



For Germany

## Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

**ROLAND MICRO COMPOSER MC-50**

(Gerät. Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

**Amtsbl. Vfg 1046/1984**

(Amtsblattverfügung)

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**Roland Corporation Osaka/Japan**

Name des Herstellers/Importeurs

For the USA

## FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.  
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

### CLASS B

### NOTICE

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

### CLASSE B

### AVIS

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

# CONTENTS

## □ Introduction

Thank you for purchasing the Roland MC - 50 Micro Composer. In order to take full advantage of the MC - 50 and enjoy long and trouble-free use, please read these manuals ( I and II ) carefully.

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# FEATURES

SUPER - MRC is the advanced sequencing software used by the world - famous MC - 500mk II and MC series sequencers. Songs you create using SUPER - MRC can be connected in a specified order of performance by using the SUPER - MRP performance software, allowing you to automate your live performances. The MC - 50 includes both these software programs in its internal memory, and can start up either program as soon as the power is turned on. (Normally, SUPER - MRC will be started.) In addition, software (MRB - 500, etc., sold separately) for previous models of the MC series can also be used, allowing you to extend functionality by software upgrades.

The simple external design and high cost - effectiveness of the MC - 50 brings professional high - performance high - capacity sequencing even closer.

## **SUPER - MRC (recording system)**

SUPER - MRC is a software program that lets you create and play-back performance data.

Two methods of recording are provided; Realtime Recording to capture your performance just as you play, and Step Recording which allows you to enter musical data one step at a time. A wide variety of editing functions are provided, allowing you to make detailed corrections and edits to the recorded data, to bring your composition to perfection.

- Memory capacity is approximately 40,000 notes in internal memory, and approximately 150,000 notes on disk. A single song can contain up to 9999 measures, and internal memory can contain 8 songs.
- Each of the Phrase Tracks can store musical data of all MIDI channels. (When compared with other sequencers that are able to store only one channel per track, each track of the MC - 50 is equivalent to a 16 - track sequencer.) The MC - 50 has 8 of these Phrase Tracks, for a total of 128 tracks of MIDI messages.
- The Quantize function lets you specify a percentage by which to correct the timing of data recorded in realtime. This allows you to tighten up the time while preserving the natural human feel of realtime recording.
- The Microscope editing function lets you perform step input or continuous editing for individual steps. In addition, you can use step input to input just the note pitches, and then use an external keyboard for realtime input of the gate time and note - on timing.
- Up to 240 Rhythm Patterns can be combined into a Rhythm Track for a song. Patterns can be created by realtime input from a MIDI pad or MIDI keyboard, and you can even quantize each rhythm instrument independently. Level can be adjusted over 8 steps for each note (you can freely specify each level over 127 steps), and Resolution can be specified as finely as a 32nd note. Since you can specify a MIDI channel independently for each rhythm instrument, you can use two or more MIDI rhythm sound modules to play the rhythm sounds.
- The Tempo Track can be input not only from the MC - 50's Alpha - dial or numeric keys, but also input in realtime using the bender, wheel, or keyboard of an external MIDI keyboard, for very flexible tempo control.
- The MC - 50 features two independent MIDI OUT connectors. Since you can specify the MIDI OUT used by each track, you can simultaneously control 16 channels × 2 MIDI OUTs, for a maximum of 32 MIDI sound modules controlled independently.

- Also provided are a Track Monitor function which lets you check the data being transmitted from each track, and a MIDI Monitor function which lets you check the data being received at MIDI IN.
- You can specify Locate Points in a song (a total of 10 locations, with two locations automatically set to the beginning and end of the recording), and move instantly to a desired Locate Point. Each point can be given a name such as "Intro".
- Functions are also provided to copy between songs in internal memory, and combine two or more songs into a single song.
- Data created by the MRC - 500/300 can be converted and loaded into the MC - 50.
- The Time Calculation function lets you check the total time of the song, or the time between specified points, while automatically taking into account any tempo changes.
- The MC - 50 is able to synchronize to MIDI clock messages from other sequencers or rhythm machines, and also features a Tape Sync interface for synchronized playback with a multitrack tape recorder (MTR). Since the MC - 50's tape sync includes data that indicates the absolute position, you can continue synchronizing even after stopping and restarting the MTR.
- System Configuration data can be stored on disk to automatically recall settings such as MIDI soft thru on/off, or to automatically load songs from disk.

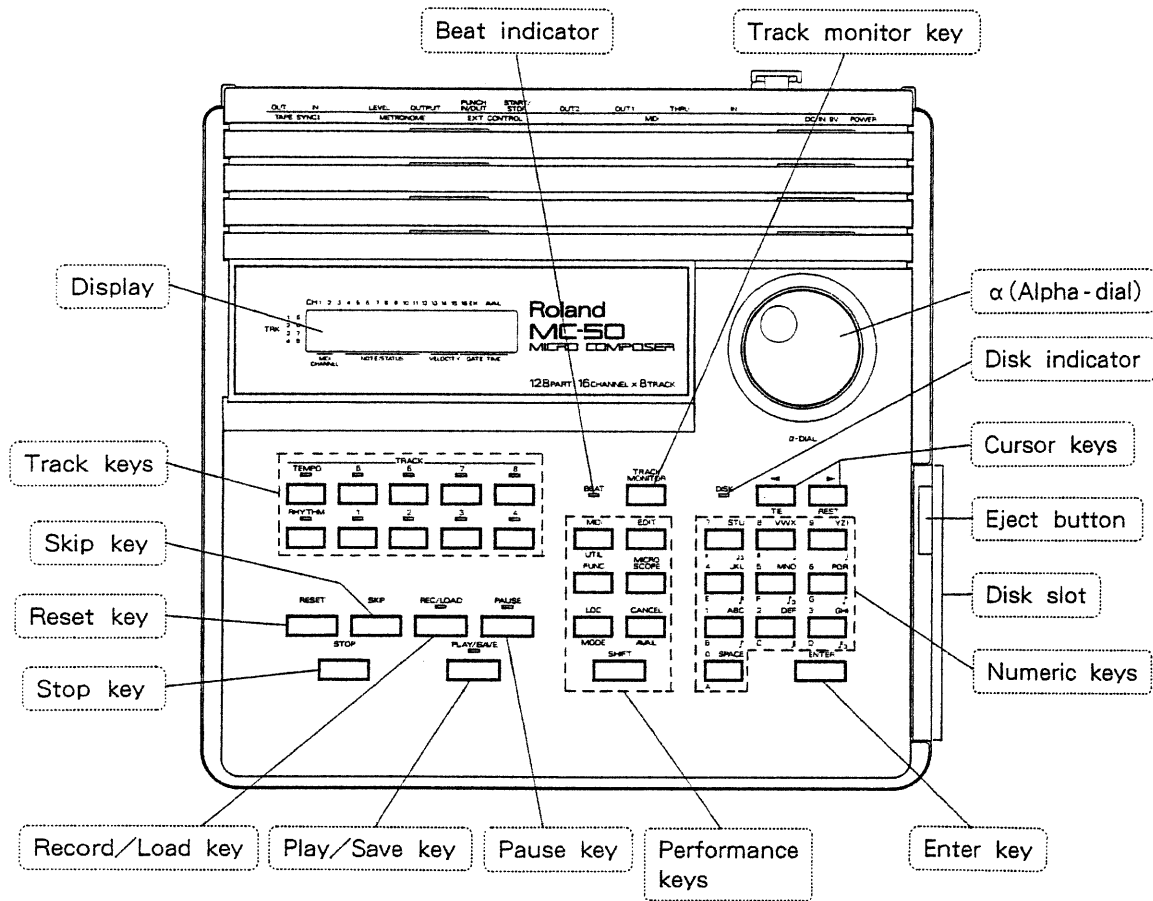
## **SUPER - MRP (performance system)**

SUPER - MRP is a software program that lets you specify the order in which song data created using SUPER - MRC will be played back. Up to 99 songs can be played back in succession, and you can also specify repeat playback. By storing the order of songs on a floppy disk, you can start continuous playback simply by pressing the MC - 50 play button (or by pressing a connected foot switch).

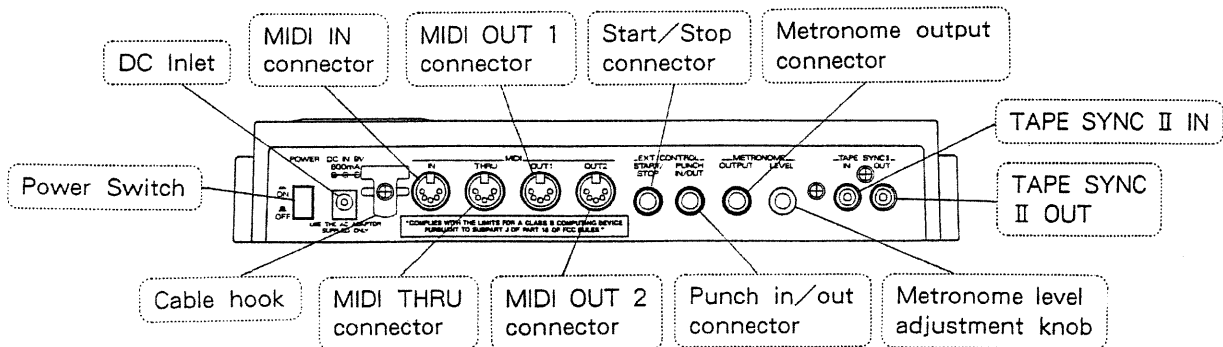
- A time interval between each song can be specified.
- Songs can be deleted or inserted.
- Each track being played can be muted.
- You can locate to specified songs or measures.
- SUPER - MRC MIDI settings such as Bulk (exclusive data for synthesizers, etc.), Transmit Channel, Clock, Soft Thru, and Sync can be used.

# FRONT AND REAR PANELS

## < Front panel >



## < Rear panel >



# ■ PRECAUTIONS

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Please use only the included AC adaptor. Using other AC adaptors can result in faulty operation and malfunctions.

\* 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.

## Power supply \_\_\_\_\_

- When the power is turned off, the contents of internal memory will be lost, and cannot be recalled. Be careful not to accidentally turn the power switch off, or pull out the power cable. Be sure to save important data regularly.
- Avoid connecting the MC - 50 to an AC outlet shared by devices which generate noise (motors, lighting dimmers, etc.) or devices which consume a large amount of power.
- Be sure to plug the AC adaptor into an AC outlet of the correct voltage.
- Do not place heavy objects on the power cable, or allow it to be stepped on.
- When unplugging the AC adaptor from the AC outlet, always grasp the plug, not the cable, to avoid breaking the power cable or causing a short circuit.
- If you will not be using the unit for a long period of time, unplug the AC adaptor from the AC outlet.

## Location \_\_\_\_\_

- Place the MC - 50 in as level a position as possible. If placed at an extreme angle, the disk drive may not function correctly. The permissible range of angles is 20 degrees upward and 0 degrees downward.
- Using or storing the MC - 50 in the following locations may result in malfunctions.
  - Locations of high temperature (in direct sunlight, near heating equipment, or on top of equipment which generates heat).
  - Nearby water vapor (bathrooms, wash stands, damp walls) or locations of high humidity.
  - Dusty locations.
  - Locations of heavy vibration.
- Operating the MC - 50 nearby a television or radio may cause interference such as blurred screen colors or radio static. In such cases, locate the MC - 50 at a greater distance.
- Do not subject the MC - 50 to strong shocks, and avoid moving the unit while it is operating.

## Care \_\_\_\_\_

- Wipe the unit with a soft dry cloth, or use a tightly - wrung damp cloth to remove dirt and then wipe with a dry cloth.
- Never use solvents such as benzine, thinner, or alcohol, since these will cause deformation or discolor the finish.

## Other \_\_\_\_\_

- Do not allow foreign material (coins, pins, etc.) or liquids (water, soft drinks, alcohol, etc.) to enter the unit.
- Do not press hard on or strike the display. During operation, you may notice some sound coming from the display, but this is not a malfunction.
- Before using the MC - 50 in a foreign country, consult your local Roland service station.
- If the MC - 50 begins performing abnormally or you notice anything out of the ordinary, immediately cease use and consult the dealer where you purchased the unit or a Roland service station.

## Floppy disk handling \_\_\_\_\_

- Floppy disks are very delicate. Observe the following precautions.
  - Do not touch the magnetic surface.
  - Do not bend floppy disks or place objects on top of them.
  - Do not store floppy disks in dusty locations.
  - Do not place floppy disks in direct sunlight, near heaters, or in closed automobiles.
  - Do not allow floppy disks to come near strong magnetic fields such as those produced by magnets or speakers.
- Floppy disks have a write protect slider to prevent data from accidentally being erased. Leave the protect slider in the Protect position unless you are writing data to the floppy disk.
- Before turning the power on or off, remove the floppy disk from the disk drive.
- Never attempt to remove the floppy disk when the disk drive is operating (when the indicator is lit). Doing so can damage the disk, destroying the data and making the disk unusable.
- As a precaution against accidents, make backup copies of valuable disks.
- When attaching a label to a floppy disk, be sure the label is firmly attached. If the label comes off while the disk is in the drive, it will be impossible to eject the disk.

# HOW TO USE THIS MANUAL

The MC - 50 manual consists of two books.

Owner's Manual I (Owner's Guide)

Owner's Manual II (Reference)


This manual I (Owner's Guide) is intended especially for those who are using a sequencer for the first time, and explains how to connect the MC - 50 to a MIDI device and make a simple recording. When you need a more detailed explanation, read through this book once, and refer to Owner's Manual II (Reference) as necessary. If you are already familiar with sequencers, it may not be necessary for you to read this entire book. The following chart shows how to use the MC - 50 manual depending on your experience and needs.

	If you are using a sequencer for the first time	If you are already familiar with sequencers
① INTRODUCTION	○	△
② CONNECTIONS	○	×
③ TURN THE POWER ON	○	×
④ HARDWARE	○	△
⑤ MODES OF OPERATION	○	○
⑥ INITIALIZING A DISK	○	△
⑦ BASIC OPERATION	○	○
⑧ MULTITRACK RECORDING	○	△
⑨ DATA EDITING	○	○
⑩ VARIOUS USEFUL PROCEDURE	△	△
⑪ APPLICATION GUIDE	△	△
⑫ ABOUT MIDI STATUS	△	△
⑬ READING MUSIC	△	×

○ ... be sure to read    △ ... read when necessary    × ... no need to read

## Conventions used in this manual

The following symbols are used in this manual to explain operation. Especially in chapters 5 and beyond, the explanation uses mainly these symbols, so please be aware of what each symbol means.

- Characters surrounded by    indicate panel keys. For example, PLAY indicates the Play key, and ENTER indicates the Enter key. When one of these keys appears in a procedure, it means that you are to press the key once.
- An indication of “(⇐ see I /page \*\*)” refers to a page in manual I (Introduction), and “(⇐ see II /page \*\*)” refers to a page in manual II (Reference).
- An indication of SHIFT + MODE means that you should “hold SHIFT and press MODE”. Be sure to press the keys in the correct order.
- Indications such as ◀ ▶ → Numeric keys/Alpha - dial → ENTER mean that you should follow the steps in the order indicated by the arrows. This example means “use the left/right cursor keys to move the cursor, use the numeric keys or Alpha - dial to set the value, and finally press the Enter key once.”
- The  character indicates an explanation of terminology.



# 1 INTRODUCTION

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When you turn the MC - 50 power on without performing a special operation, the SUPER - MRC sequencer software will normally start up, and the MC - 50 will function as a “sequencer”. It is possible to start up the other SUPER - MRP performance software, or to load another software program from a different disk to make the MC - 50 function as something other than a sequencer. However, this section will explain only about the hardware of the MC - 50, and how it will function when running the SUPER - MRC software.

## ■ What is the MC - 50 ?

The MC - 50 is a device which runs the SUPER - MRC software to record musical performances from an electronic instrument such as a synthesizer or electric piano. This type of device is generally known as a **sequencer**. The MC - 50 transmits and receives musical data using a world - wide standard called **MIDI**.

Regardless of the manufacturer, any synthesizer or electronic piano that is compatible with MIDI can be connected to the MC - 50. When you perform on a MIDI instrument, the MC - 50 records your playing as digital data, and stores this data in internal memory. (This is known as **realtime recording**.) The MC - 50 can then transmit this data to make another connected device play automatically. Since a large number of MIDI instruments can be controlled at once, the MC - 50 can act as the “conductor” for an entire MIDI orchestra. The MC - 50 is ideal for people who wish to create music but are not able to play an instrument, since it allows you to enter notes and rests one by one using the front panel keys, etc. (This is known as **step recording**.)

## ■ Internal memory and floppy disks

A tape recorder records musical data directly onto the tape itself. This means that unless a tape has been loaded into the recorder, it is impossible to record. The MC - 50, however, records musical data into its **internal memory**, meaning that you can record and playback data using just the MC - 50 by itself. However if you turn the power off, this musical data in the MC - 50 internal memory will be lost. If you wish to keep the musical data you record, you must save it to an external storage medium (corresponding to the tape of a tape recorder).

The MC - 50 uses **3.5 inch 2DD micro floppy disks** as its storage medium. (These will be referred to as “floppy disks”.) Page 7 explains some precautions you should observe when handling floppy disks.

### 🔊 Internal memory:

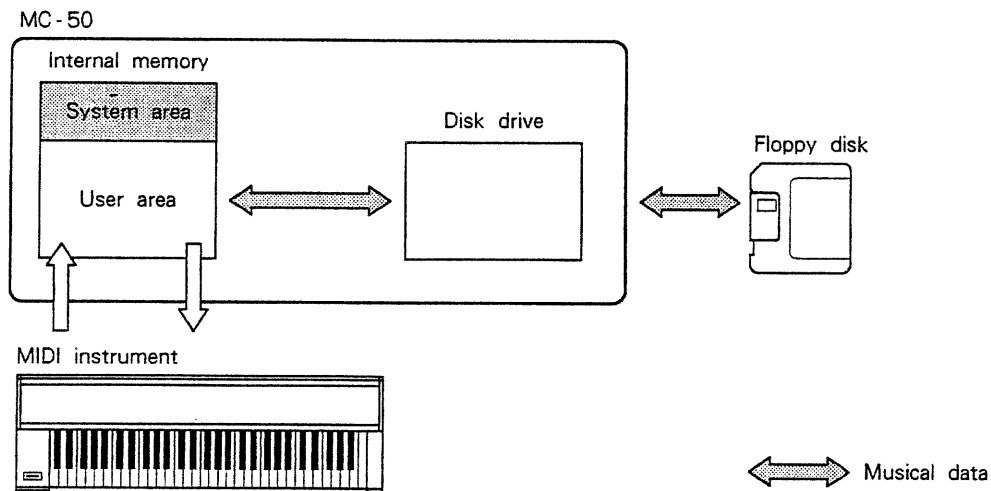
This refers to computer circuitry of two varieties; **RAM** (Random Access Memory) and **ROM** (Read Only Memory). Data in RAM can be freely rewritten by the user, but is lost when the power is turned off. On the other hand, ROM is only for reading. It is not possible for the user to store his own data into ROM, but the contents of ROM (originally set at the factory) are preserved even when the power is turned off.

### 🔊 Storage media:

This refers to some type of external storage that can preserve the data from internal memory. There are many types of **storage media**; floppy disk (3.5/5/8 inch), magnetic tape, hard disk, and others.

## ■ How the MC - 50 is organized

The MC - 50 is organized as follows.



### ○ Internal memory

The internal memory of the MC - 50 is divided into the **System area** and the **User area**.

#### **System area (ROM)**

This area contains the programs that make the MC - 50 function as a **sequencer** or as a **performance system**. The data in the system area is preserved even when the power is turned off, but cannot be saved to floppy disk or edited. With the normal settings, the sequencer program will be loaded when the power is turned on.

