does not control the tempo, as does synchronization. The method of synchronization will depend on the Sync Clock setting (FUNC 1) of each song.

☐ Remote control settings

① Move to the Remote Control display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]



② Turn Remote control on/off.

(Alpha - dial / Numeric keys) → [ENTER]

● End the procedure and return to Mode 1.

Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

5. Saving and Loading Sequence Data (File)

Sequence data will be lost when you turn the power off. To keep your settings, you must save them to a song disk. Sequence files can be loaded from a song disk into the MC - 50.

＊When you load a sequence file into the MC - 50, the configuration file will also be loaded at the same time.

☐ Saving sequence data

You can save sequence data to a sequence file in the Mode 2 menu display or sequence display.

① Remove the disk, set the protect slider off (WRITE), and re - insert it.

② Execute the Save operation.

Hold [SHIFT] and press [SAVE]

☐ Loading sequence file

You can load a sequence file in the menu display / sequence display of Mode 1 or Mode 2.

① Execute the Load operation.

Hold [SHIFT] and press [LOAD]

APPENDIX

Error Messages

*Unfortunately, it may be impossible to restore the contents of data stored on disk once it has been corrupted. Roland assumes no liability concerning such loss of data.

SUPER - MRC

MODE 1

```
Attn! LACK of LENGTH
Press STOP
```

Reason: Since the length of the song data would exceed the limit, the operation cannot be executed.

Action: Press [STOP]. Make sure you do not exceed the maximum length of song data.

```
Attn! LACK of MEMORY
Press STOP
```

Reason: Due to the large amount of data in the song file, it cannot be loaded into internal memory.

Action: Press [STOP]. Delete unneeded song data from internal memory.

```
Error 4 MEMORY FULL
Press STOP
```

Reason: Internal memory is full, and further recording is not possible.

Action: Press [STOP]. Delete unneeded song data.

```
Attn! BUFFER FULL
Press STOP
```

Reason: A large amount of MIDI messages were received in too short a time to process them.

Action: Press [STOP]. If the Soft Thru setting is on, MIDI message handling will be a bit slower. Either turn Soft Thru off, or widen the interval between the incoming MIDI messages, or reduce the amount of incoming MIDI messages.

```
Attn! MIDI ERROR
Press STOP
```

Reason: The data received from MIDI IN was not a MIDI message, so recording has been stopped.

Action: Press [STOP].

```
Attn! MIDI OFF LINE
Press STOP
```

Reason: The MIDI cable connected to MIDI IN has been disconnected (or broken), so recording has been stopped.

Action: Press [STOP]. Check MIDI cable connections.

MODE 2

```
Attn! LACK of MEMORY
Press STOP
```

Reason: Due to the large amount of data in the song file, it cannot be loaded into internal memory.

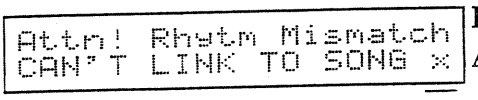
Action: Press [STOP]. If you are loading two or more song files, reduce the number of song files. If internal memory contains unneeded song data, delete that song data.

```
Attn! 2 Versions
SONG x>song title
```

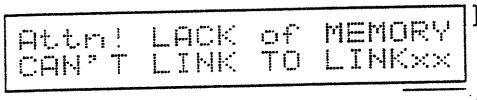
Reason: Song data of the same name already exists.

Action: Modify the Song Title, and press [ENTER].

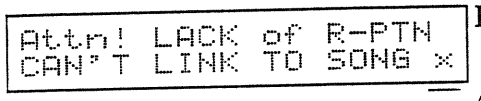
● MODE 3



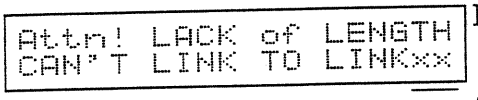
Reason: FUNC 4 and 5 settings are different.
Action: Set the function settings of the displayed song number to be the same as the other songs.



Reason: Linking to or beyond the displayed Link number would exceed the capacity of internal memory.
Action: Reduce the number of songs to be linked.



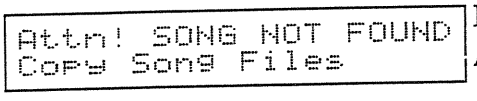
Reason: Linking to or beyond the displayed Link number would exceed 240 Rhythm patterns.
Action: Reduce the types of song data to be linked.