#### 🎵 Performance system:

This software allows you to playback up to 99 previously created songs in any specified order (⇒ II /page 167).

#### **User area (RAM)**

This area temporarily contains the musical data you create or record. This data can be freely exchanged or edited. However there is a limit to the amount of data that this area can contain, and it will be lost when the MC - 50 power is turned off.

### ○ Disk drive

The MC - 50 contains a disk drive which **saves** data from the internal user area onto a floppy disk, or **loads** data from a floppy disk into the internal user area. By saving your performances onto floppy disks, you can build up a library of songs.

## ■ System programs and internal memory

When the power is first turned on, a computer is not able to do anything useful. It needs a program to tell it what useful actions to perform. This means that by loading a different program, you can make the same computer perform a wide variety of tasks. The program (software) that makes a computer run is often referred to as the **system**. Previous models of the MC series (MC - 300/500/500mk II ) were just like a computer in that they needed to load a system program from disk into internal memory to tell them to “function as a sequencer”. This type of device (hardware) has the advantage of being able to use a variety of different system programs, but has the disadvantage that a bit of time is required to load the system program before the machine is able to do anything useful. The MC - 50, however, has a sequencer system program (and also a performance system) in its system area, and is able to function as a sequencer almost immediately (about 3 seconds) after the power is turned on (with the initial settings).

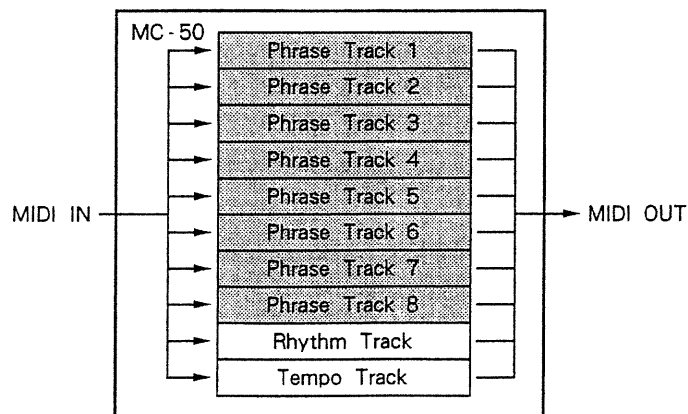
When the power is turned on, the MC - 50 checks whether or not a system disk is inserted in the disk drive (for 1 second). If not, it reads the sequencer system program from internal memory, and begins functioning as a “sequencer”. If a floppy disk containing a system program is inserted when the power is turned on, the MC - 50 will read that program, and start up the system from floppy disk. This means that, like previous models of the MC - series, the MC - 50 can be used in ways other than as a sequencer. Disks containing this type of system program are known as **system disks**. By loading system disks such as the MRB - 500 **Bulk Librarian**, you can make the MC - 50 perform a wide variety of functions.

### 📀 Bulk Librarian:

This refers to a program that lets you store synthesizer sound data etc. on floppy disks.

## ■ About tracks

The MC - 50 has eight **Phrase Tracks**, one **Rhythm Track**, and one **Tempo Track**, for a total of ten tracks. Tracks contain musical data for MIDI instruments, not sound.



Each track can contain the following data.

## ○ Phrase Track

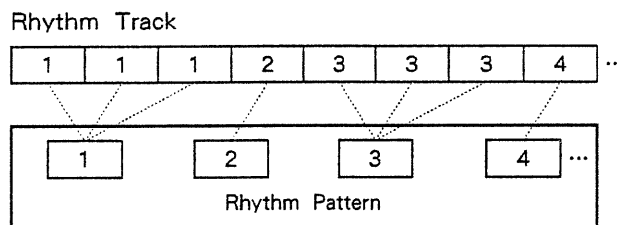
These tracks store data for a musical performance, and contain data that specifies the pitch, timing, and loudness of each note played for each instrument. There are eight of these Phrase Tracks, and when recording an ensemble - type composition, it is convenient to divide the instrumental parts into groups, and record each group on its own track.

**Pops "Brightness"**

This does not mean that the MC - 50 can record only eight parts. Once you finish recording a track, you can combine the musical data of two or more Phrase Tracks into a single Phrase Track, or record additional parts into a single track. A single Phrase Track can contain up to 16 independent musical parts, so the eight tracks of the MC - 50 actually allow you to record very large compositions of 128 parts (16 parts × 8 tracks).

## ○ Rhythm Track

Since the rhythm parts of a song consist mainly of repeated patterns in various combinations, the MC - 50 allows you arrange previously created **Rhythm Patterns** in the **Rhythm Track** in the order of playback. (Rhythm Patterns are created for each measure.)



The musical data recorded in the MC - 50 is played back according to the time signature of the Rhythm Patterns arranged in the Rhythm Track, and the number of Rhythm Patterns in the Rhythm Track determines the length of the song. In this way, the Rhythm Track does not simply play the percussion instruments, but is a very important track that acts as the framework for the entire song by determining the time signature and song length.

As the name suggests, the Rhythm Track contains musical data for instruments such drums and percussion. In general, percussion instruments such as drums and cymbals are played only at a specific pitch, and cannot play melodies by themselves. The Rhythm Track contains data telling which instrument was played when and how strongly.

\* The Rhythm Track is not able to handle data indicating the pitch of a note. This means that data for melodic percussion instruments such as steel drums must be recorded in a Phrase Track.

## ○ Tempo Track

This track records changes in tempo. It does not contain data to be sent to MIDI instruments.

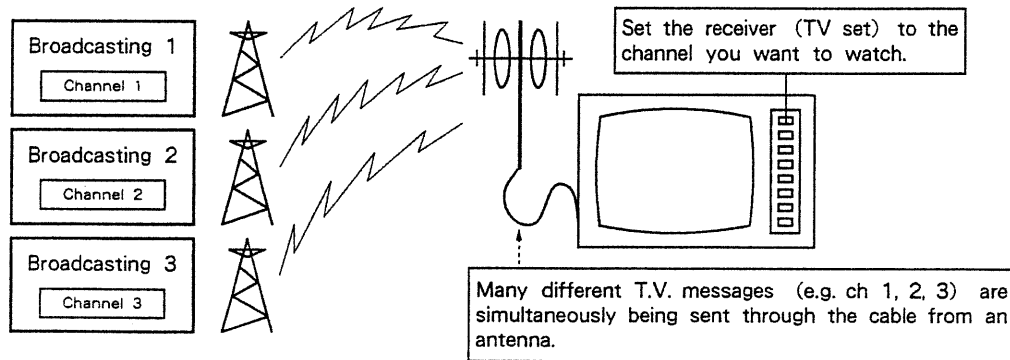
## ■ About Songs

An entire set of data recorded in these ten tracks is called a **Song**. The MC - 50 is able to store up to eight songs in its internal memory, but if the songs are long, or if they contain a lot of performance information, fewer than eight songs can be accommodated. Each song can be given a **title** (name), and saved to disk. Songs saved to disk are called **Song files**, and a single disk can store up to 108 of these Song files.

## ■ MIDI channels

By transmitting various types of message to the connected MIDI instruments, the MC - 50 is able to control an entire ensemble by using **MIDI channels**.

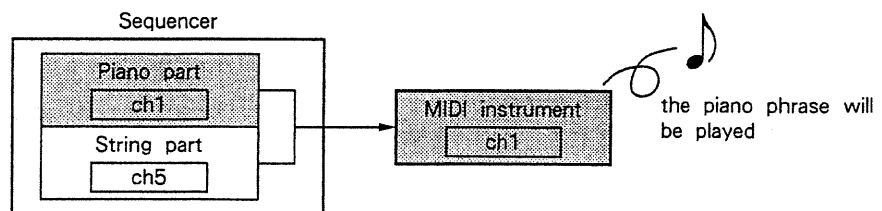
MIDI channels are similar to TV channels. Each broadcast station transmits on its own channel. The TV antenna receives the signals from many broadcast stations at once, but the TV receiver receives only the signal of the channel to which it is set, allowing you to watch the broadcast of one station at a time.



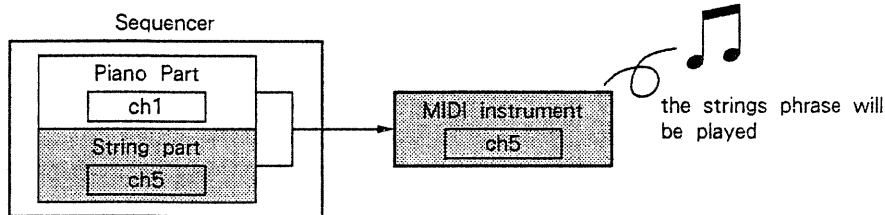
In the same way, MIDI devices use a Transmit Channel and a Receive Channel. Musical messages are received only when both channels match.

For example, suppose that a MIDI instrument is connected to the sequencer, and that the sequencer is transmitting musical data for the piano part on channel 1, and musical data for the string part on channel 5. At this time, if the receiving device is switched to Receive Channel 1, it will play the notes of the piano part. If switched to Receive Channel 5, will play the notes of the string part.

When the Receive Channel is set to 1 :

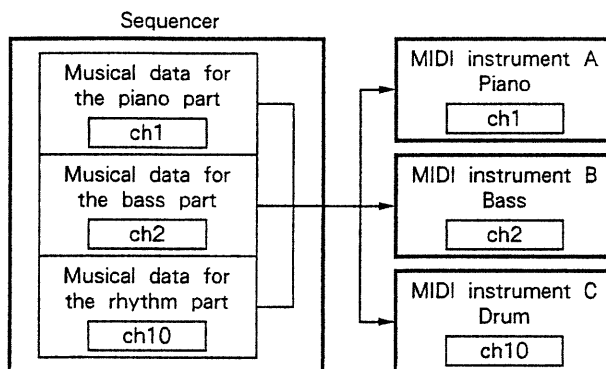


When the Receive Channel is set to 5 :



\* A single MIDI cable can carry 16 independent channels of MIDI data.

In this way, a sequencer is able to transmit the musical data of each part on a different MIDI channel, to make each MIDI instrument play its own part. You must make sure that the Transmit Channel of each part matches the Receive Channel of the corresponding MIDI instrument.



MIDI Transmit/Receive channels can be set over a range of 1—16. By using all sixteen channels, you can independently control sixteen different MIDI instruments from a single sequencer.

\* The MC - 50 has two independent MIDI OUT connectors, and you making appropriate MIDI OUT assignments, you can independently control up to 32 different MIDI instruments.

## MIDI output assign

The MC - 50 has two independent MIDI OUT connectors. Since you can specify the MIDI OUT used by each track, you can independently control up to 32 MIDI instruments. The MIDI OUT used by each track is determined by the Output Assign setting (☞ see II /page 74).

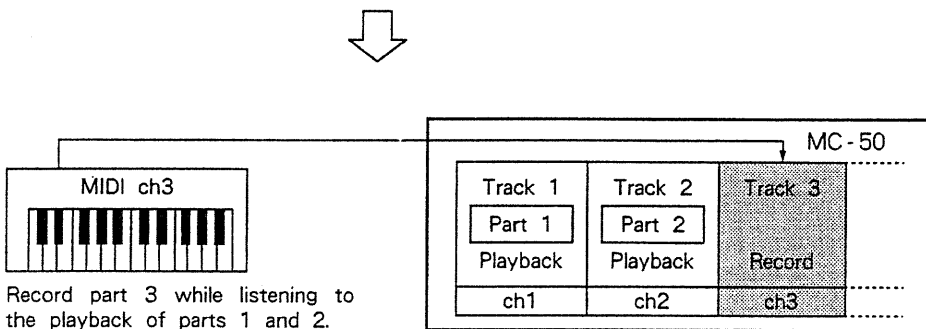
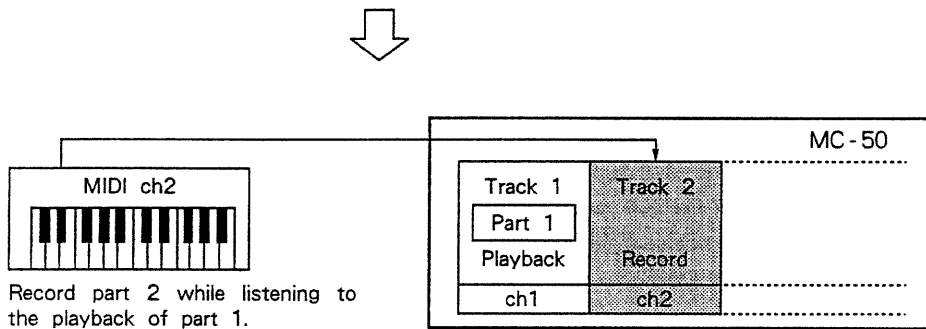
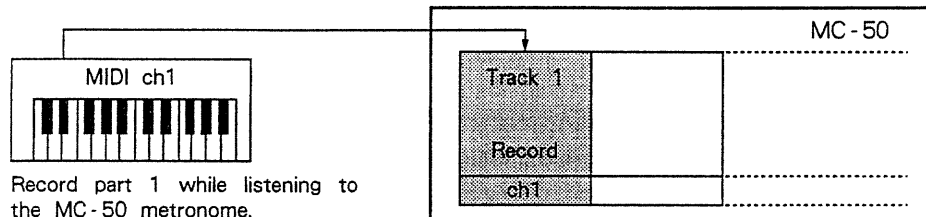
### 《Example of Output Assign settings》

Part 1 (ch.1/OUT 1).....MIDI device A (ch.1)  
 :  
 Part 16 (ch.16/OUT 1) .....MIDI device B (ch.16)  
 Part 17( ch.1/OUT 2) .....MIDI device C (ch.1)  
 :  
 Part 32( ch.16/OUT 2) .....MIDI device D (ch.16)

\* In this example, part 1 is transmitting on channel 1 from MIDI OUT 1, and will therefore control MIDI device A, which is receiving channel 1 from MIDI OUT 1. MIDI device C is also receiving channel 1, but is connected to OUT 2, and will not receive the messages transmitted by part 1.

## ■ Sequencers and MTRs (multitrack recorders)

Multitrack sequencers such as the MC - 50 allow you to do **multitrack recording**. This allows you to build up a complex composition by recording one track at a time while listening to the playback of the previously recorded tracks.



↓  
:

---

In this way by playing just one part at a time, you can build up a multitrack orchestral composition. Although the same type of process is possible with multitrack tape recorders, using a sequencer offers the following advantages.

- Since the performance is recorded in digital form,
  - there is no loss in sound quality no matter how many times the data is layered.
  - there is no crosstalk (leakage of sound onto another track).
  - you can instantly move to the beginning of the song, or rewind and fast forward.
  - you can store the performance data on a small, convenient disk.
  
- Since not the sound, but the musical data is being recorded,
  - the tempo can be changed without affecting the pitch.
  - the pitch can be changed without affecting the tempo (the transpose function).
  - by changing the settings of your MIDI instruments, you can change the sounds used for playback.
  - note timing can be corrected automatically (the quantize function).
  - sections (or all) of the data can be copied or deleted (copy/delete functions).

Some disadvantages of sequencers are that since the sound itself is not being recorded, it is not possible to record vocals or acoustic instruments.

The important thing is to use each technology for what it is best at. Use multitrack tape recorders to do what sequencers cannot (or vice versa), and your musical creations will have more depth. The MC-50 is able to synchronize itself to a multitrack tape recorder to record and playback MIDI instruments in **synchronization** with the sounds played back by the tape recorder (⇐ II /P.23). This technique is widely used in recording studios today. A multitrack tape recorder is an excellent partner for a MIDI sequencer.

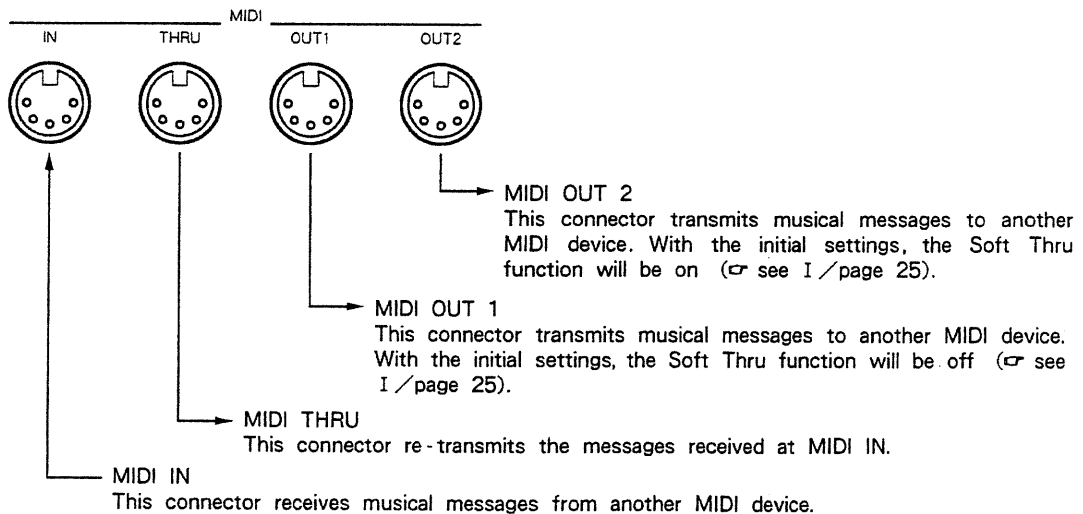


## 2 CONNECTIONS

By using a MIDI cable to connect the MC - 50 with a MIDI device, the MC - 50 can control (or be controlled by) the external MIDI device.

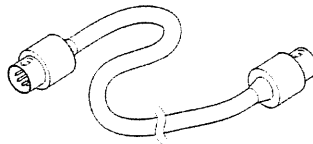
### ■ The MIDI connectors of the MC - 50

The rear panel of the MC - 50 has three types of MIDI connector; IN, OUT, and THRU. (There are two MIDI OUTs.) Nearly any device that has a MIDI connector can be connected to the MC - 50. Audio devices and some rhythm machines may have "5 - pin DIN" connectors which have the same shape, but carry completely different electrical signals. Not only will the MC - 50 not work when connected to such a device, but it may even malfunction. Never connect the MC - 50's MIDI connectors to such a device.



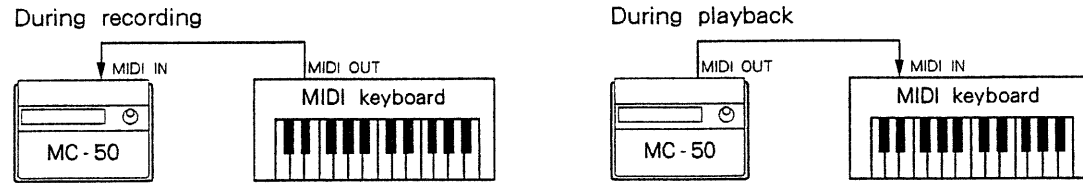
#### Note!

Use MIDI cables such as the following to connect MIDI devices. There are other types of cable which use the same "5 - pin DIN" connector, but cannot be used for MIDI. Be sure to use cables designed for MIDI.

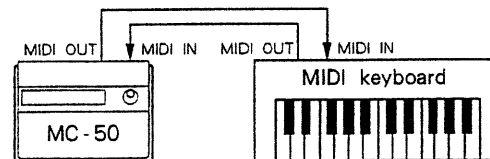


## Basic MIDI connections

Use a MIDI cable to connect the MIDI OUT of the transmitting device to the MIDI IN of the receiving device. This means that if you wish to record a performance from a MIDI keyboard on the MC - 50, connect the MIDI OUT of the keyboard to the MIDI IN of the MC - 50. If you wish to playback the MC - 50 to play a MIDI keyboard, connect the MIDI OUT of the MC - 50 (either of the two MIDI OUTs) to the MIDI IN of the keyboard.

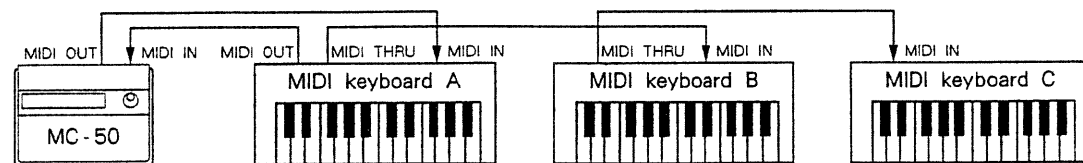


MIDI messages travel one way. If you wish to record and playback without remaking connections, connect the MIDI INs and OUTs of the two devices as follows.

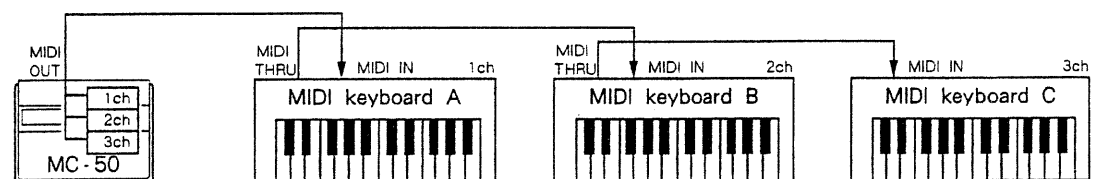


\* The MIDI OUT to use will depend on the settings of your MIDI keyboard (⇐ see I /page 25).

If you are connecting two or more devices, use the THRU connectors.



Simply connecting a MIDI device does not guarantee that the musical messages will be received correctly. You must make sure that the MIDI Receive Channel of the sound module you wish to play is set to the same channel as the recorded data.



## ■ MIDI devices that can be connected

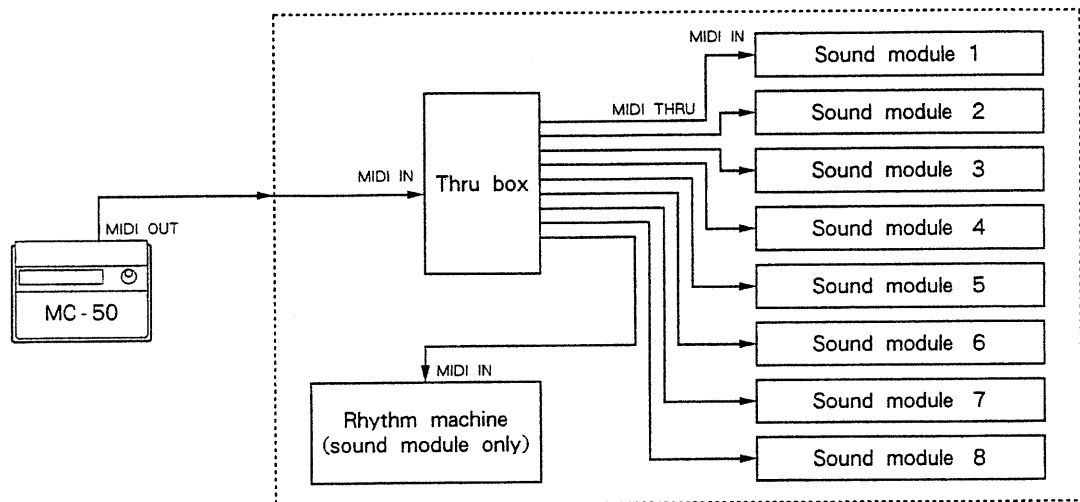
The following devices can be connected to the MC - 50 to create various types of system. Many other combinations are also possible.

### ○ MIDI keyboard

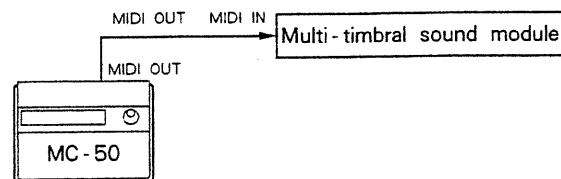
Electronic musical instruments with a keyboard, such as electronic pianos or synthesizers. Some models are **multi - timbral** and some are not.

### ○ Sound modules

Sound modules (MT - 32, CM - 64, U - 220, etc., sold separately) contain only the sound - generating circuitry of an electronic piano or synthesizer, without a keyboard. Since they have no keyboard, they cannot produce sound by themselves. The real advantage of sound modules becomes apparent when they are used together with a sequencer. When creating an ensemble composition, connect as many sound modules as you need to play each part. Some sound modules are "multi - timbral", meaning that they can function as two or more independent sound modules in a single unit.



A multi - timbral sound module can perform all the functions surrounded by the dashed line.



### ▶ Multi - timbral sound modules/multi - timbral keyboards:

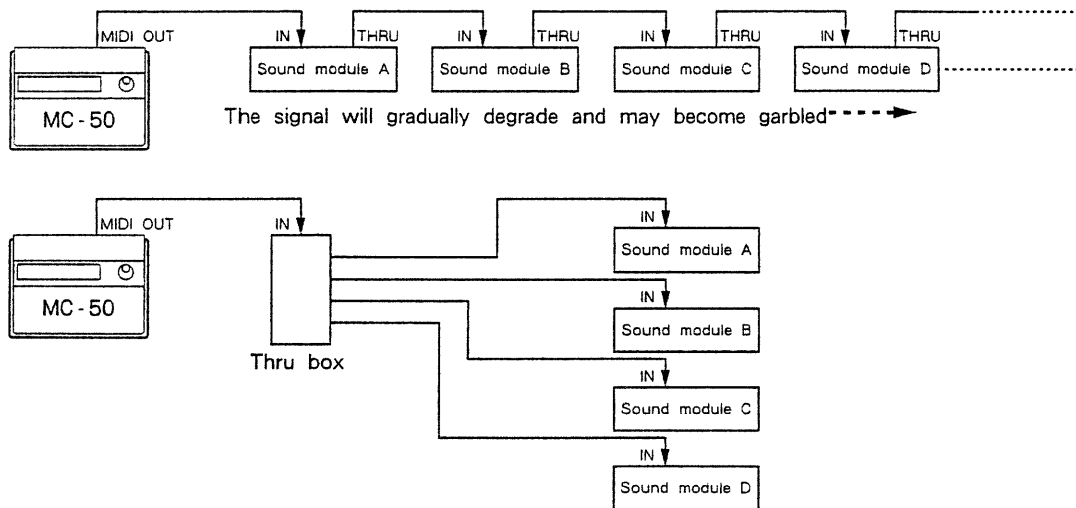
Multi - timbral sound modules can function as two or more sound modules in a single unit. Some, such as the MT - 32 (sold separately), also contain rhythm sounds and effect units. When using the MC - 50 with a synthesizer or electric piano, adding just one of these multi - timbral sound modules allows you to record and playback multi - part orchestral compositions. Recently, multi - timbral keyboards (D - 5, U - 20, Model - 660, etc., sold separately) have begun to appear, making sequencer music even easier than ever.

## ○ MIDI controllers

**MIDI controller** is the term used to refer to devices such as keyboard controllers (A - 50/80, sold separately), guitar controllers, and pad controllers (PAD - 80, sold separately). These devices contain only the control section of a MIDI instrument, such as the keyboard or pads, and do not contain sound producing circuitry. (When used together with a MIDI sound module, these will function as a MIDI instrument.) MIDI controllers can be used to input musical data into a sequencer in the same way as MIDI keyboards.

## ○ MIDI Thru boxes

**Thru boxes** (A - 880, etc., sold separately) are used to distribute MIDI messages, and are useful when you are connecting many MIDI instruments or sound modules. If you “daisy - chain” more than three devices by connecting MIDI cables from IN → THRU → IN → THRU, the MIDI signal will begin to degrade and may not be transmitted accurately, causing reception errors.



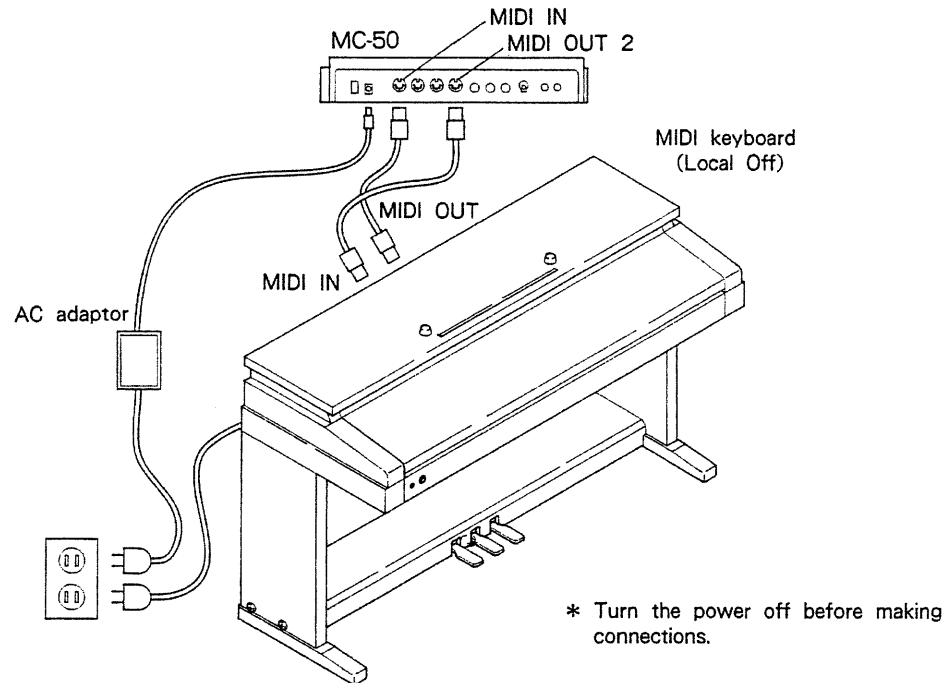
## ○ MIDI - equipped effect devices

If a MIDI - equipped effect device is connected to the MC - 50, you can switch effect settings by transmitting Program Change messages from the MC - 50 to the effect device.

## ■ Connecting a MIDI keyboard (electronic piano or synthesizer)

The simplest way to use the MC - 50 is to connect an electronic piano or synthesizer. With this type of setup, you will be able to play only one part. By connecting a multi - timbral keyboard, you can take greater advantage of the MC - 50's multitrack recording capabilities.

### 《Connections》



- ① Connect the AC adaptor to the MC - 50 rear panel connector marked "DC IN 9V".
- ② Insert the AC adaptor plug into an AC outlet.
- ③ Use a MIDI cable to connect the MIDI OUT of the keyboard to the MIDI IN of the MC - 50.
- ④ If your keyboard has a Local Off (☞ see I /page 25) setting, connect the MIDI OUT 2 (Soft Thru On) of the MC - 50 to the MIDI IN of your keyboard. If your keyboard does not have a Local Off setting, use the MIDI OUT 1 (Soft Thru Off) of the MC - 50 (☞ see I /page 25).

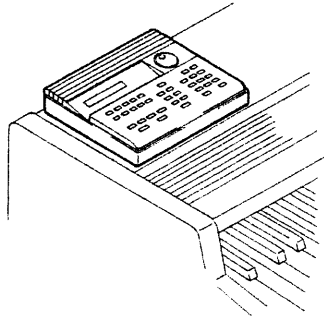
\* Refer to the manual of your keyboard for details on Local On/Off settings.

In addition to the above connections, you will need to connect an amp/speaker system to hear your synthesizer (unless your instrument has a built - in speaker). You may use a radio cassette player, or headphones if you wish.

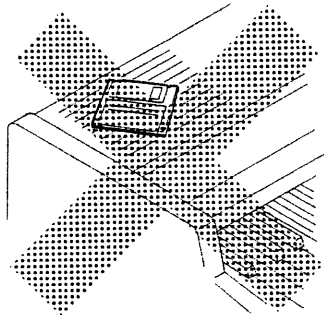
### MC-50 settings

The MC-50 contains a floppy disk drive, which may not operate correctly if placed at an angle. Place the MC-50 on a steady and level surface.

If the top of your electronic piano is flat, you can place the MC-50 there, but if it is placed at the left, the music stand may get in the way when you need to insert disks. If so, place it on the right side, or remove the music stand.



If your keyboard has speakers built into the top, they may be obstructed by the MC-50, and not sound correctly. In addition, the data in a floppy disk may be damaged by the magnetic field generated by speaker magnets.

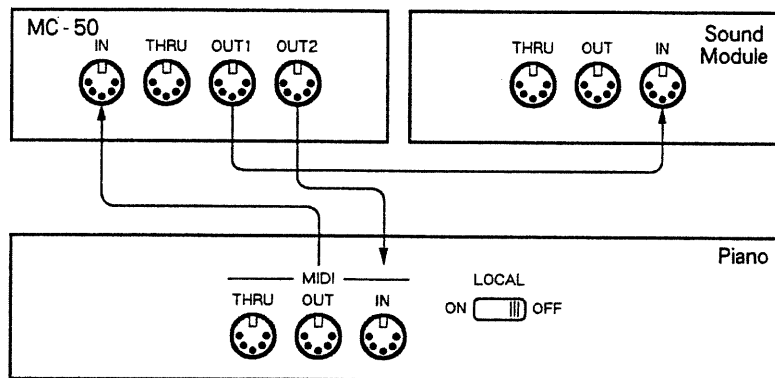


## ■ Connecting an electronic piano and sound module

If you add a multi - timbral sound module to a non - multi - timbral electronic piano, you can use the MC - 50 to create multi - part compositions.

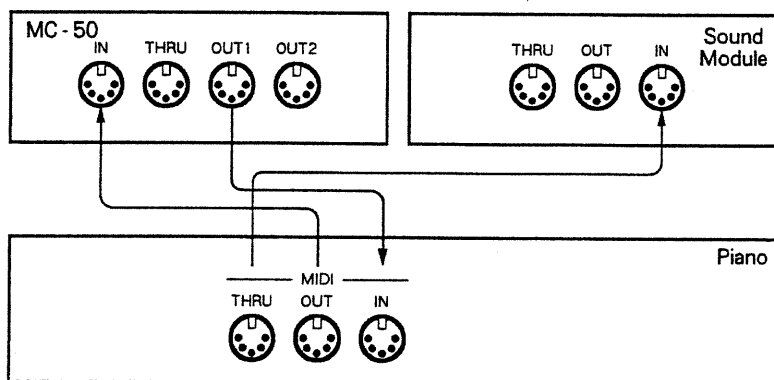
### ○ Pianos which can be set to Local Off

Set your piano to Local Off (for details, refer to the manual for your piano), and connect it to MIDI OUT 2 (Soft Thru On) of the MC - 50 (☞ see II /page 25).



### ○ Pianos which cannot be set to Local Off

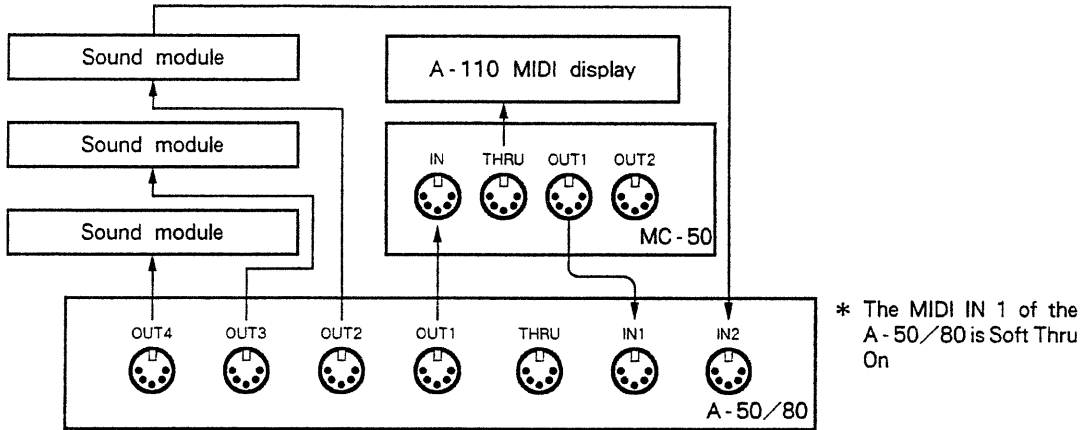
Connect your piano to MIDI OUT 1 (Soft Thru Off) of the MC - 50.



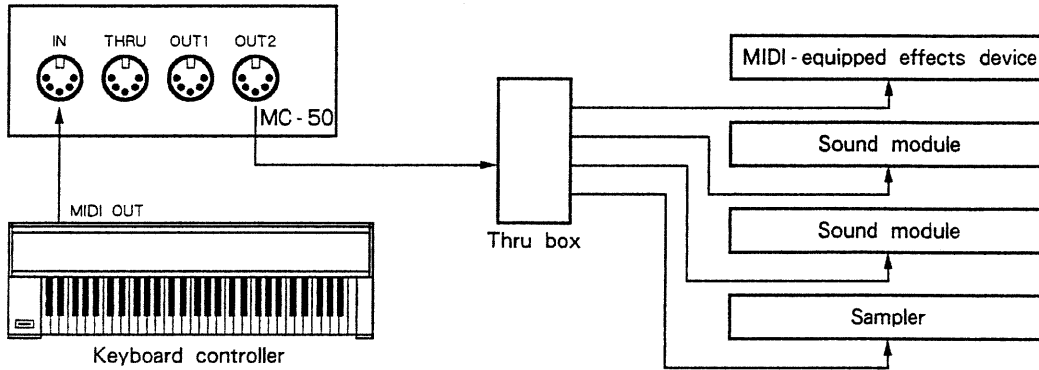
\* If your electronic piano has audio input jacks and built - in speakers, you can listen to the sound of the connected sound module through the piano's speakers.

## ■ Example connections using a keyboard controller

Example of connections with an A-50/80

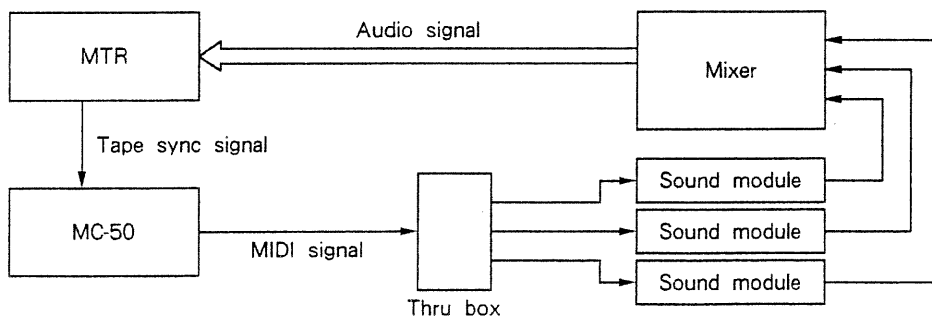


Example of connections with a standard keyboard



## ■ Example connections for a synchronized recording system

Since a sequencer is a device which records the musical performance data (not the sound) of an electronic instrument, it cannot record actual sounds themselves, such as can be picked up by a microphone. If you wish to record acoustic instruments or vocals together with the sounds of electronic instruments, you will need to synchronize a MTR (multitrack tape recorder) with the MC-50 as it controls the electronic instruments. Once the sync signal from the MC-50 has been recorded on an unused track of the tape, the MC-50 will be able to record and playback in synchronization with the tape sync signal.



\*The tape sync found on older sequencers was able to synchronize only from the beginning of the song. The tape sync of the MC-50 is able to synchronize from any point in the song (⇐ See II /page 23).