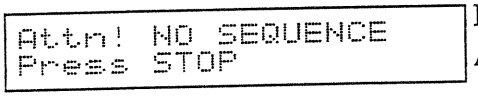
Reason: Linking to or beyond the displayed Link number would exceed the limits of song length.
Action: Reduce the number of songs to be linked.

□ SUPER - MRP

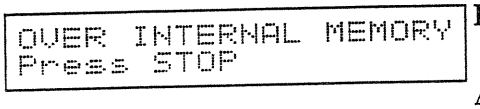
● MODE 1



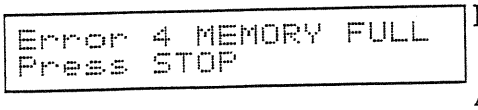
Reason: A song file specified in a sequence file is not on disk.
Action: Press [STOP]. Modify the settings of the sequence file.



Reason: Since there is no sequence data, it is not possible to enter mode 1.
Action: Press [STOP]. Either make sequence data settings, or load a sequence file from disk into internal memory.

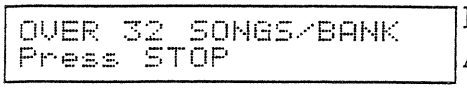


Reason: Due to the large total amount of data in all song files assigned to the Bank, it cannot be loaded into internal memory.
Action: Press [STOP]. Make settings so that the songs in the Bank use less than 100% of memory.

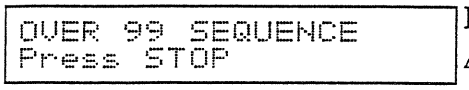


Reason: A song file has been modified to increase the amount of data after setting a song file, and cannot be processed.
Action: Press [STOP]. Make settings and try again.

● MODE 2

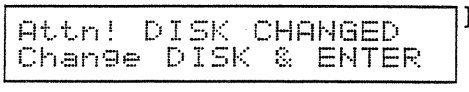


Reason: A single bank contains more than 32 song files.
Action: Press [STOP].

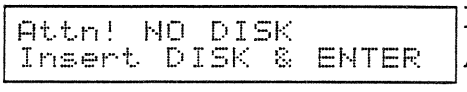


Reason: There are more than 99 song files total for all Banks.
Action: Press [STOP].

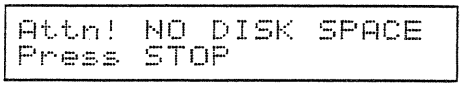
☐ Common to both SUPER-MRC/SUPER-MRP



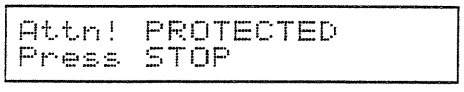
Reason: Since you exchanged the disk during the procedure, processing cannot be continued.
Action: Insert the previous disk, and press [ENTER].



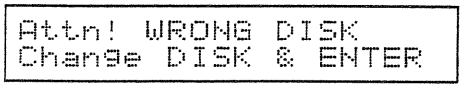
Reason: No disk is inserted.
Action: Insert a disk, and press [ENTER].



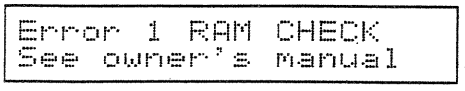
Reason: Since the amount of song data is greater than the available space on disk, it cannot be saved to disk.
Action: Press [STOP]. Either delete unneeded song files, or insert another song disk



Reason: The protect tab of the disk is On (PROTECT position).
Action: Press [STOP]. Set the protect tab of the disk Off (WRITE position).



Reason: The disk has not been initialized.
Action: Press [STOP]. Either initialize the disk, or insert another song disk.



Reason: The MC - 50 has malfunctioned.
Action: Contact your nearby Roland service station, or the dealer where you purchased the MC - 50.

Reason: Since the system disk has been damaged (scratched, etc.), it is not possible to start up the system. Or, the disk is new (i.e., not a system disk).
Action: Damaged disks cannot be used. Insert another system disk.

```
Error12 DISK I/O
See owner's manual
```

Reason 1: A new disk is inserted.

Action 1 : Initialize the disk on the MC - 50MK II.

```
Error22 DISK I/O
See owner's manual
```

Reason 2: A 2HD disk is inserted.

Action 2 : The MC - 50MK II uses only 2DD disks. It cannot use 2HD disks.

```
Error32 DISK I/O
See owner's manual
```

Reason 3: It is possible that the song data has been damaged, or that the disk drive is malfunctioning.

Action 3 : Insert a different song disk (that does not contain important data) and try the same operation once again. If the operation is successful, the problem is with the disk that produced the error message. Avoid using that disk. If the same message is displayed even when a different disk is inserted, it is possible that the disk drive is malfunctioning. If the disk drive is malfunctioning, it can damage disks. Contact a nearby Roland service station or your dealer.

```
Error99 DISK I/O xxx
See owner's manual
```

Reason: Disk access (reading/writing) was unsuccessful.

Action : Press [STOP]. Contact a Roland service center, giving the number in the upper right of the display, and explaining the details of your situation.

```
Not MC's SYSTEM DISK
See owner's manual!
```

Reason: The disk is not an MC - series system disk.

Action : Insert the proper disk.

Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV) :

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

MIDI status : F0H, F7H

An exclusive message must be flanked by a pair of status codes, starting with a Manufacturer-ID immediately after F0H (MIDI version1.0).

Manufacturer-ID : 41H

The Manufacturer-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufacturer-ID.

Device-ID : DEV

The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H—0FH, a value smaller by one than that of a basic channel, but value 00H—1FH may be used for a device with multiple basic channels.

Model-ID : MDL

The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model-IDs, each representing a unique model :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command-ID : CMD

The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command-IDs, each representing a unique function :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Main data : BODY

This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

2. Address-mapped Data Transfer

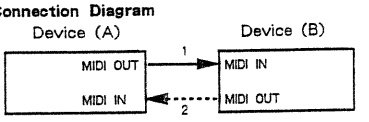
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records–waveform and tone data, switch status, and parameters, for example–to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

One-way transfer procedure (See Section 3 for details.)

This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

Connection Diagram

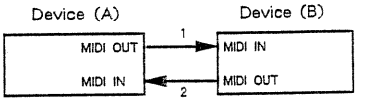


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake-transfer procedure (See Section 4 for details.)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures

*There are separate Command-IDs for different transfer procedures.
*Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data all the way until it stops and is used when the messages are so short that answerbacks need not be checked. For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

Request data # 1 : RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

*The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set 1 : DT1 (12H)

This message corresponds to the actual data transfer process. Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more data as well as a series of data formatted in an address- dependent order.

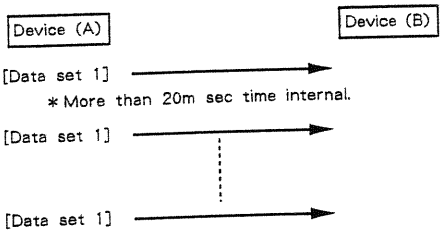
The MIDI standards inhibit non-real time messages from interrupting an exclusive one. This fact is inconvenient for the devices that support a "soft-through" mechanism. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate segments.

Byte	Description
F0H	Exclusive
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ddH	Data
⋮	⋮
sum	Check sum
F7H	End of exclusive

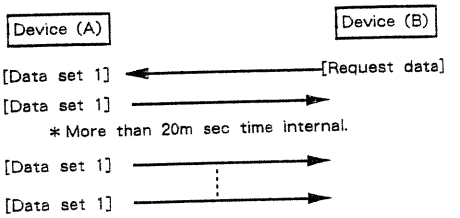
*A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The number of bytes comprising address data varies from one Model-ID to another.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Example of Message Transactions

●Device A sending data to Device B
Transfer of a DT1 message is all that takes place.



●Device B requesting data from Device A
Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.



4. Handshake-Transfer Procedure

Handshaking is an interactive process where two devices exchange error checking signals before a message transaction takes place, thereby increasing data reliability. Unlike one-way transfer that inserts a pause between message transactions, handshake transfer allows much speedier transactions because data transfer starts once the receiving device returns a ready signal.