# Local on/off function and the Soft Thru on/off function

Most (but not all) MIDI keyboards have a Local On/Off setting. When this is turned off, the keyboard section will be separated from the sound generating circuitry, and playing the keyboard will not produce sound. However, messages will be transmitted from MIDI OUT when the keyboard is played.

Local Off is convenient when you wish to play only the connected MIDI sound modules without hearing the sound of the instrument itself.

Sequencers such as the MC-50 have a Soft Thru function. When Soft Thru is turned on, musical messages received at MIDI IN are re-transmitted from MIDI OUT as they are recorded. This means that as you record, you can hear how the MIDI sound modules connected to the sequencer's MIDI OUT will sound during playback.

Here's what happens when a MIDI keyboard is connected to a sequencer which is recording with its Soft Thru turned On.

If the MIDI keyboard is set to Local On, each note played on the keyboard will be sounded both directly from the keyboard, and by the message that passed through the sequencer back into the keyboard. This will make each note be sounded twice, or perhaps cut off unnaturally.

On the other hand if the MIDI keyboard is set to Local Off, the note messages from the keyboard will pass through the sequencer and play the sound generator built into the keyboard.

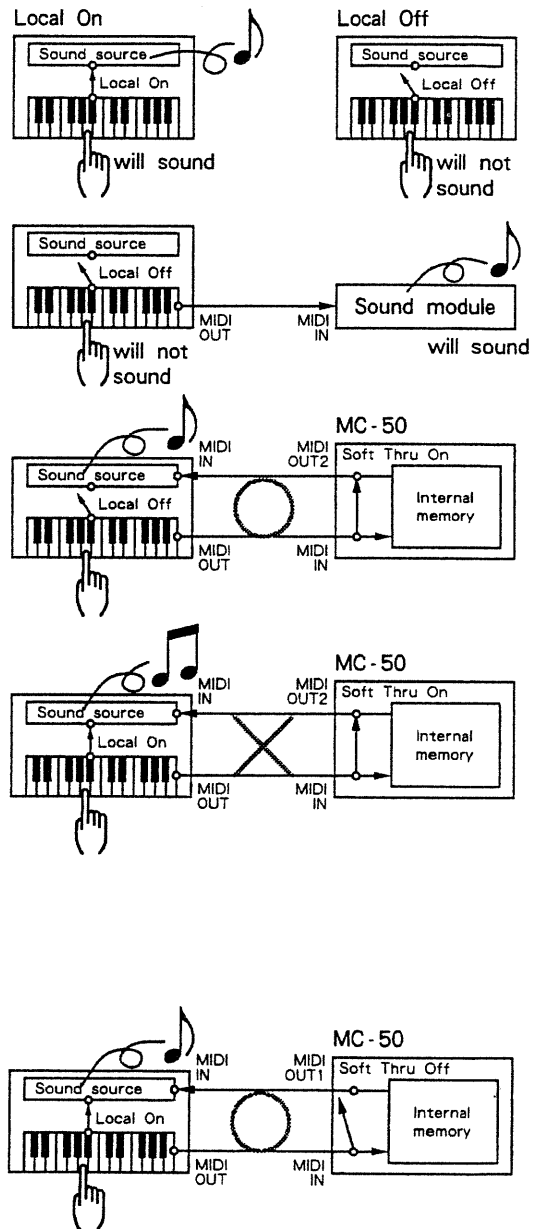
In this way, when using a sequencer you will normally set it to Soft Thru On, and set the connected keyboard to Local Off. The MC-50 is initially set so that MIDI OUT 2 is Soft Thru On, so simply connect this connector to the MIDI IN of your MIDI keyboard.

If your keyboard is set to Local off or does not have a Local On/Off function, connect it to the MIDI OUT 1 (Soft Thru Off) of the MC-50.

The following chart shows the ways in which the Local On/Off setting of your MIDI keyboard and the Soft Thru On/Off setting of the MC-50 can be combined.

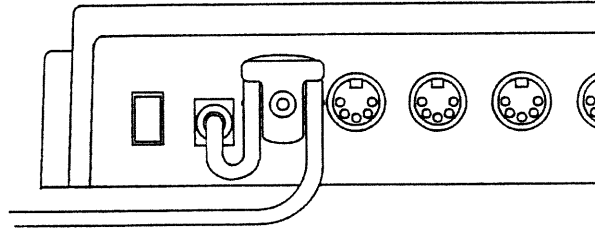
MIDI keyboard	MC-50 THRU ON (MIDI OUT 2)	MC-50 THRU OFF (MIDI OUT 1)
Local Off	○	×
Local On	×	○

\* Other combinations may result in no sound, or in notes being sounded incorrectly.



## Cable hook

By wrapping the AC adapter cable around the cable hook, you can prevent the cable from accidentally being pulled out and cutting off the power.



# [3] TURN THE POWER ON

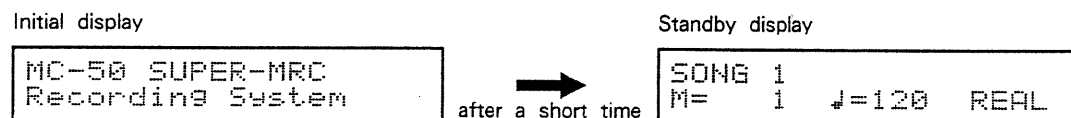
## 1. Turning the Power ON

### ■ Starting SUPER - MRC

- ① Before you turn the power on, make sure of the following.
  - that the MC - 50 is correctly connected to the other devices
  - that there is no disk in the disk drive
  - that the volumes of the mixer/amp system are turned down
- ② Turn the power of each device on in the following order.  
MIDI instruments → Audio device → MC - 50

Turning the power on in the wrong order will not damage the MC - 50. However when the MC - 50 is turned on, it may transmit various initialization messages to the other devices, and if the MIDI instruments are not yet turned on, they will not receive these messages.

When you turn on the MC - 50, the initial display will immediately appear, and after a short time (about 3 seconds), the following display will appear.



This is the **Standby display**, and this condition is called the **Standby Condition**. Recording and playback procedures begin from this display.

### ■ Starting SUPER - MRP

From the condition of ②, hold the MC - 50's numeric key **[2]** and turn the power on, and SUPER - MRP (⇨ see II /page 167) will be started up.

### ■ Starting from a system disk

Turn the power on, and while the initial display is still showing, insert the floppy disk containing the system program you wish to load. The system program will be loaded from disk.

\* If you hold down numeric key **[3]** while turning the power on, then press **[ENTER]** and insert a floppy disk, you can start up a system from disk.

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## 2. Turning the Power OFF

① Before you turn the MC - 50 power off, make sure of the following.

- there is no disk in the disk drive
- data you wish to keep has been saved to disk (☞ see I /page 41)

② Turn the power off in the following order.

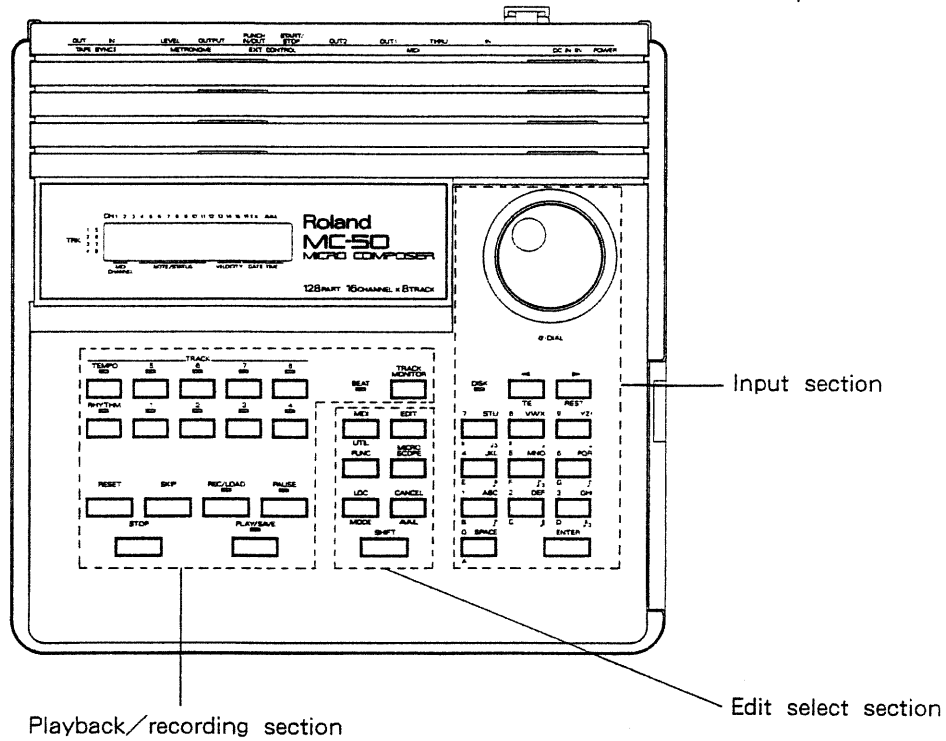
MC - 50 → Audio devices → MIDI devices

\* If you turn off the MIDI devices while the volumes are still raised and the audio system still turned on, the speakers may be damaged.

# 4 HARDWARE

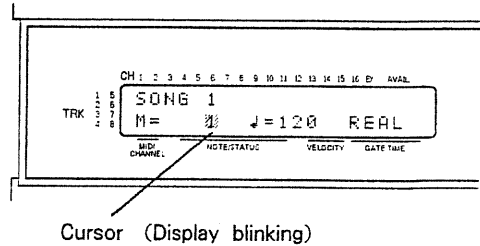
Panel keys and rear panel connectors will be explained separately for each SUPER - MRC function. As you read through this section, press each key and notice what happens.

Keys on the MC - 50 front panel are arranged in groups by function.



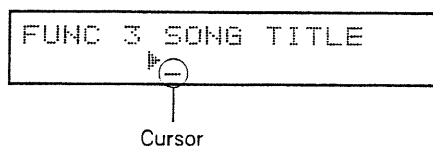
## ■ The display

Gives you information as you make settings and perform operations. The display is tilted, for easy visibility when the MC - 50 is placed on a table or electronic piano, and is backlit for readability even on dark stages.



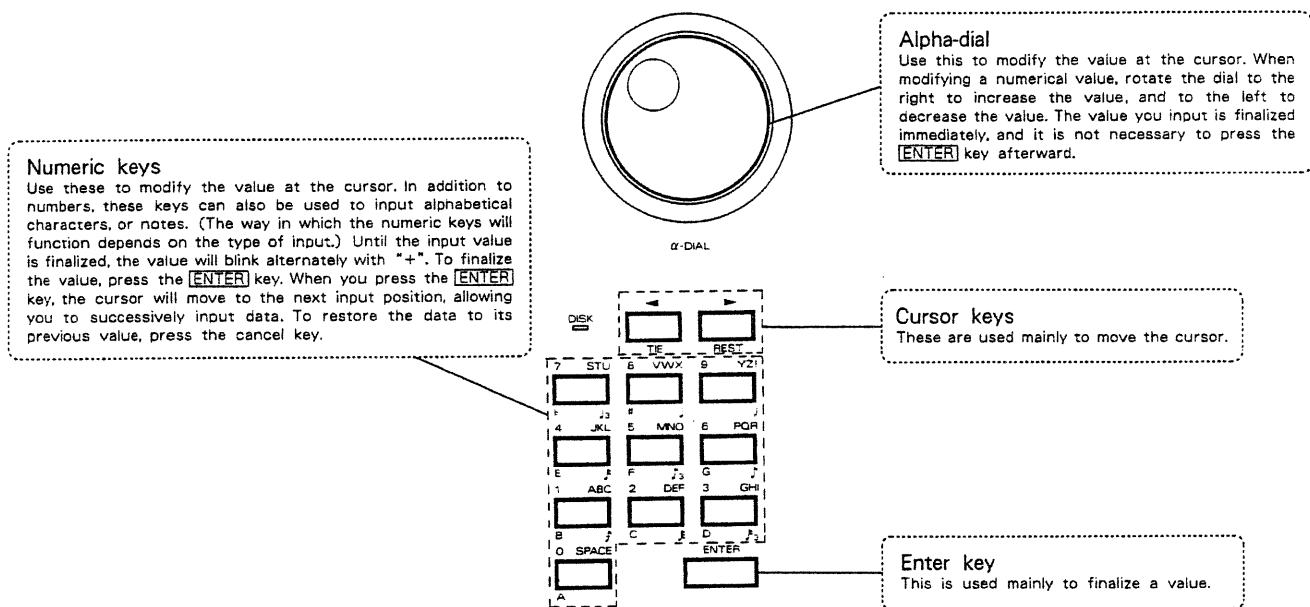
In general, the area of the display where the characters or numerals are blinking is called the **CURSOR**, and indicates the place where you can input data. To modify the settings and data of the MC - 50, move the cursor to the parameter (data value) you wish to input, and modify the data value.

\* In some displays, the cursor is shown as a line underneath the input value.



## 《Input section》

Use the numeric keys and Alpha-dial to input data at the cursor location. Use the two cursor keys to move the cursor.

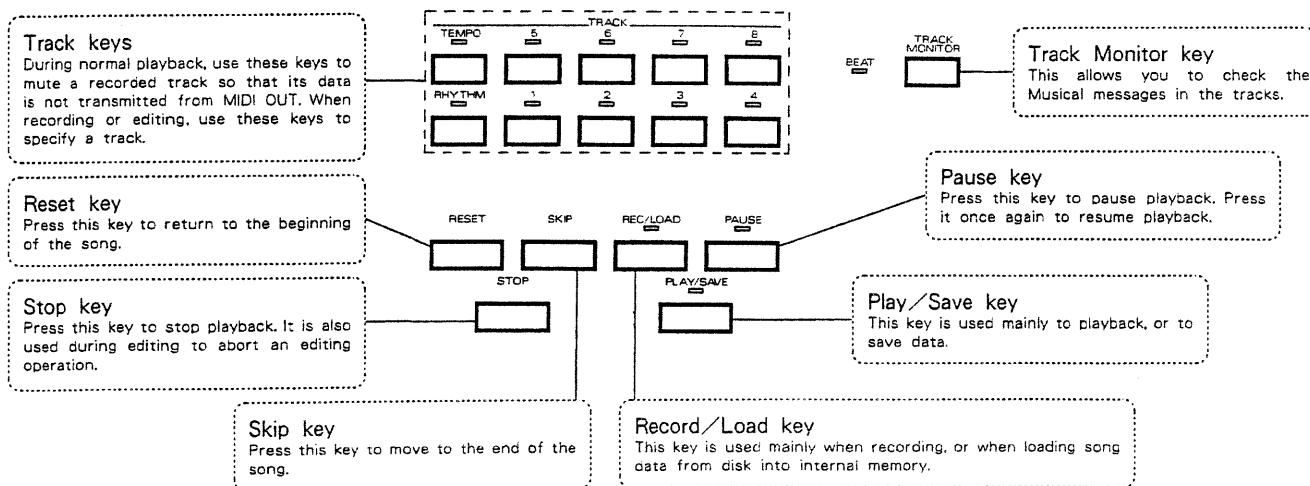


### Important!

There are two ways to modify a setting value; use the Alpha-dial to modify the value, or use the numeric keys to input a new value and press **ENTER**. Either method will have the same results. Use the method that is most convenient for you.

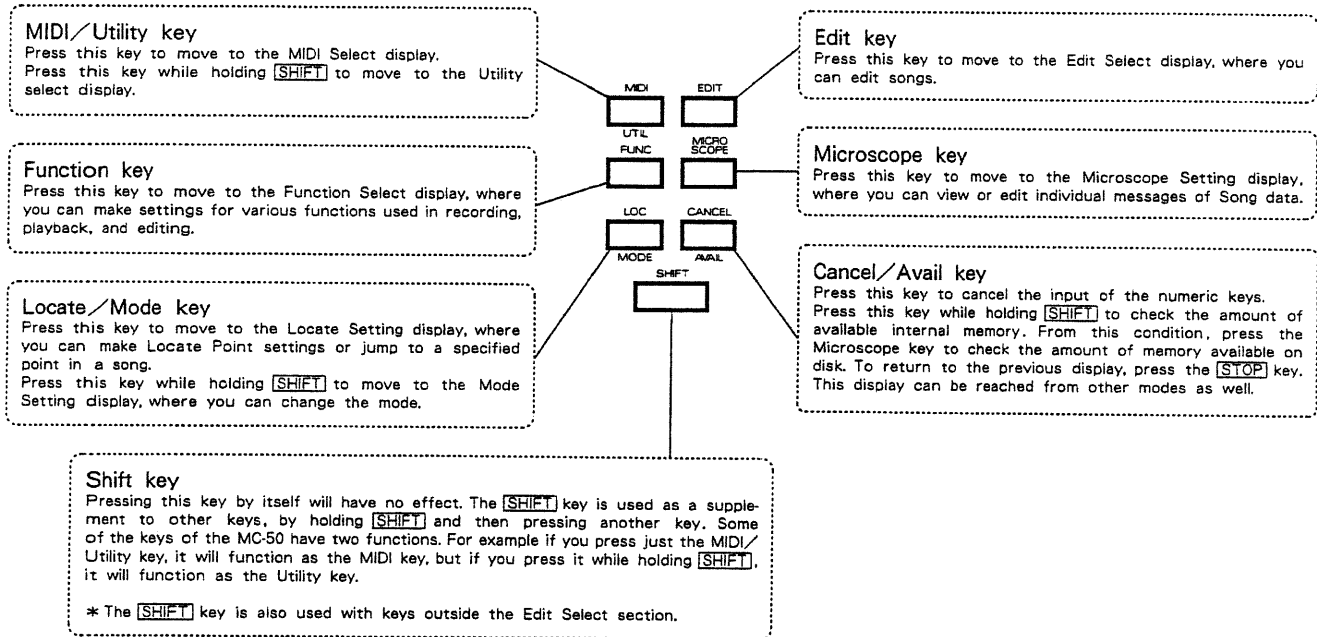
## 《Playback/recording section》

This section contains the keys used in mode 1 when recording tracks to build up a song, or when playing back a song.



## 《Edit select section》

The keys in this section are used mainly in mode 1, "MIDI RECORDER". From the mode 1 standby condition, press one of these keys to move to the desired editing display. To return to the standby display, press the **[STOP]** key of the Playback/recording section.



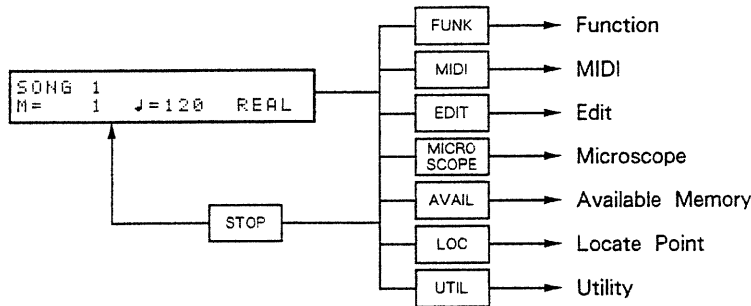
### Note!

If the MC-50 stops responding, or if you are not able to move from a certain display to another display, press the **[STOP]** key, or hold **[SHIFT]** and press the **[MODE]** (/Locate Point) key. If the MC-50 still does not respond, turn the power off, and start up SUPER-MRC once again.

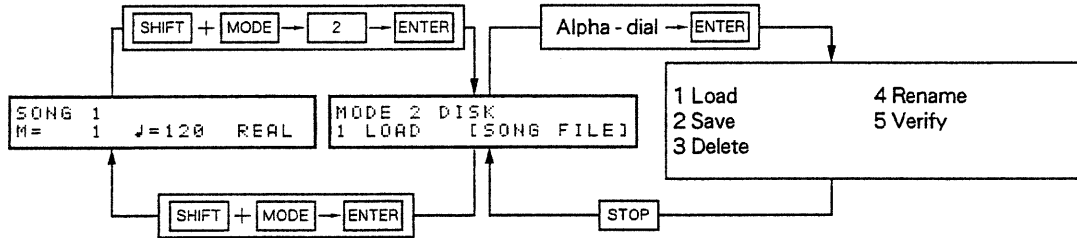
# 5 MODES OF OPERATION

SUPER - MRC has the following five modes. Use the following procedure to move from the standby display to the various mode displays.

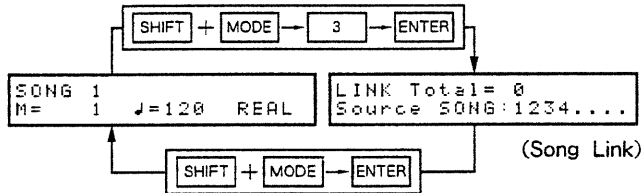
**Mode 1 (MIDI RECORDER)** Use the MC - 50 as a MIDI recorder (☞ see II /page 13).



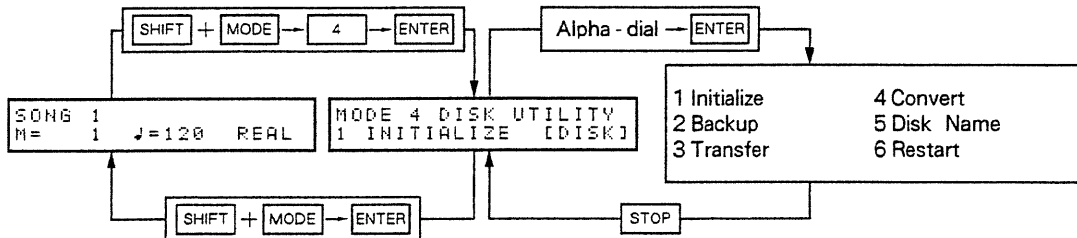
**Mode 2 (DISK)** Transfer song data between the MC - 50 and disk (☞ see II /page 135).



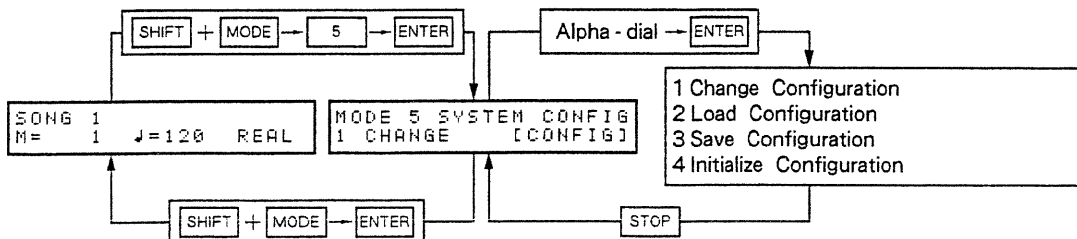
**Mode 3 (SONG LINK)** Link two or more songs in internal memory into a single song (☞ see II /page 143).



**Mode 4 (DISK UTILITY)** Manage disk data (☞ see II /page 147).



**Mode 5 (SYSTEM CONFIG)** Make system settings (☞ see II /page 155).





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## 【How to move between displays】

The procedure for moving between displays in mode 1 is different from the other modes.

< In mode 1 >

- ① From the standby condition, press the key of the desired Edit Select section.
- ② Use the Alpha - dial or numeric keys to select the function you wish to set.

\* When you press the **STOP** key, you will return to the standby condition.

< In modes 2—5 >

- ① From the standby condition, hold the **SHIFT** key and press the **MODE** key.
- ② Use the Alpha - dial or numeric keys to select the desired display.
- ③ Press the **ENTER** key.
- ④ Use the Alpha - dial or numeric keys to select the function you wish to set.
- ⑤ Press the **ENTER** key.

\* When you press the **STOP** key, you will return to the function select display. When you hold the **SHIFT** key and press the **MODE** key, you will return to the mode select display.

## 6 INITIALIZING A DISK

The musical data in internal memory will be lost when you turn the power off. If you wish to keep the data you record or edit, you must save it to a floppy disk. However, a newly purchased disk or a disk that has been used by another device cannot be used as it is. It must first be **initialized** before it can be used by the MC - 50. Before you begin recording, initialize a disk to prepare it for saving MC - 50 data. A new 3.5 inch floppy disk is included with the MC - 50, so go ahead and initialize it now.

\*When purchasing floppy disks, ask your dealer for **3.5 inch double side double density disks** such as the "Roland MF - 2DD". The MC - 50 is not able to use 3.5 inch double side high density disks such as the "Roland MF - 2HD".

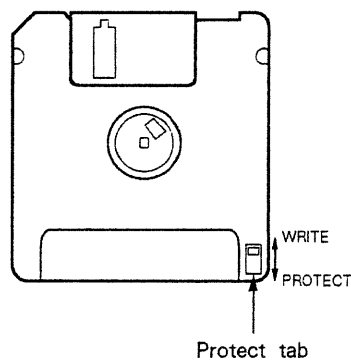
### Important!

- Newly purchased disks must be initialized before they can be used.
- When a disk is initialized, all its data will be lost.
- Disks used by another device must first be initialized by the MC - 50 before they can be used.

### The floppy disk Protect tab

Floppy disks have a **Protect tab** which can be used to prevent data from being erased accidentally. When the Protect tab is moved towards PROTECT, the contents of the disk are protected, and it is not possible to save or rewrite data on that disk, or to initialize it. When you wish to initialize or save, set the Protect tab to the WRITE position before inserting the disk into the disk drive. When you finish saving, be sure to move the Protect tab back to the PROTECT position.

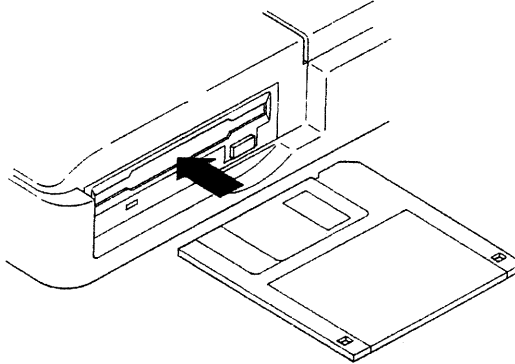
Under side of disk



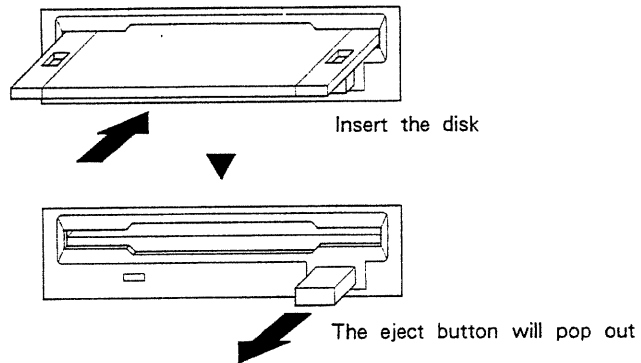
---

## 【Disk initialization procedure】

- ① Making sure that the Protect slider is in the **WRITE** position, hold the disk horizontally with the label facing up, and insert it into the **disk slot** located on the right side of the MC - 50.



When the disk has been inserted correctly, it will click into place, and the **eject button** beneath the **disk slot** will pop out.



- ② Hold **SHIFT** and press **MODE** to get the Mode select display.

```
MODE 1 MIDI RECORDER
```

- ③ Press **4** and then **ENTER**. (Or if you wish, you can use the Alpha - dial to select 4, and then press **ENTER**.)

This will select Disk Utility mode (mode 4).

```
MODE 4 DISK UTILITY
1 INITIALIZE [DISK]
```

- ④ Press **ENTER** to select the Initialize display. When you press the button, the display will ask if you are sure you want to erase the data. (This display may or may not appear, depending on the disk data.)

```
Clear DISK data?
Yes:ENTER   No:STOP
```

- 
- ⑤ If you are sure you want to initialize the disk, press **ENTER**. To exit without initializing, press **STOP**. When you press **ENTER**, initializing will begin, and the following display will appear.

```
Initializing      **
Please Wait      [INIT]
```

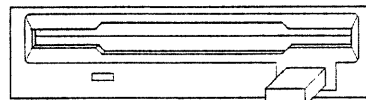
Initializing a disk will take about 1 minute.

**Note!**

When a disk is initialized, any data that may have been on the disk will be erased. Before initializing a disk that has been used by another device, make sure that it is ok to erase the data.

- ⑥ When initialization is complete, the following display will appear. When the display changes, press the eject button and remove the disk.

```
INIT Complete! Cont?
YES:ENTER      NO:STOP
```



Press the eject button

- ⑦ To end the procedure, press **STOP**.

If you wish to continue initializing another disk, insert the disk, press **ENTER**, and repeat the procedure from step ⑤.

You now have a disk which can be used to store MC - 50 data. For details of the Save procedure, refer to page 41 of this manual.

- To return from this display to Mode 1 standby, hold **SHIFT** and press **MODE** to get the mode select display. Then press **1** → **ENTER**.

# 7 BASIC OPERATION

## 1. Recording with a MIDI Keyboard and the MC-50

Let's connect a MIDI keyboard (electronic piano or synthesizer) to the MC-50 and make a simple recording. Keeping time with the metronome, play Bach's "Air on the G String" and record it in realtime. In this example, we will record the accompaniment part and the melody part separately.

\* For connections, refer to page 21.

### ■ Record the accompaniment

First, record the accompaniment on track 1.

● From the standby condition

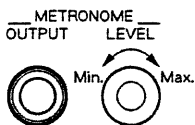
- ① Select the song number of the song you wish to record.

Move the cursor to the right of "SONG", and use **[SHIFT]**+Alpha - dial to select the song number. (It is not possible to select a number greater than 8.)

```
SONG █
M= 1  ♩=120 REAL
```

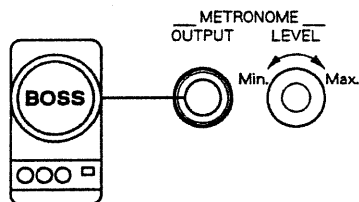
- ② Press **[REC]**. The REC indicator and the indicator of track 1 will begin blinking. And the metronome will begin to sound.

If the volume is too low (or high), rotate the metronome volume knob located on the back panel to the right (or left).



\* Changing the volume of the metronome will also change the volume of the MC-50's warning signal.

\* If the metronome volume is too low, you can connect a monitor amp or headphones to the Metronome output jack to hear the metronome at a higher volume. The metronome output volume knob also affects this output level.



- ③ Press **[REC]** once again, and the recording settings display will appear.

```
Recording method      Track
REPLACE REC  ▶TRK 1
M= 1  4/4  CH=ALL
```

Time signature      MIDI channel

- ④ Set the recording parameters as necessary.

◀▶ → Alpha - dial/numeric keys → ENTER

Example settings

Parameter	Input value	
Recording method	REPLACE REC	select Replace Recording
Recording Track	1	record on track 1
Time	4/4	record in 4/4 time

- 🔊 Replace Recording:

Select this recording mode if you are recording on a Phrase Track for the first time. If musical data already exists in the track selected for Replace Recording, the previous musical data will be erased, and replaced by the newly recorded data (☞ see II /page 28). If you wish to layer new Musical messages onto existing data in a track, set the display to MIX REC (Mix Recording) (☞ see II /page 32) before beginning to record.

- ⑤ Press PAUSE. The PAUSE indicator will light orange.

- ⑥ Use the Alpha - dial to set the tempo.

As you rotate the Alpha - dial toward the right, the tempo will become faster. The displayed tempo value indicates the number of beats that will occur in one minute (example: ♩ = 120). The tempo can be set over the range of ♩ = 10—250.

\*If you are not sure of being able to play the song correctly, record at a slow tempo. When playing back, you can use the Alpha - dial to increase the tempo.

- ⑦ Play the following accompaniment part on the keyboard.

When you begin playing, recording will start automatically (key on start).

### Air on the G string

J.S Bach

Melody part

→ Accompaniment part

- ⑧ When you finish playing, press **STOP**.
- ⑨ Press **RESET** to return to the beginning of the song.
- ⑩ Press **PLAY** to listen to the playback.

During playback, try using the Alpha - dial to adjust the tempo, and select different sounds on your keyboard.

## ■ Record the melody while listening to the accompaniment

Next, record the melody part on track 2 while listening to the accompaniment you just recorded.

- ① Press **RESET** to return to the beginning of the song.
- ② Press **REC**.

\*Since you will be recording another track with the same time signature as the accompaniment part, there is no need to modify the Replace Recording settings (by pressing **REC** once again to get the recording setting display).

When you press the key, the following display will appear.

```

Press PLAY >> RECORD
M= 1  J=1/4 REAL
  
```

Use the Alpha - dial to adjust the tempo.

- ③ Press track key **2**. It is also possible to select a track to record by pressing a track key.

TEMPO	5	TRACK	6	7	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RHYTHM	1	2	3	4	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

When you press the key, the indicator will begin blinking.

- ④ Press **PLAY**. After a two - measure count, the previously recorded accompaniment will begin playing back (count in recording).

```

-2--1-1-2...
  ^
  
```

When the display reaches 1, playback will start

- ⑤ While listening to the playback, play the melody part on the keyboard.
- ⑥ When you finish recording, press **STOP**.

If you wish to re - record, press **RESET** to return to the beginning, and repeat from step ②.

---

## ■ Playback the song data you recorded

You have now completed your recording of "Air on the G String". Play it back, and if you are not satisfied with it, use Replace Recording to re-record either track as many times as you like. Here we will explain some convenient ways in which you can playback a song for checking purposes.

Quadruple speed play (fast playback)

While you hold **PLAY** and press **▶**, the song will be played at four times normal speed. (The pitch will remain the same.) When you release the button, the speed will return to normal.

Quarter speed play (slow playback)

While you hold **PLAY** and press **◀**, the song will be played at one fourth of the normal speed. (The pitch will remain the same.) When you release the button, the speed will return to normal.

Repeat play (continuous playback)

If you hold **SHIFT** and press **PLAY** to start playback, the song will continue repeating. Press **STOP** to stop playback.

\* You can also repeatedly playback a desired area of a song. This is called Block Repeat (see II /page 16).

Track mute play (playback only desired tracks)

During playback, or in the standby condition, the track indicators of all tracks which contain musical data will light. When you press the track key of a track which is lit, it will alternate between lit and off. When a track is turned off, the musical data in that track will not be transmitted from MIDI OUT. In this way, you can playback only the desired tracks. This can also be done during playback.

\* If you mute the melody track, only the accompaniment will be heard, providing "music minus one" for you to play along with.



## ■ Save song data to disk

The song you recorded will be lost if you turn the power off. If you wish to keep the song, you must save the song data from internal memory to a floppy disk.

Song data in internal memory is distinguished by the Song Number. Song data on disk, however, is distinguished by name (Song Title), and song numbers are not used. The MC - 50 will not allow you to save song data to disk before you have given it a Song Title. Now let's save the "Air on the G String" to disk.

\*To save two or more songs to disk in a single operation, use the mode 2 Disk Save (⇨ see II /page 137).

### 【Save song data】

Make sure you have a floppy disk that has been formatted by the MC - 50 (⇨ see I /page 34).

● From the standby condition

- ① Select the song number you wish to save.

Move the cursor to the right of SONG, and use the Alpha - dial (numeric keys → **ENTER**) to select.

```
SONG 1
M=    1  ↓=120  REAL
```

\*If internal memory contains only the "Air on the G String", you will not be able to select any other song number.

- ② Move to the Song Title display.

**FUNC** → **3** (numeric key 3) /Alpha - dial → **ENTER**

```
FUNC 3 SONG TITLE
      ──┬──
```

Cursor

- ③ Specify a Song Title of up to 13 characters.

For this example, input "A i r".

The horizontal line blinking beside "┆" is the cursor for this display, and indicates the position at which a character will be input. To select characters of the alphabet, use the numeric keys, and move the cursor using **◀ ▶**.

## 《Inputting characters from the numeric keys》

The numeric keys can be used to input the numerals and alphabetical characters printed on each key. Each time you press a key, the display will cycle through these characters. To enter lower - case characters, hold **SHIFT** as you press the numeric keys.

Numeric key	Order of display	Numeric key	Order of display
<b>0</b>	0 → (Space) → 0	<b>5</b>	5 → M → N → O → 5
<b>SHIFT</b> + <b>0</b>	0 → (Space) → 0	<b>SHIFT</b> + <b>5</b>	5 → m → n → o → 5
<b>1</b>	1 → A → B → C → 1	<b>6</b>	6 → P → Q → R → 6
<b>SHIFT</b> + <b>1</b>	1 → a → b → c → 1	<b>SHIFT</b> + <b>6</b>	6 → p → q → r → 6
<b>2</b>	2 → D → E → F → 2	<b>7</b>	7 → S → T → U → 7
<b>SHIFT</b> + <b>2</b>	2 → d → e → f → 2	<b>SHIFT</b> + <b>7</b>	7 → s → t → u → 7
<b>3</b>	3 → G → H → I → 3	<b>8</b>	8 → V → W → X → 8
<b>SHIFT</b> + <b>3</b>	3 → g → h → i → 3	<b>SHIFT</b> + <b>8</b>	8 → v → w → x → 8
<b>4</b>	4 → J → K → L → 4	<b>9</b>	9 → Y → Z → ! → 9
<b>SHIFT</b> + <b>4</b>	4 → j → k → l → 4	<b>SHIFT</b> + <b>9</b>	9 → y → z → ? → 9

⏏ ·· press **1** twice

↓  
press **▶**

i ·· **SHIFT** + press **3** four times

↓  
press **▶**

f ·· **SHIFT** + press **6** four times

\* To delete the character at the cursor position, press **PAUSE** + **◀**.

\* You can also use the Alpha - dial to select characters. This allows you to select symbols in addition to numerals and alphabetical characters. As you rotate the dial to the right, the following characters will appear.

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

④ Press **STOP** to finalize the Song Title.

You will return to the standby condition.

⑤ Insert a disk (with the protect tab in the WRITE position) into the disk drive.

⑥ Move to the Available display, and check the amount of memory used by the song you wish to save.

**SHIFT** + **AVAIL**

Remaining memory	Number of songs
MEMORY= 67K	SONG# 5
SONG 1= 20K	12%

↑  
Memory amount and percentage used by the displayed song number

Song number

- 
- ⑦ Move to the Disk Avail display, and check the amount of free memory remaining on disk.

MICROSCOPE

Remaining disk memory      Number of song files

```
DISK  =589K:FILE=  6
                = 17K
```

Song title

Memory amount by the displayed song file

If the amount of memory used by the song is greater than the amount of free memory remaining on disk, it will not be possible to save the data. In this case, insert another disk.

- ⑧ Execute the Save operation that you specified.

SHIFT + SAVE

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

- ⑨ Press the eject button and remove the disk. After removing the disk, set its protect tab to the PROTECT position.

---

## ■ Load song data from disk

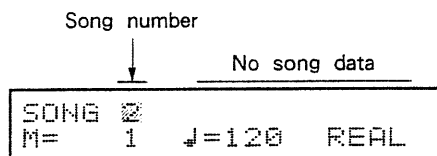
The process of transferring song data (Song File) from disk into internal memory is called Loading. To playback song data from disk, you must first load it into internal memory.

\*If you wish to load two or more songs in a single operation, use the mode 2 Disk Load operation (⇨ see II /page 136).