When it comes to handling large amounts of data–sampler waveforms and synthesizer tones over the entire range, for example–across a MIDI interface, handshaking transfer is more efficient than one-way transfer.

Types of Messages

Message	Command ID
Want to send data	WSD (40H)
Request data	RQD (41H)
Data set	DAT (42H)
Acknowledge	ACK (43H)
End of data	EOD (45H)
Communication error	ERR (4EH)
Rejection	RJC (4FH)

Want to send data : WSD (40H)

This message is sent out when data must be sent to a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of the data to be sent.

On receiving a WSD message, the remote device checks its memory for the specified data address and size which will satisfy the request. If it finds them and is ready for communication, the device will return an "Acknowledge (ACK)" message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
40H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

Otherwise, it will return a "Rejection (RJC)" message.
*The size of the data to be sent does not indicate the number of bytes that make up a "Data set (DAT)" message, but represents the address fields where the data should reside.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Request data : RQD (41H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQD message, the remote device checks its memory for the data address and size which satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set (DAT)" message, which contains the requested data. Otherwise, it will return a "Rejection (RJC)" message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
41H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

* The size of the requested data does not indicate the number of bytes that make up a "Data set (DAT)" message, but represents the address fields where the requested data resides.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
* The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set : DAT (42H)

This message corresponds to the actual data transfer process.
Because every byte in the data is assigned a unique address, the message can convey the starting address of one or more data as well as a series of data formatted in an address-dependent order.

Although the MIDI standards inhibit non-real time messages from interrupting an exclusive one, some devices support a "soft-through" mechanism for such interrupts. To maintain compatibility with such devices, Roland has limited the DAT to 256 bytes so that an excessively long message is sent out in separate segments.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
42H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ddH	Data
⋮	⋮
sum	Check sum
F7H	End of exclusive

* A DAT message is capable of providing only the valid data among those specified by an RQD or WSD message.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
* The number of bytes comprising address data varies from one model ID to another.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Acknowledge : ACK (43H)

This message is sent out when no error was detected on reception of a WSD, DAT, "End of data (EOD)", or some other message and a requested setup or action is complete. Unless it receives an ACK message, the device at the other end will not proceed to the next operation.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
43H	Command ID
F7H	End of exclusive

End of data : EOD (45H)

This message is sent out to inform a remote device of the end of a message. Communication, however, will not come to an end unless the remote device returns an ACK message even though an EOD message was transmitted.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
45H	Command ID
F7H	End of exclusive

Communications error : ERR (4EH)

This message warns the remote device of a communications fault encountered during message transmission due, for example, to a checksum error. An ERR message may be replaced with a "Rejection (RJC)" one, which terminates the current message transaction in midstream.

When it receives an ERR message, the sending device may either attempt to send out the last message a second time or terminate communication by sending out an RJC message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
4EH	Command ID
F7H	End of exclusive

Rejection : RJC (4FH)

This message is sent out when there is a need to terminate communication by overriding the current message. An RJC message will be triggered when:

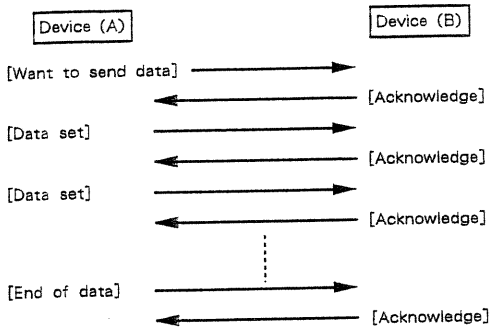
- a WSD or RQD message has specified an illegal data address or size.
- the device is not ready for communication.
- an illegal number of addresses or data has been detected.
- data transfer has been terminated by an operator.
- a communications error has occurred.

An ERR message may be sent out by a device on either side of the interface. Communication must be terminated immediately when either side triggers an ERR message.

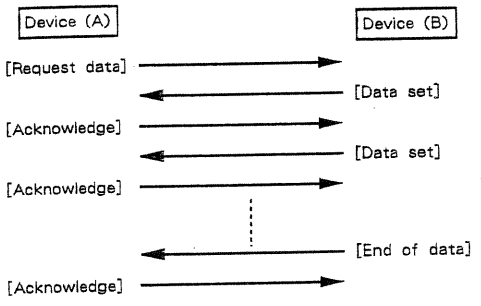
Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
4FH	Command ID
F7H	End of exclusive

Example of Message Transactions

● Data transfer from device (A) to device (B).