### 【Loading a single song file】

● From the standby condition

- ① Insert the disk (with the protect slider at PROTECT) into the disk drive.
- ② Select a song number which does not contain song data. Move the cursor to the song number, and select using **[SHIFT]**+Alpha - dial.



- ③ Move to the Disk Available display.  
**[SHIFT]**+**[AVAIL]** → **[MICROSCOPE]**
- ④ Select the song file to load, and execute loading.  
Alpha - dial → **[LOAD]**
- ⑤ When loading is completed, you will return to the standby display.

# 8 MULTITRACK RECORDING

This chapter explains effective ways to use a variety of parts in your recordings, and illustrates some of the more advanced operations. As our example, we will use Mendelssohn's "Spring Song", in a simple four - part arrangement of melody, bass, backing, and rhythm. (Since the original song is long, it has been shortened for this example.) After completing this song, you can go on and try other songs from commercially available sheet music.

## 1. Recording Method

In multitrack recording, you can record each part on a track using the recording method most appropriate for the part.

### ■ Phrase Tracks

There are two ways in which you can record a Phrase Track; Realtime recording, in which your keyboard playing is recorded exactly as you play, and Step Recording, which allows you to numerically specify the length, etc. of each note, and specify the pitch using the numeric keys or from a keyboard. Each method has its own advantages.

#### ○ Realtime recording

- is much quicker than steprecording. You can **quantize** afterward if necessary.
- faithfully reproduces musical nuances of timing and dynamics.
- makes it easy to enter continuous control changes such as modulation wheel, pitch bend wheel, or aftertouch.

#### ● Quantize (☞ see I /page 71):

This operation corrects the unevenness in note timing that may occur when you record a song using Realtime Recording. You can record without worrying about slight timing mistakes, and then use the Quantize function afterward.

#### ○ Step recording

- allows you to accurately record difficult (or unplayable) phrases.
- is useful when you want a mechanical feel, as in techo - pop.
- is convenient when recording phrases or patterns that will be repeated.

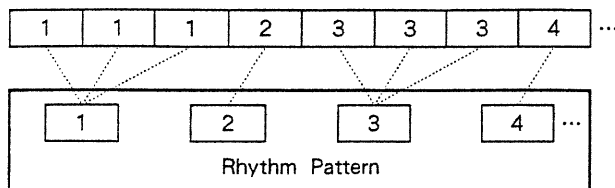
Phrase Track recording  
(tracks 1—8)



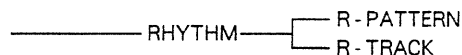
### ■ Rhythm Track

To record the Rhythm Track, you will create several Rhythm Patterns, and arrange these Rhythm Patterns in the Rhythm Track. Each Rhythm Pattern is one measure long, meaning that the Rhythm Track is created one measure at a time.

Rhythm Track



Rhythm Track recording



# Spring Song

Mendelssohn

$\text{♩} = 120$

1 3

Trumpet

Strings

Bass

Drums

PTN - 1

5 7

Trumpet

Strings

Bass

Drums

PTN - 2

9 11

Trumpet

Strings

Bass

Drums

PTN - 3

13 15 17

Trumpet

Strings

Bass

Drums

PTN - 4

## 2. Before you begin recording

If you are recording a song from printed music, it will be easier if you make the following preparations.

### ●Decide the recording method for each part

We will record the rhythm part in the Rhythm Track, and the melody, backing, and bass parts in Phrase Tracks.

Use realtime recording to record the brass and strings parts of the sample song, and Quantize them later if necessary. The bass part consists of the same phrase repeated, so we will record it using step recording.

### ●Decide the order in which you will input the musical data

You may begin recording from any track you like, but in general, parts are recorded in the order of drums → bass → melody → backing. The reason for this is that once the drum part has been input, the overall structure of the song is easier to understand. In this chapter we will explain the recording process in this order, but you may use any order you find convenient.

### ●Decide the track and channel of each part

Decide which sound you will use for each part, and the track and channel on which you will record it. For each part, you can select from tracks 1—8 and channels 1—16.

The musical score shows four staves. The top staff is labeled 'Trumpet 1TR 1CH' and contains a melodic line starting with a circled '1'. The second staff is labeled 'Strings 3TR 3CH' and contains a sustained harmonic. The third staff is labeled 'S-Bass 2TR 2CH' and contains a rhythmic pattern. The bottom staff is labeled 'Drums R.TR 10CH' and contains a drum pattern.

《Example settings for the sample song》

Part	Sound	Track	MIDI channel
Melody part	Trumpet	Track 1	ch.1
Bass part	Slap Bass	Track 2	ch.2
Backing part	Strings	Track 3	ch.3
Rhythm part	Drum	Rhythm track	ch.10

\* Phrase Tracks 4—8 are not used in this example.

---

● **Mark the measure numbers on the sheet music**

The sheet music may jump from one measure to another measure because of repeat marks etc. When you record a song from sheet music, the procedure will go smoothly if you take a moment to mark measure numbers on the sheet music. This will also be helpful if you later need to input additional data or make corrections, since the MC - 50 lets you jump immediately to a specified measure number. Measure numbers are marked for every two measures of the example song.

\* For an explanation of musical symbols, refer to "Reading music" at the end of this manual.

● **Mark the Rhythm Pattern numbers on the sheet music**

Notice that the rhythm part consists mostly of repetitions of the same pattern, with fill - in patterns (short irregular phrases at structural divisions of the song) added for occasional emphasis. Each measure of an MC - 50 rhythm part consists of one pattern, and copies of the same pattern can be used as many times as desired. Recording will be easier if you write the Rhythm Pattern number onto the sheet music wherever the rhythm pattern needs to change. The sample song uses four different patterns.

● **Select a song number which does not contain song data**

If internal memory already contains song data, recording new data into the same song number will either combine the new with the old data, or erase the old data. Before you continue, make sure to select a song number which does not already contain song data.

From the mode 1 standby condition, move the cursor to the right of "SONG", and use **SHIFT** + Alpha - dial to select a song number which does not contain song data. (It is not possible to select a song number of 9 or higher.)

Song number

SONG	█		
M=	1	♩=120	REAL

After selecting a song, you can begin recording the parts of the multitrack recording.





The rhythm part for this example consists of the following four Rhythm Patterns. First we will create these four Rhythm Patterns (patterns 1—4).

Rhythm Pattern 1

Rhythm Pattern 2

Rhythm Pattern 3

Rhythm Pattern 4

< Example drum score >

# Recording Rhythm Pattern 1

< Example: Inputting velocity codes for pattern 1 >

Example)  
Closed hi-hat 3 - 2 - 3 - 2 - 3 - 2 - 3 - 2 -  
Snare drum ----- 7 ----- 7 -----  
Bass drum 7 ----- 4 5 -----

● From the standby condition

- ① Set the recording mode to "RHYTHM".

Use to make "REAL" blink, and use the Alpha - dial to change it to "RHYTHM".

SONG 1  
M= 1 ♩=120 **RHYTHM**

Recording mode

- ② Press , use the Alpha - dial to select "R-PATTERN", and press .

RECORD **R-PATTERN** ENTER

Rhythm Pattern number  
PTN 1 4/4

- ③ Move the cursor to the right of PTN, and use the Alpha - dial (or numeric keys + ) to select the pattern number.

Since we are now creating pattern 1, press without changing the setting.

- ④ Move the cursor to the right of PTN 1, and use the numeric keys + (or the Alpha - dial) to specify the time signature.

Press → → →

Time signature  
PTN 1 4/4

- ⑤ Specify the rhythm instrument.

Use or to select the instrument.

Press to select an instrument of a higher number. Press to select an instrument of a lower number.

PTN 1 4/4  
INST **BD1** RESO=♩

Rhythm instrument number

\* We will start with the bass drum.

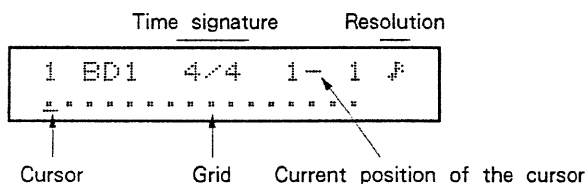
Select the instrument "1 BD1", and press .

⑥ Specify the resolution (the shortest note value to be used).

Since the shortest note value in the bass drum of Pattern 1 is a 16th note, use the Alpha - dial to specify this, and press **ENTER**.

```
PTN 1 4/4
INST 1 BD1 RESO=16
```

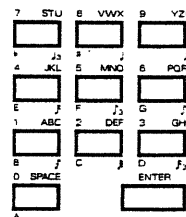
- \* The grid indicates the position at which rhythm notes will be input.  
The number of grid divisions will depend on the time signature and resolution you select.



- \* The upper right of the display shows the position of the cursor.

**Resolution can also be input using the numeric keys.**

Note value symbols are printed below each numeric key. Press a numeric key to select a Resolution of the corresponding note value.

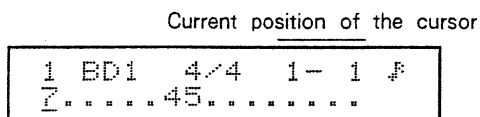


⑦ Press **SHIFT** + **PLAY**. The metronome will begin sounding in 4/4 time, and you can begin input.

As you input Velocity Codes (numbers to indicate the strength of each note), the pattern will be repeated, allowing you to listen to the pattern as you build it up.

⑧ Use **←** **→** to move the cursor in the grid, and use the numeric keys to enter a Velocity Code at the appropriate positions of the grid to enter the bass drum part shown in the score for pattern 1.

You can specify the Velocity Code over eight levels, from 1 to 8. Higher numbers are louder.



Try this out by inputting **7** at cursor position 1 - 1, **4** at 2 - 3, and **5** at 2 - 4. If you input a Velocity Code at the wrong place, move the cursor to the grid position of the mistake, and press numeric key **0** to erase it.

- \* When recording the rhythm, it is important to add variations in velocity. If you use the same Velocity Code for all notes, the performance will be mechanical and uninteresting.

- ⑨ Press **SKIP** to select instrument "3 SD1", and input Velocity Codes for the snare drum.

```
3 SD1 4/4 4- 1 ♯  
.....7.....2.....
```

Input **7** at cursor position 2 - 1, and **7** at 4 - 1.

### Inputting a flam

A "flam" is a short grace note added immediately before the main note. For example instead of a single snare drum beat "ta", it would play a rapid "ta - ta". The MC - 50 lets you create a similar effect by holding **SHIFT** as you press a numeric key to specify the Velocity Code.

- ⑩ Input the Velocity Codes for the closed hi - hat.

Press **SKIP** to select instrument "5 CHH".

Input **3** at cursor position 1 - 1, **2** at 1 - 3, **3** at 2 - 1, **2** at 2 - 3, **3** at 3 - 1, **2** at 3 - 3, **3** at 4 - 1, and **2** at 4 - 3.

```
5 CHH 4/4 4- 3 ♯  
3.2.3.2.3.2.3.2.
```

- ⑪ This completes pattern 1. Press **ENTER** to finalize the input values.

If you wish to stop while remaining in recording mode, press **PAUSE**. If you wish to continue to the next step, press **SHIFT** + **PLAY** to continue playing.

## ■ Recording patterns 2 and 4

While the pattern continues to play, move the cursor to "PTN 1" and use the Alpha - dial to change this to "PTN 2 (4)" (the currently playing pattern will stop), and press **ENTER** once again.



When you press **ENTER**, you will be in the same condition as step ⑨ of "Recording pattern 1". Create patterns 2 and 4 just as you did for pattern 1.

### < Example of Velocity Code input for pattern 2 >

The diagram shows musical notation for pattern 2 in 4/4 time. The notation includes a bass clef, a common time signature, and a series of notes and rests. Above the notes are velocity codes: 1-1, 2-1, 3-1, 4-1. To the right of the notes are velocity code inputs for different drum parts: High tom (7), Low tom (6), Closed hi-hat (3-2-3-2-3-2-3-2), Snare drum (7-7-5-6-7), and Bass drum (7-4-5).

\* Use a 16th note Resolution setting.

### < Example of Velocity Code input for pattern 4 >

The diagram shows musical notation for pattern 4 in 4/4 time. The notation includes a bass clef, a common time signature, and a series of notes and rests. Above the notes are velocity codes: 1-1, 2-1, 3-1, 4-1. To the right of the notes are velocity code inputs for Snare drum (7) and Bass drum (7).

\* Use a quarter note Resolution setting. To change the Resolution, press **ENTER** to move the cursor to the Resolution, press numeric key **8** (or use the Alpha - dial to change the setting to ♩), and press **ENTER** once again.

The diagram shows a rectangular box representing the Resolution setting. Above the box is the text "6 VWX" and below the box is the text "# ♩". To the right of the box is the text "Press numeric key **8** to set the Resolution to ♩".

## ■ Recording pattern 3

As you can see from the music on page 50, pattern 3 is similar to pattern 1. In this example, we will copy pattern 1 to pattern 3 (☞ see II /page 46), and then modify pattern 3.

### < Example of Velocity Code input for pattern 3 >

The musical notation shows three staves: Closed hi-hat, Snare drum, and Bass drum. The Closed hi-hat part has velocity codes: 1-1, 2-1, 3-1, 4-1. The Snare drum part has velocity codes: 3-2, 3-2, 3-2, 3-2. The Bass drum part has velocity codes: 7-6, 4-5. The notation includes a bass clef, a 6/8 time signature, and various rhythmic values (quarter notes, eighth notes, and rests).

- ① Select the copy destination pattern number.

The screenshot shows the PTN display with the following text: PTN 4/4, INST 1 BD1 RESO= ♪. An arrow points to the right, where the PTN display shows PTN 4/4.

From the above display, move the cursor to the pattern number, and use the Alpha - dial to select pattern 3 as the copy destination.

\* If the above display does not appear, go through steps ① and ② of "Recording pattern 1".

- ② Hold **[SHIFT]** and press **[2]**.

The screenshot shows the PTN display with the following text: PTN 3 4 COPY.

- ③ Select the copy source pattern number.

Use the Alpha - dial to select pattern 1 as the copy source, and press **[ENTER]**.

The screenshot shows the PTN display with the following text: PTN 3 4 COPY. An arrow points to the right, where the PTN display shows PTN 3 4 1 >> REC.


- ④ Press **[REC]**.

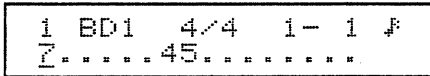
This completes the copying procedure.

When copying is completed, you will immediately hear pattern 3 playback. To stop playback while remaining in recording mode, press **[PAUSE]**. To resume playback and continue input from step ⑤, press **[SHIFT]** + **[PLAY]**.



⑤ Patterns 1 and 3 differ in the bass drum rhythm. In this example, we will modify just the bass drum.

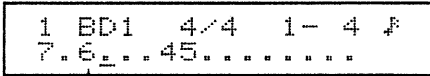


Press  several times until the Velocity Code input display appears.





⑥ Input velocity code 6 at position 1 – 3.

Press  to move the cursor, and press .



↑  
1 - 3

This completes pattern 3.

To stop playback, press . To return to the standby condition, press .

\* It is also possible to record rhythm pattern from a connected keyboard (⇨ see II /page 44).



## ■ Creating the Rhythm Track

Next you will arrange these newly created Rhythm Patterns in the Rhythm Track. 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 data, the playback of the Rhythm Track will be affected.

For the song we are recording in this example, we will arrange Rhythm Pattern numbers in the Rhythm Track as follows.

Measures	1	3	5	7	9	11	13	15	17							
Rhythm Track	1	1	1	1	1	1	2	1	3	3	3	3	3	1	2	4

↑  
Rhythm Pattern numbers

Use the following procedure to arrange the Rhythm Patterns in the Rhythm Track in the order of playback.

## ■ Recording the Rhythm Track

● From the standby condition

- ① Make sure that the recording mode is "RHYTHM". If not, use to move the cursor to the recording mode, and use the Alpha - dial to select "RHYTHM".
- ② Press , and use the Alpha - dial to select "R-TRACK".

```
RECORD R-TRACK
```

- ③ Press .

```

      Measure  Time signature
R-TRK MEAS   1  4/4
PTN:  R

```

Rhythm Pattern number

- ④ We will specify Rhythm Pattern numbers starting with measure 1, so select measure 1. Use to move the cursor to the right of "MEAS", and press → .
- ⑤ Specify the pattern number to be assigned to measure 1 of the Rhythm Track. Since measure 1 uses pattern 1, press → .

```

R-TRK MEAS   1  4/4
PTN:  1  BIAS: 0

```

⑥ Specify the Velocity Bias.

When creating a Rhythm Pattern, you specified the velocity of each individual note. However, the Velocity Bias setting lets you specify a velocity adjustment for an entire Rhythm Pattern. For example by gradually lowering the Velocity Bias of each Rhythm Pattern, you can create fade - out effects. (Velocity Bias can be set over a range of - 99—+99.) In this example we will not adjust the Velocity Bias, so simply press **ENTER** to continue to the next measure. (Leave the Velocity Bias at "0".)

(**0**) → **ENTER**

You will move to measure 2.

⑦ Measure 2 also uses pattern 1, so press **1** → **ENTER**.

```
R-TRK MEAS  2  4/4
PTN:  1  BIAS: 0
```

⑧ We will not adjust the Velocity Bias, so simply press **ENTER**.

You will move to measure 3.

Continue these steps to record all 17 measures of the song. The following figure shows the pattern number to input for each measure.

Measures	1	3	5	7	9	11	13	15	17								
Rhythm Track	1	1	1	1	1	1	1	2	1	3	3	3	3	3	1	2	4

↑  
Rhythm Pattern numbers

⑨ This completes the recording process.

Press **STOP**.

```
SONG 2
M= 17  ♩=120 RHYTHM
```

⑩ Playback the Rhythm Part.

Press **RESET** to move to the beginning of the song, and press **PLAY**.

## 4. The Bass Part

The bass part consists of repetitions of the same phrase, and it must keep in precise timing. These qualities make it an ideal subject for Step Recording. It is possible to step record by inputting notes from the numeric keys, but in this example you will use your MIDI keyboard.

### Step Recording:

Step Recording is a method of recording in which you use the numeric keys etc. to input notes one by one, specifying data such as MIDI channel, note number (pitch), velocity (dynamics), step time (the time until the next note; i.e., the note value), and gate time (the length of time that the note is actually pressed). If a MIDI keyboard is connected to the MC - 50, you can input MIDI channel, note number, and velocity all at once simply by pressing a key. In this case, the previously specified Step Time will be used, and the Gate Time will be set to 75% of the Step Time (this rate can be modified freely). Of course, you can go back and change these values afterward. (Even if the Step Times are identical, a slur or tenuto note will have a longer Gate Time, and a staccato note will have a shorter Gate Time.) To input a chord, press two or more notes together. (Do not release them until all notes of the chord have been pressed.) When you release all the notes, you will advance to the next step.

## Step recording using a MIDI keyboard

Input the bass part of the musical example (page 47) into track 2 on channel 2. Before you begin recording, set your keyboard to transmit channel 2.

\*If the keyboard you are using does not allow you to change the transmit channel, use an MC - 50 editing operation to convert the MIDI channel after recording (see I /page 82).

① Press **RESET** to move to measure 1.

② Set the Recording Mode to "STEP".

Use **◀▶** to make "RHYTHM" blink, and use the Alpha - dial to change it to "STEP".

```

SONG 1
M= 1  ♩=120  STEP
    
```

③ Press **REC** to enter recording standby.

The track to be recorded

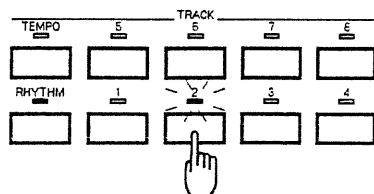
```

STEP RECORD  ▶TRK  2
M= 1  4/4  CH=ALL
    
```

④ Specify the track you wish to record.