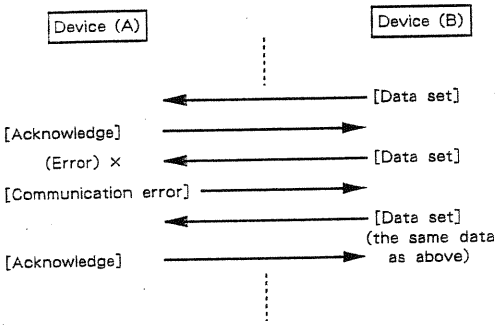


● Device (A) requests and receives data from device (B).

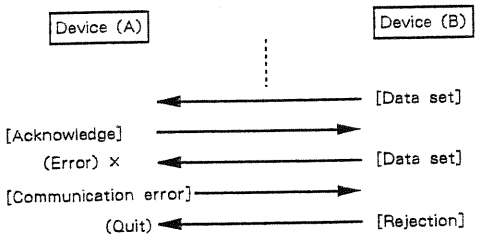


● Error occurs while device (A) is receiving data from device (B).

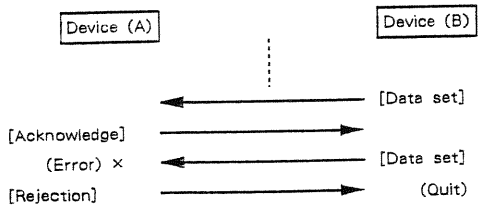
1) Data transfer from device (A) to device (B).



2) Device (B) rejects the data re – transmitied, and quits data transfer.



3) Device (A) immediately quits data transfer.



Model MC-50

MIDI Implementation

Version : 1.00

1. RECOGNIZED RECEIVE DATA (SUPER-MRC System)

1.1 Messages memorized in RECORD mode

■Channel Voice Message

●Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Velocity : 00H—7FH (0—127)

*8n kk vv is memorized as 9n kk 00.

●Note on

Status	Second	Third
9nH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Velocity : 01H—7FH (1—127)

●Polyphonic key pressure

Status	Second	Third
AnH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Value : 00H—7FH (0—127)

*Received and memorized when PAf in MIDI 2 RCV STATUS is ON.

●Control change

Status	Second	Third
BnH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Control number : 00H—78H (0—120)
vv = Value : 00H—7FH (0—127)

*Received and memorized when CCa (control number 0—63) and CCb (control number 64—120) in MIDI 2 RCV STATUS are ON.

●Program change

Status	Second
CnH	ppH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
pp = Program number : 00H—7FH (0—127)

*Received and memorized when PG in MIDI 2 RCV STATUS is ON.

●Channel pressure

Status	Second
DnH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
vv = Value : 00H—7FH (0—127)

*Received and memorized when CAf in MIDI 2 RCV STATUS is ON.

●Pitch bend change

Status	Second	Third
EnH	mmH	llH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
mm,ll = Value : 00H,00H—7FH,7FH 0—16383 (−8192—+8191)

*Received and memorized when PB in MIDI 2 RCV STATUS is ON.

■Channel Mode Message

●Local ON/OFF

Status	Second	Third
BnH	7AH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
vv = Value : 00H—7FH (0—127)

*Received and memorized as specified in CCb.

■System Exclusive Message

Status	data
F0H	iiH,ddH, ····,eeH
F7H	

F0 : System Exclusive
ii = ID number : 00H—7FH (0—127)
dd, ····,ee = data : 00H—7FH (0—127)
F7 : EOX (End of Exclusive/System common)

*Received and memorized when EX in MIDI 2 RCV STATUS is ON. The number of data bytes varies according to the setting of THRU (Soft THRU) in MIDI 3 XMT CONDITION.

■System Common Message

●Tune request

Status
F6H

1.2 Messages not memorized in RECORD mode

■Channel Mode Message

●Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*When MC-50 receives this message, it produces and memorized Note off message for notes remains on.

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●OMNI ON

Status	Second	Third
BnH	7DH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●MONO

Status	Second	Third
BnH	7EH	mmH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

1.3 Recognized messages for sync

Recognized when FUNC 1 SYNC CLOCK is MIDI.

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

mm,ll = Value : 00H,00H—7FH,7FH 0—16383

*Received when SUPER – MRC is in standby mode.

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—7FH 0—127

*Received when SUPER-MRC is in standby mode.

■System Realtime Message

●Timing clock

Status
F8H

●Start

Status
FAH

●Continue

Status
FBH

●Stop

Status
FCH

1.4 Messages received for detecting trouble in MIDI connection

■System Realtime Message

●Active sensing

Status
FEH

*Having received Active Sensing, SUPER – MRC automatically terminates recording if a MIDI message is not followed by a MIDI message within about 420 ms.

2. TRANSMITTED DATA (SUPER-MRC System)

2.1 Transmitted messages in playback mode

The stored messages are transmitted when song data is played back.

2.2 Tansmitted messages which are received

When THRU (Soft THRU) is set in MIDI 3 XMT CONDITION, SUPER-MRC transmits received message (except All Notes Off, System Common Messages and System Realtime Messages).The following messages can be selectively set to ON or OFF.

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted when all notes are turned off in a specific channel.

2.3 Created message

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

Transmitted when all notes are turned off in a specific channel.

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

■System Realtime Message

●Active sensing

Status
FEH

*Transmitted when ActS in MIDI 3 XMT CONDITION is ON.

2.4 Created messages for sync

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

mm,ll = Value : 00H,00H—7FH,7FH 0—16383

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—7FH 0—127

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

■System Realtime Message

●Timing clock

Status
F8H

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Start

Status
FAH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Continue

Status
FBH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Stop

Status
FCH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

2.5 Messages generated upon execution of a function

2.5.1 Messages generated upon execution of UTIL 8

■Channel Voice Message

●Note off

Status	Second	Third
9nH	45H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●Note on

Status	Second	Third
9nH	45H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

■System Common Message

●Tune request

Status
F6H

2.5.2 Generated upon execution of [STOP] + [MIDI]

■Channel Voice Message

●Control change

Status	Second	Third
BnH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Control number : 01H,40H (1, 64)

*Transmitted over all channels.

●Channel pressure

Status	Second
DnH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●Pitch bend change

Status	Second	Third
EnH	00H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

■Channel Mode Message

●Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

3. RECOGNIZED RECEIVE DATA (SUPER-MRP System)

3.1 Recognized only

■ Channel Mode Message

● All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*When SUPER-MRP receives this message, it produces Note off message for received notes remains on.

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

● OMNI ON

Status	Second	Third
BnH	7DH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

● MONO

Status	Second	Third
BnH	7EH	mmH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
mm = Number of MIDI channel : 00H—0FH (0—15)

* Recognized only as All Notes off.

● POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

3.2 Recognized messages for sync

Recognized when SYNC CLOCK (FUNC 1 in the song file) is MIDI.

■ System Common Message

● Song position pointer

Status	Second	Third
F2H	mmH	llH

ll, mm = Value : 00H, 00H—7FH, 7FH 0—16383

*Only received when SUPER-MRP is in standby mode.
*Received REMOTE (CONFIG 2) is ON.

● Song select

Status	Second
F3H	ssH

ss = Value : 00H—62H 0—98

*Only received when SUPER—MRP is in standby mode.
*Received REMOTE (CONFIG 2) is ON.

■ System Realtime Message

● Timing clock

Status
F8H

● Start

Status
FAH

*Received REMOTE (CONFIG 2) is ON.

● Continue

Status
FBH

*Received REMOTE (CONFIG 2) is ON.

● Stop

Status
FCH

*Received REMOTE (CONFIG 2) is ON.

3.3 Message received for detecting trouble in MIDI connection

■ System Realtime Message

● Active sensing

Status
FEH

4. TRANSMITTED DATA (SUPER-MRP System)

4.1 Transmitted messages in playback mode

The stored messages are transmitted when song data is played back.

4.2 Transmitted messages which are received

When THRU (Soft THRU) is set in the system configuration file, SUPER-MRP transmits received message (except System Common Message and System Realtime Message).