Press track key **2**.

(The track 2 indicator will light.)



⑤ Press **ENTER** to enter step recording input mode.

\*If you wish to begin step recording from a measure for which rhythm data does not exist, specify the time signature and then press **ENTER**.

Track number	Current position	Step time
2 1	1-01-000	♩ 24

MIDI Channel

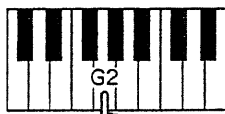
⑥ Specify the note value (step time) of the notes to be recorded.



Since the first note is a quarter note, use the Alpha - dial to set the Step Time to "♩ 96".

Track number	Current position	Step time
2 1	1-01-000	♩ 96

⑦ Press the G2 key on your keyboard.



When you release the key,

Track number	Current position	Step time
2	1-01-000	♩ 96
2	G2 43 73	86










Channel    Note name    Note number

The current position has moved to the second beat

Track number	Current position	Step time
2 2	1-02-000	♩ 96

This will input the note number, MIDI channel, velocity, and step time (and gate time). As necessary, move the cursor to each parameter of the note, and use the Alpha - dial to modify the value.

\*The initial values of step time and gate time will be as follows.

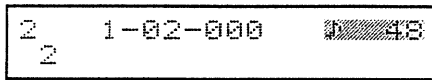
Note symbol	Step time	Gate time
	6	4
	12	9
	16	12
	24	19
	32	26
	48	41
	64	56
	96	86
	192	178


⑧ Next we will enter an eighth note.

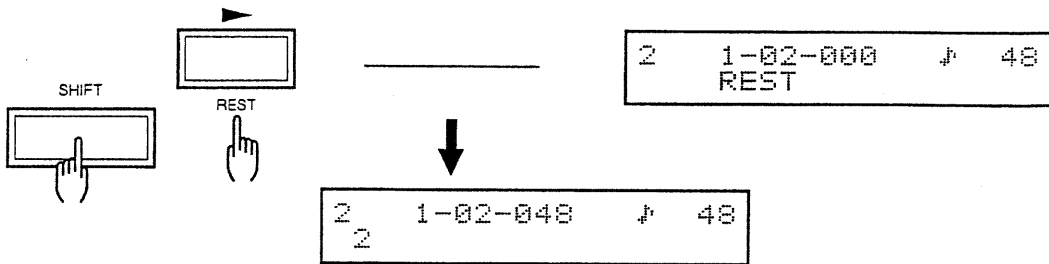


Specify the step time.

Since this is an eighth note, use the Alpha - dial to set the step time to "♪ 48".



Hold **SHIFT** and press  once to enter a rest of the specified step time.



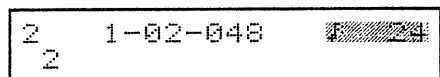
\*This simply advances the current position by the length of the step time. In reality, there is no such thing as "rest data".

⑨ Press the G2 key on your keyboard.



Specify the step time.

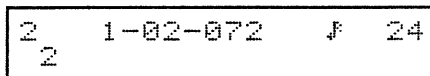
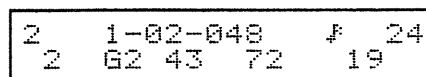
Since this is a sixteenth note, use the Alpha - dial to set the step time to "F 24".



Press the G2 key on your keyboard.



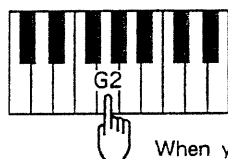
When you release the key,



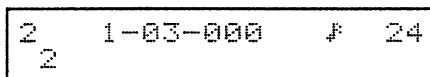
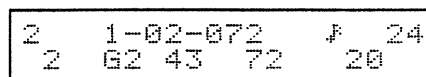
⑩ Press the G2 key on your keyboard.



Since this is also a sixteenth note, press the G2 key on your keyboard without changing the step time.



When you release the key,

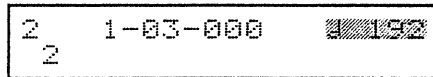


⑪ Finally, input a half - note rest.

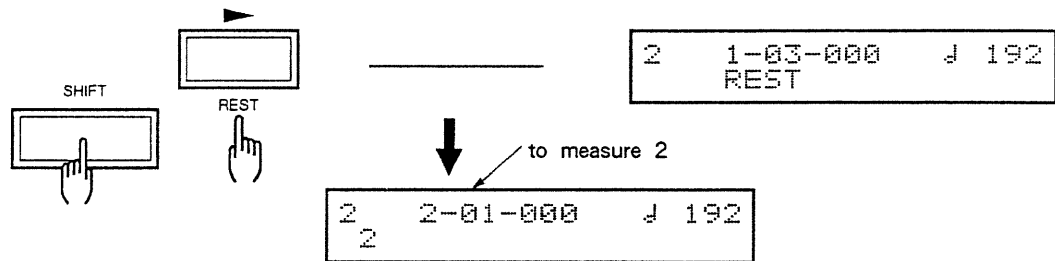


Specify the step time.

Since this is a half note, use the Alpha - dial to specify a step time of "J 192".



Hold **SHIFT**, and press **▶** once.



This completes the input for the first measure.

In the same way, input the rest of the song to measure 16.

When you finish, press **STOP**, press **RESET** to return to the beginning of the song, and press **PLAY** to hear the bass part.

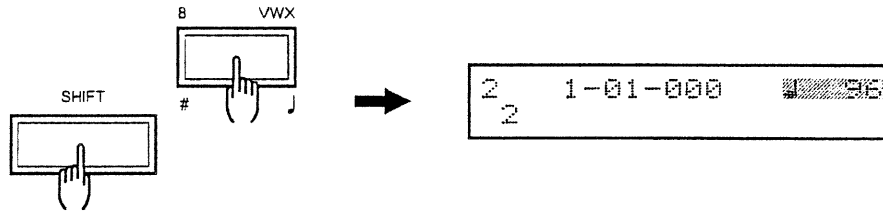
## Some convenient functions

During step recording, you can use the following functions for more efficient data entry.

### ○ Numeric key input

You can specify the step time using not only the Alpha - dial, but also by holding **SHIFT** and pressing a numeric key. (Note values are printed at the lower right of each numeric key.)

Example : **SHIFT** + **8** will specify "↓ 96"



### ○ To correct a note

If you input a wrong note, press **RESET**.

Each time you press **RESET**, you will step back one note, and the data at that location will be erased.

Re - enter the correct data.

### ○ Copy

If the same phrase is repeated several times, you can use the Copy function (☞ see II /page 96).



## 5. The Melody Part and Backing Part

Use realtime recording to record the melody part and the backing part. The following procedure will refer to the melody part. After you finish, record the backing part in the same way.

Since the melody part will be recorded in track 1 on channel 1, set your MIDI keyboard to transmit on channel 1. (The backing part will be recorded in track 2 on channel 3, so set your MIDI keyboard to transmit on channel 3.)

\*If the keyboard you are using does not allow you to change the transmit channel, use an MC - 50 editing operation to convert the MIDI channel after recording (see I /page 82).

**【Procedure】** ● From the standby condition

① Press **RESET** to move to measure 1.

② Set the recording mode to "REAL".

Use **◀▶** to make "STEP" blink, and use the Alpha - dial to select "REAL".

```
SONG 1
M= 1  ♩=120  REAL
```

③ Press **REC** to enter recording standby.

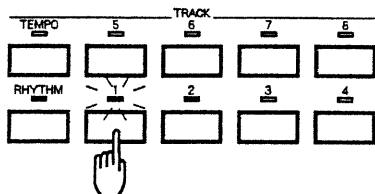
```
Press Play >> RECORD
M= 1  ♩=120  REAL
```

The metronome will begin sounding.

Use the Alpha - dial to adjust the tempo to a comfortable speed.

④ Specify the track you wish to record.

Press track key **1** (key **3** if recording the backing part.)



⑤ Press **PLAY**.

After the two - measure count - in (at the moment the display reaches 1), begin playing.

- 2 → - 1 → 1 → 2 ...

△

Begin playing at the moment the display reaches 1

---

⑥ When you finish playing, press **STOP** to end recording.

\*After realtime recording, you can (if necessary) use the Quantize operation (☞ see I /page 71) to tighten up the timing of inaccurately played notes.

This completes the recording of all parts.

Press **RESET** to return to the beginning of the song, and press **PLAY** to hear the playback.

Realtime recording also allows you to use recording methods such as “Key On Start Recording” (☞ see II /page 29) to begin recording at the moment you play the keyboard, and “Mix Recording” (☞ see II /page 32) to combine the newly recorded data with the previous data of the track.

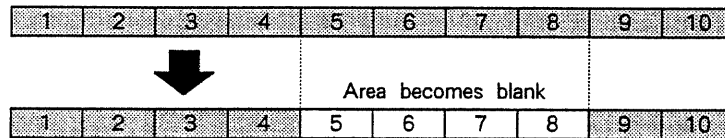
# 9] DATA EDITING

Here are some of the editing operations provided by the MC - 50.

## ■ ERASE (use an “eraser”)

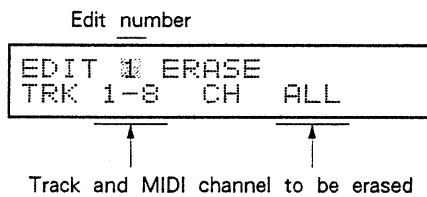
This operation erases song data from the specified area, so that the specified area becomes blank. This simply erases the data, as when you use a pencil eraser to erase notes from a written score.

Example : Erase all song data from measures 5—8 of tracks 1—8



**【Procedure】** ● From the standby condition

- ① Press **EDIT** to get the Edit mode select display.



- ② Use the Alpha - dial to select EDIT1 ERASE, and press **ENTER**.

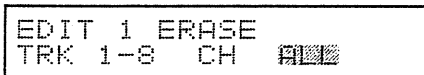
- ③ Specify the track you wish to erase.

Press the track key for the track you wish to erase, and press **ENTER**.

\*You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press **ENTER** to finalize the value.

- ④ Specify the MIDI channel you wish to erase.

Alpha - dial → **ENTER**



\*If you specify ALL, data of all MIDI channels will be selected.

⑤ Specify the MIDI status to be erased.

You can specify one of eight types of MIDI status.

MIDI status	Range
ALL (all MIDI status)	---
NOTE (notes)	Note number (0—127)
PAf (Polyphonic aftertouch)	Note number (0—127)
CC (Control change)	Control number (0—127)
PG (Program change)	Program number (1—128)
CAf (Channel aftertouch)	---
PB (Pitch bend)	---
EX (Exclusive)	ID number
TU (Tune request)	---

\*For a detailed explanation of MIDI status, refer to page 92.

Use the Alpha - dial to select the MIDI status, and press **ENTER**. (If the selected status allows you to specify a range of data values, specify the range using the Alpha - dial → **ENTER**.)

```
EDIT 1 ERASE
STATUS ALL
```

MIDI status

Range of data values

⑥ Specify the beginning measure of the area to be erased, and the number of measures to erase.

Numeric keys → **ENTER** → numeric keys → **ENTER**

```
EDIT 1 ERASE
FROM M= 1 FOR ALL
```

Beginning measure

Number of measures to erase

\*“FOR” indicates the number of measures to erase; it does not indicate the last measure of the erased area. For example if you wish to erase from measure 2 to measure 5, specify “FROM M=2 FOR 4”.

To correct a value you have specified, press **←** to move the cursor to the item you wish to correct. Use the numeric keys to enter the correct value, and be sure to press **ENTER** to finalize the value.

- ⑦ The execute display will appear.  
If you are sure you want to erase the specified data, press **REC**.

```
EDIT 1 ERASE
Sure? >> Press REC
```



```
EDIT 1 ERASE
Please Wait
```



```
EDIT 1 ERASE
TRK 1-8 CH ALL
```

- ⑧ Press **STOP** to end the operation.

For details, see “EDIT 1 Erase” on page 80 of the Owner’s Manual II .

## ■ DELETE (use “scissors”)

This operation deletes the song data from the specified area, and removes the deleted area. This is similar to using a pair of scissors to cut an unwanted section out of a tape recording.

Example : Delete measures 5—8



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

**【Procedure】** ● From the standby condition

- ① Press **EDIT** to get the Edit mode select display.

```
EDIT 1 ERASE
TRK 1-8 CH ALL
```

- ② Use the Alpha - dial to select EDIT 2 DELETE, and press **ENTER**.

- ③ Specify the track you wish to delete.

Press the track key for the track you wish to delete, and press **ENTER**.

```
EDIT 2 DELETE
TRK ALL
```

Track

\*You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press **ENTER** to finalize the value.

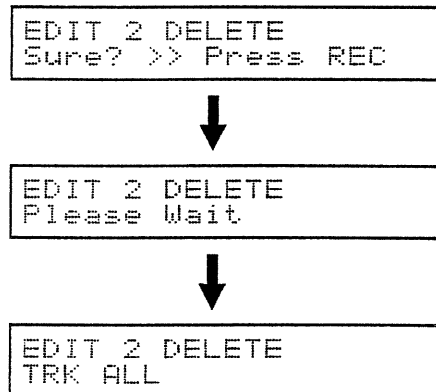
- ④ Specify the measures you wish to delete.

Numeric keys → **ENTER** → numeric keys → **ENTER**

\*"FOR" indicates the number of measures to delete; it does not indicate the last measure of the deleted area. For example if you wish to delete from measure 2 to measure 5, specify "FROM M=2 FOR 4".

- ⑤ The execute display will appear.

If you are sure you want to delete the specified data, press **REC**.



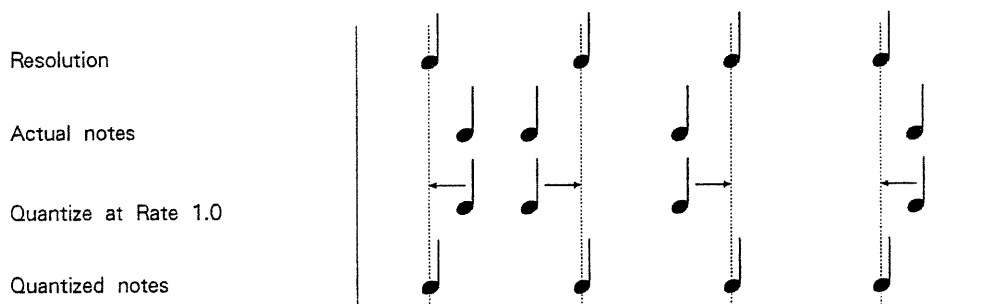
- ⑥ Press **STOP** to end the operation.

For details, see "EDIT 2 Delete" on page 82 of the Owner's Manual II .

## ■ QUANTIZE (correct timing inaccuracies)

This operation corrects inaccuracies in timing that may occur when you record in realtime.

Example : Quantize with a Rate of 1.0 and Resolution of a quarter note



The Quantize operation affects only Note messages, and will not change the timing of other messages such as Bender/Modulation messages or Program Change messages. Record only note messages in the track to be quantized. (↩ see I /page 86).

### Caution!

It is not possible to restore Quantized data to its previous condition. As a precaution, you should Copy (↩ see II / page 96) the track before quantizing it.

**【Procedure】** ● From the standby condition

- ① Press **EDIT** to get the Edit mode select display.

```
EDIT 1 ERASE
TRK 1-8 CH ALL
```

- ② Use the Alpha - dial to select EDIT 9 QUANTIZE, and press **ENTER**.

- ③ Specify the track you wish to quantize.

Press the desired track key, and press **ENTER**.

```
EDIT 9 QUANTIZE
TRK 1-8 ▶ TRK 1-8
```

Track to be quantized

\* You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press **ENTER** to finalize the value.

- ④ Specify the track into which to place the quantized track.

Press a track key, and press **ENTER**.

```
EDIT 9 QUANTIZE
TRK 1-8 ▶ TRK 1-8
```

Track after being quantized

\*You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press **ENTER** to finalize the value.

- ⑤ Specify the MIDI channel of the song data to be quantized.

Numeric keys → **ENTER**

```
EDIT 9 QUANTIZE
CH ALL RESO= ♯
```

MIDI channel

- ⑥ Specify the minimum note value (Resolution) of the data to be quantized.

Alpha - dial → **ENTER**

```
EDIT 9 QUANTIZE
CH ALL RESO= ♯
```

Resolution

\*You can also specify the note value by holding **SHIFT** and pressing a numeric key. A note symbol is printed at the lower right of each numeric key. Be sure to press **ENTER** to finalize the value.

- ⑦ Specify the amount of adjustment (the quantization Rate).

Alpha - dial → **ENTER**

\*If you quantize notes precisely to the specified note value, the performance will sound mechanical. We suggest that you set the rate to approximately 0.8. For details, see page 94 of the Owner's Manual II .

```
EDIT 9 QUANTIZE
RATE 0.8
```

- ⑧ Specify the measures to be quantized.

Numeric keys → **ENTER** → numeric keys → **ENTER**

\*"FOR" indicates the number of measures to quantize; it does not indicate the last measure of the quantized area. For example if you wish to quantize from measure 2 to measure 5, specify "FROM M=2 FOR 4".



- 
- ⑨ If you are sure you want to quantize with the specified settings, press **REC**.

```
EDIT 9 QUANTIZE  
Sure? >> Press REC
```



```
EDIT 9 QUANTIZE  
Please Wait
```



```
EDIT 9 QUANTIZE  
TRK 1-8 ▶ TRK 1-8
```

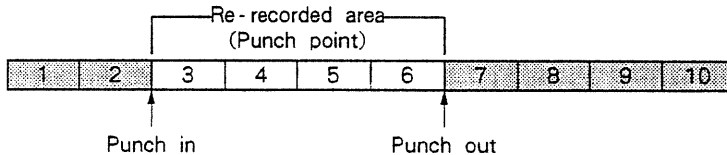
- ⑩ Press **STOP** to end the operation.

For details, refer to "EDIT 9 Quantize" (page 94) in the Owner's Manual II .

## ■ AUTO PUNCH IN RECORDING (Auto Punch In; re - record a specific area)

Punch In recording allows you to re - record a specific area while listening to the song data playback. Entering record mode at the beginning of the area is called **punching in**, and exiting record mode is called **punching out**. The area to be re - recorded is determined by FUNC 6 Punch Point. There are several forms of Punch In recording, but here we will explain how to use **Auto Punch In Recording**, where you specify the punch in/out points before beginning to record.

Example : Punch In recording on measures 3—6



\*Punch In recording can be used only for realtime recording. It cannot be used in step recording.

### **[Procedure]** First, set the punch points.

● From the standby condition

- ① Press **FUNC** to get the Function select display.

```
FUNC 1 SYNC CLOCK  
INTERNAL
```

- ② Use the Alpha - dial to select FUNC 6 PUNCH POINT, and press **ENTER**.

- ③ Specify the area to re - record (the punch in/out points).

Numeric keys → **ENTER** → numeric keys → **ENTER**

```
FUNC 6 PUNCH POINT  
FROM M= 3 FOR 4
```

Beginning measure      Number of measures to re-record

\*You can also set this using the Alpha - dial instead of the numeric keys.

After setting the value, press **ENTER**.

The punch points have now been set.

- ④ Press **STOP** to return to the standby condition.

Next, re - record the specified area.

- ① Move to a measure before the area to be re - recorded.

```
SONG 1 Spring Song
M= 2 J=120 REAL
```

Beginning measure

- ② Press **REC** twice.

- ③ Specify the recording procedure.

Use the Alpha - dial to select "AUTO PUNCH IN", and press **ENTER**.

```
REPLACE REE TRK 1
M= 1 4/4 CH=ALL
```

- ④ Specify the track you wish to correct.

Press the track key, and press **ENTER**.