4.3 Created message

■ Channel Mode Message

● All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted when all notes are turned off in a specific channel.
*This message can be selectively set to ON or OFF (MIDI 3 AOff in the system configuration file).

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

● POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

■ System Realtime Message

● Active sensing

Status
FEH

*Transmitted when MIDI 3 ActS (in the system cofiguration file) is ON.

4.4 Created messages for sync

Transmitted when MIDI 3 CLK (in the system configuration file) is ON.

■ System Common Message

● Song position pointer

Status	Second	Third
F2H	mmH	llH

ll, mm = Value : 00H, 00H—7FH, 7FH 0—16383

● Song select

Status	Second
F3H	ssH

ss = Value : 00H—62H 0—98

■ System Realtime Message

● Timing clock

Status
F8H

● Start

Status
FAH

● Continue

Status
FBH

● Stop

Status
FCH

4.5 Genaration upon execution of [STOP] + [MIDI]

■ Channel Voice Message

● Control change

Status	Second	Third
BnH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = control number : 01H, 40H (1, 64)

*Transmitted all over channels.

● Channel pressure

Status	Second
DnH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

● Pitch bend change

Status	Second	Third
EnH	00H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

■ Channel Mode Message

● Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

● All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

Model MC-50

MIDI Implementation Chart

Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	All Ch	All Ch	not BASIC ch
	Changed	×	1 – 16 each	
Mode	Default	Mode 3	×	＊2
	Messages	OMNI OFF, POLY	×	
	Altered	＊＊＊＊＊＊＊＊＊		
Note Number		0 – 127	0—127	
	True Voice	＊＊＊＊＊＊＊＊＊	0—127	
Velocity	Note ON	○	○	
	Note OFF	× 9n v = 0	×	
After Touch	Key's	○	＊1	
	Ch's	○	＊1	
Pitch Bender		○	＊1	
Control Change	0—63	○	＊1	
	64—120	○	＊1	
	121	○	×	
Prog Change		○	＊1	
	True #	＊＊＊＊＊＊＊＊＊	0 – 127	
System Exclusive		○	＊1	
System Common	Song Pos	＊1	○ (SYNC = MIDI)	
	Song Sel	＊1	○ (SYNC = MIDI)	
	Tune	○	×	
System Real Time	Clock	＊1	○ (SYNC = MIDI)	
	Commands	＊1	○ (SYNC = MIDI)	
Aux Message	Local ON/OFF	○	＊1	
	All Notes OFF	＊1 (123)	○ (123 – 127)	
	Active Sense	＊1	○	
	Reset	×	×	
Notes		＊1 Can be set to ○ or × manually. ＊2 When SUPER-MRC is first booted up, OMNI OFF, POLY ON are sent for all channels (1—16).		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

○ : Yes
× : No

Model MC-50

MIDI Implementation Chart

Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	All Ch	×	not BASIC ch
	Changed	×	×	
Mode	Default	Mode 3	×	
	Messages	OMNI OFF, POLY	×	* 2
	Altered	*********		
Note Number		0 – 127	×	
	True Voice	*********	×	
Velocity	Note ON	○	×	
	Note OFF	× 9n v = 0	×	
After Touch	Key's	○	×	
	Ch's	○	×	
Pitch Bender		○	×	
Control Change	0—120	○	×	
	121	○	×	
Prog Change		○	×	
	True #	*********	×	
System Exclusive		○	×	
System Common	Song Pos	* 1	○ (SYNC = MIDI or REMOTE = ON)	
	Song Sel	* 1	○ (SYNC = MIDI or REMOTE = ON)	
	Tune	○	×	
System Real Time	Clock	* 1	○ (SYNC = MIDI)	
	Commands	* 1	○ (SYNC = MIDI or REMOTE = ON)	
Aux Message	Local ON/OFF	○	×	
	All Notes OFF	* 1 (123)	○ (123—127)	
	Active Sense	* 1	○	
	Reset	×	×	
Notes		* 1 Can be set to ○ or × by system configuration file. * 2 When SUPER-MRP is first booted up, OMNI OFF, POLY ON are sent for all channels (1—16).		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : No

How to read a MIDI Implementation Chart

○ : MIDI messages that can be transmitted or received.
× : MIDI messages that cannot be transmitted or received.

● Basic Channel

These are the Transmit (Receive) channels when the power is turned on, and the range of channel numbers that can be used. The MC-50 handles messages of all MIDI channels in the same way, and has no real basic channel.

● Mode

Most recent keyboards use mode 3 (omni off, poly).
Receive : Only the MIDI messages of the specified MIDI channel will be received, and will be played polyphonically.
Transmit : MIDI messages will be transmitted on the specified MIDI channel.

* "Mode" refers to MIDI Mode messages.

● Note Number

This is the range of note numbers that can be transmitted (or received). Note number 60 is middle C (C4).

● Velocity

This is the range over which velocity can be transmitted (or received) by Note On and Note Off messages.

● Aftertouch

Key's : Polyphonic Aftertouch
Ch's : Channel Aftertouch

● Control Change

These are the control numbers which can be transmitted (received). The control functions will differ for each type of MIDI device.

● Program Change

The listed program numbers are the numbers of the data, and are one less than the program numbers displayed in Microscope mode.

● Common, Realtime

Tune is a Tune Request message that tells MIDI sound modules to tune themselves to standard pitch. Other MIDI messages in this category are used to synchronize sequencers, etc.

● Aux Messages

Mainly, these messages are of the type used to prevent problems, such as Active Sensing (Checks whether MIDI cable is in proper condition or not) ; and All Notes Off (Message which terminates the sounding of all notes).

Specifications

MC-50: Micro Composer

☐ Hardware

● Memory capacity
256 Kbytes (RAM)
512 Kbytes (ROM)

● Disk drive
Micro floppy disk (3.5 inch, 2DD), built - in

● Display
LCD type (20 character × 2 lines, with backlight)

● Terminals
MIDI connectors (IN / OUT × 2 / THRU)
Start/Stop jack
Punch in/out jack
Metronome output jack
Tape sync II jack (RCA pin)
Input level ····· − 20—0 dBm
Input impedance ····· 50 k ohm
Output level ····· − 10 dBm (50 k ohm load)
Output impedance ····· less than 1 k ohm
(0 dBm = 0.775 V rms)

● Dimensions
280 (W) × 271 (D) × 47 (H) mm
11 (W) × 10 - 11/16 (D) × 1 - 7/8 (H) inches

● Weight
1.8 kg / 3 lb. 15 oz.

● Current Rating
800 mA

☐ SUPER-MRC / SUPER-MRP

● Tracks
Phrase Tracks (16 MIDI channels per track) ····· 8
Rhythm Track (Rhythm Pattern combination type) ····· 1
Tempo Track ····· 1

● Song data (internal memory capacity)
Songs ····· 8
Note capacity ····· approx. 40,000 notes
Song length ····· 9999 measures, or quarter note × 87381
Number of rhythm
instruments ····· 32 (independent MIDI channels)
Number of Rhythm patterns ····· 240 (per song)

● Resolution
Phrase Tracks ····· 96 clocks / quarter note
Rhythm Pattern ····· 32nd note (independent instruments)

● Data input method
Realtime / Step

● Maximum simultaneous input notes (during realtime recording)
64 notes

● Maximum simultaneous output notes
64 notes / track

● Tempo
10—250 (Basic Tempo)
5—500 (Tempo Track)

● Time signatures
1—32/16, 1—32/8, 1—32/4, 1—32/2

● Sequence data
Banks ····· 26 (A—Z)
Number of song files ····· 99 (32 per Bank)

☐ Disk

Disk capacity ····· 720 Kbyte
Song files ····· 108
Note storage ····· approx. 150,000 notes
Configuration file ····· 1
Sequence file ····· 1

☐ Accessories

Manual I (USER'S GUIDE), II (REFERENCE)
AC Adaptor (ACI - 120 (117V), ACI - 220 (220V),
ACB - 240E / 240A(240V))
Micro floppy disk (3.5 inch, 2DD)
MIDI cable (1.0 m)

* The included MIDI cable is only for MIDI. It cannot be used for other purposes.

☐ Options

Micro floppy disk (3.5 inch, 2DD) ····· MF - 2DD
Pedal switch ····· DP - 2, BOSS FS - 5U

* In the interest of product improvement, the specifications of this unit are subject to change without prior notice.

Index

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R

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Roland Corporation

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