Track to be corrected

```
AUTO PUNCH IN TRK 1
M= 1 4/4 CH=ALL
```

\* You can also specify this using the Alpha - dial or the numeric keys. After using the numeric keys, be sure to press **ENTER** to finalize the value.

\* Use the Alpha - dial to set a comfortable tempo.

- ⑤ Press **PLAY** to begin Auto Punch In Recording.

After a two - measure count - in, playback will begin.

When you come to the punch in point, begin playing. (When you begin playback, the indicator will change from blinking to lit.)

- ⑥ End Auto Punch In Recording.

When you pass the punch out point, press **STOP** to stop recording.

- ⑦ When you are finished with Auto Punch In Recording, change the recording mode from "AUTO PUNCH IN" back to "REPLACE".

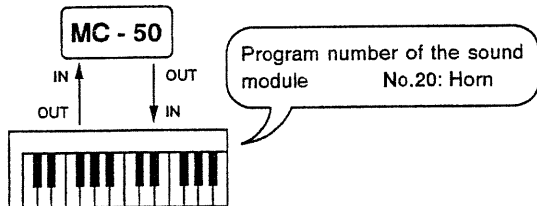
**REC** → **REC** → use the Alpha - dial to select "REPLACE" → **STOP**

\* For details, refer to "FUNC 6 Punch Point" (page 68) and "Auto Punch In" (page 34) in the Owner's Manual II.

# 10 VARIOUS USEFUL PROCEDURE

## <MICROSCOPE>

### ● Set/select a sound on the connected sound module



For example, if you input a Program number 20 on channel 1 into the third measure of track 1, the sound module will switch to the Horn sound at that point.



Standby condition

Move to the measure at which you want to select a sound (measure 3 in this example).

MICROSCOPE

EDIT → 3 → ENTER

Specify the MIDI message to input → ENTER  
\* 2 (in this example, "PG")

Specify the MIDI channel for which to select a sound. → ENTER  
(in this example, CH = 1)

Specify the Program number → ENTER  
\* 3 (in this example, "20")

STOP

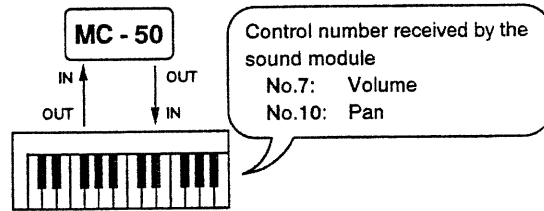
PLAY \* 4

\* 1: If you wish to input the message at a location other than the first beat of a measure, or at a specific clock, specify the location here (using the Alpha-dial, numeric keys, and cursor)

\* 2: PG = Program Change message  
CC = Control Change message

\* 3: The manual for your sound module will explain which sound will be selected by each incoming Program number.

### ● Set/select the volume or pan of each part



Standby condition

Move to the measure at which you want to set/modify the volume or pan.

MICROSCOPE

EDIT → 3 → ENTER

Specify the MIDI message you wish to input → ENTER  
\* 2 (in this example, "CC")

Specify the MIDI channel which you want to set/modify. → ENTER

Specify the Control number → ENTER  
Specify volume: 7  
Specify pan: 10

Set the value → ENTER  
\* 5 (the range of settings is 0—127)

STOP

PLAY \* 4

These MIDI messages can be...

• Deleted see Reference manual page 115

• Moved see Reference manual page 118

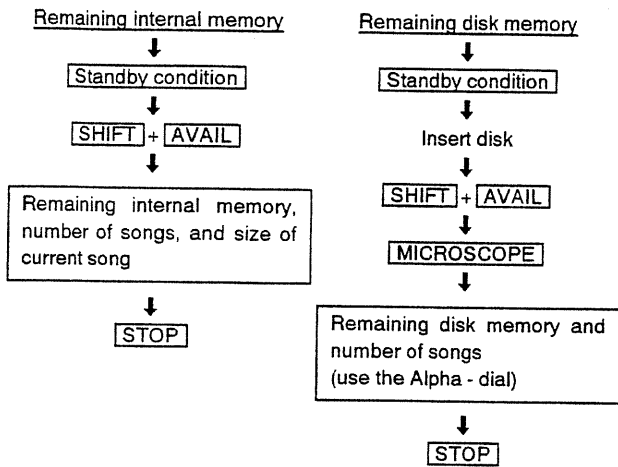
• Modified see Reference manual page 113

\* 4: For the newly input message to have an effect, you must begin playback from a measure preceding the message.

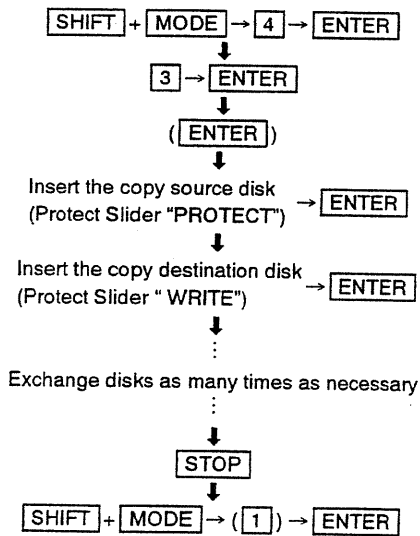
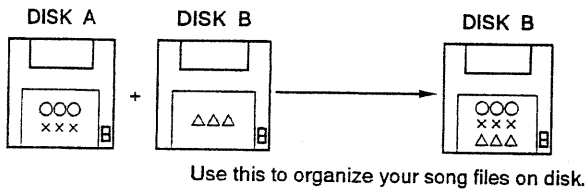
\* 5: Value : 0 — 63 — 127  
Volume : low ————— high  
Pan : <—————> <—————> <—————>  
left center right

# <DISK>

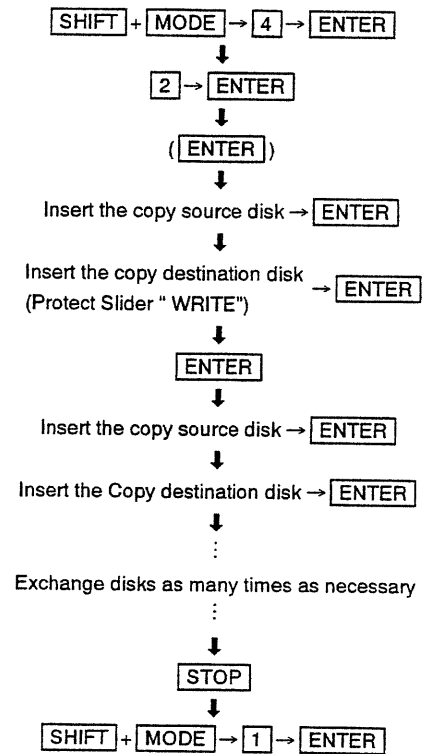
## ● Display the remaining amount of memory



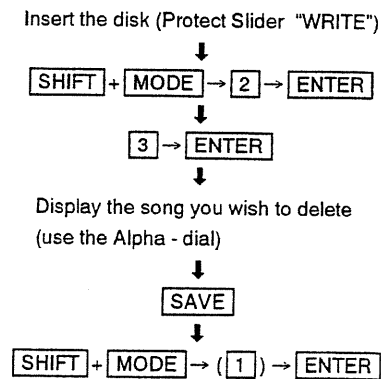
## ● Combine song files from two disks into one disk



## ● Make a copy of a floppy disk



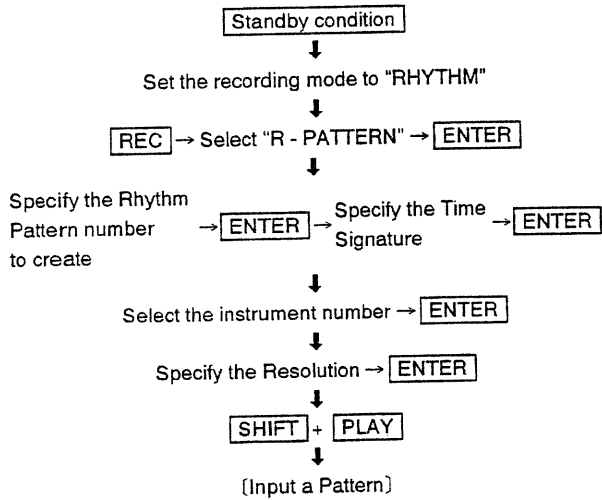
## ● Delete song files from a floppy disk



# <RHYTHM>

## ● Use a MIDI keyboard to create a Rhythm Pattern

< Creating a Rhythm Pattern >

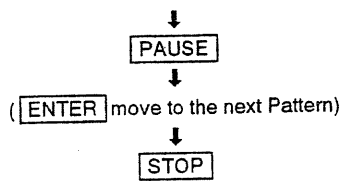


Complex patterns can be input in several passes, adding new notes to the previously recorded notes.

If the tempo is too fast, press **STOP** to return to the standby display, and adjust the tempo.

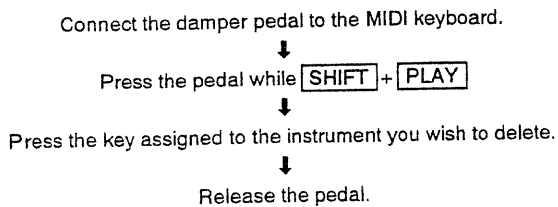
You will be able to input any instrument, regardless of the instrument number shown in the display.

Use **SKIP** / **RESET** to view the Velocity Code of the instrument you are inputting.



< If you make a mistake >

If you have a damper pedal



Connect the damper pedal to the MIDI keyboard.

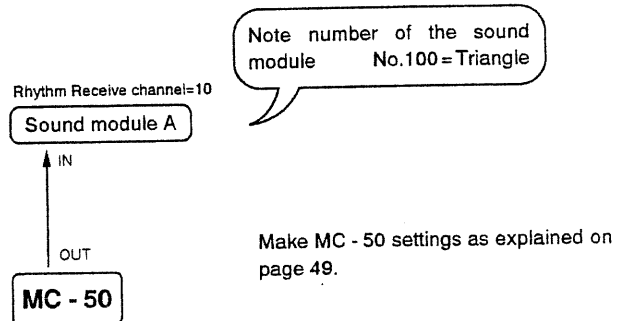
- Delete while monitoring from **SHIFT** + **PLAY**
- Delete without monitoring **PAUSE**

Press **SKIP** / **RESET** to display the Velocity Code you wish to delete.

Input "0" (use the numeric key)

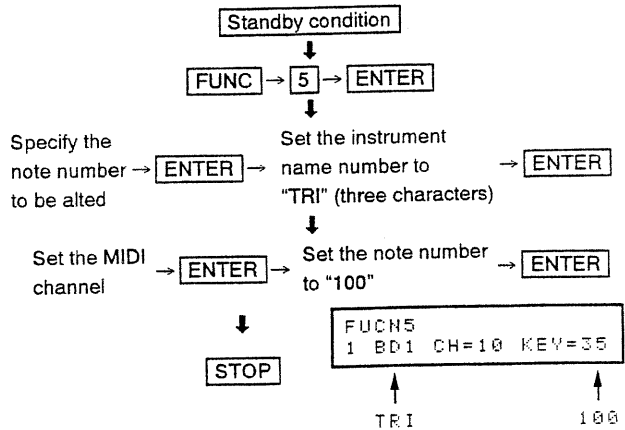
\* After creating a Pattern, follow the procedure for recording the Rhythm Track. This completes the Rhythm Track. (See Reference page 48)

## ● Set the MC - 50 instruments to the key numbers you wish to play



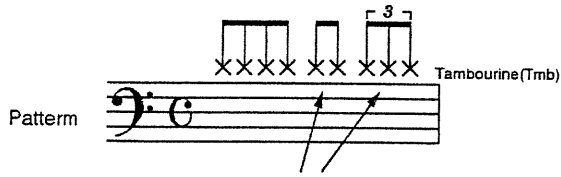
<For example if you wish to play the "Triangle" instrument of sound module A>

Set the value of the unused key number to "100". (Change the instrument name to "Triangle".)



# <RHYTHM>

## ● Modify the Resolution in the middle of a pattern for a single instrument



The sounds are the same, but the timing resolution is different

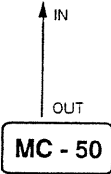
< Input the tambourine pattern shown in the example >

The resolution of the first three beats is "♪", but the fourth beat uses a resolution of "♪₃". (see Reference page 42)

Since it is not possible to use different Resolutions inside the same pattern, set the key number of an unused instrument to the key number of the tambourine, and change the instrument name to tambourine (Tmb).

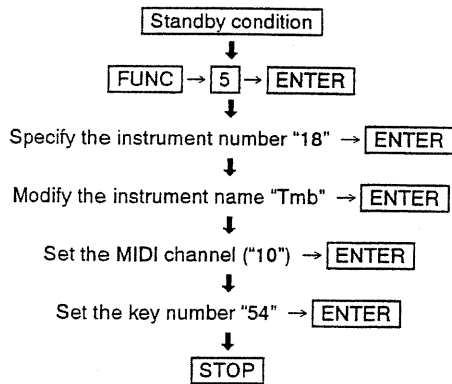
Note number of the sound module No.54: Tambourine

Sound module Receive CH = 10



Instrument number	Instrument name	CH	Key number
1	SD1	10	35
17	Tmb	10	54
18	Hbg	10	60
32	Chm	10	74

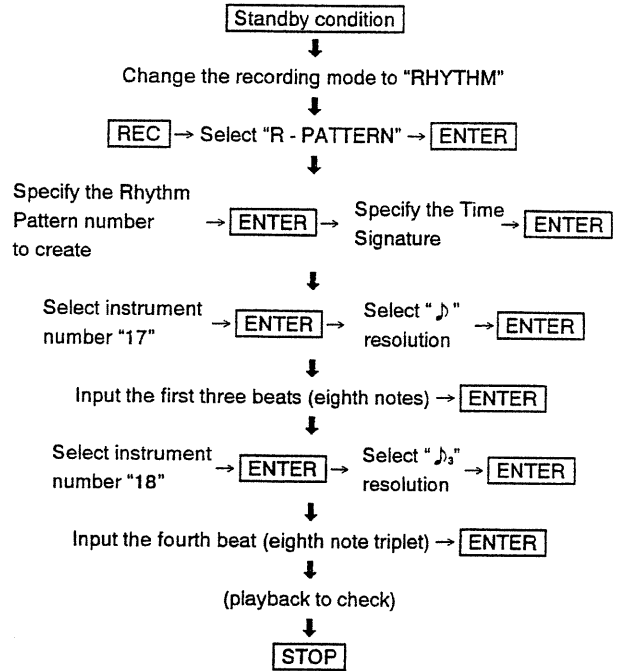
### ① Modify the settings for MC - 50 instrument number 18 (for example)



This will result in the following settings

Instrument number	Instrument name	CH	Key number
17	Tmb	10	54 (same as initial settings)
18	Tmb	10	54 (modified settings)

### ② Input the tambourine pattern



### ● Copy a Rhythm Pattern

From the same song

From another song

from the Rhythm Pattern recording display

Move to the copy source song number

Move the cursor to the copy destination pattern number

Standby condition

SHIFT + 2

SHIFT + UTIL → 4 → ENTER

Specify the copy source pattern number

Specify the copy source song number → ENTER

ENTER

REC

REC

STOP

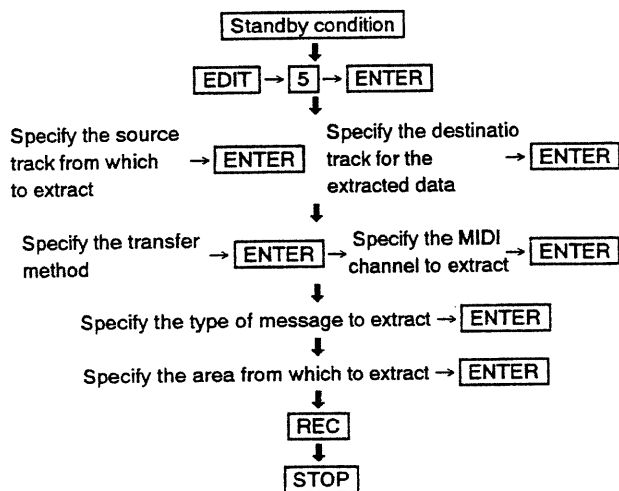
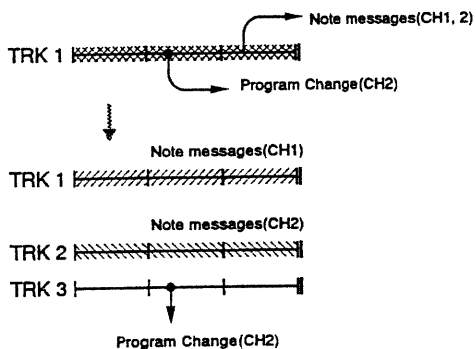
(PLAY)

STOP

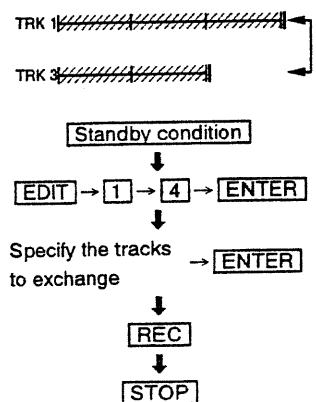
\* If you wish to edit the copied pattern, see Reference page 42.

# <SONG DATA>

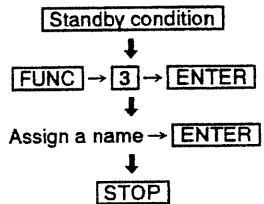
## ● Extract song data



## ● Exchange data between Phrase Tracks

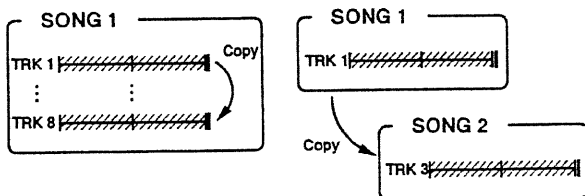


## ● Assign a Song Title

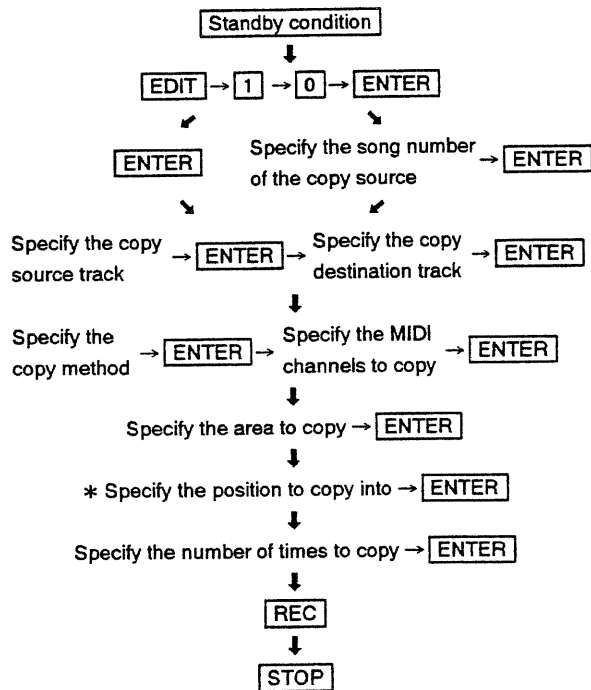


## ● Copy song data

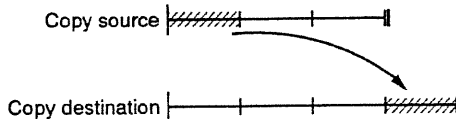
Copy within the same song      Copy from another song



Move to the song number of the copy destination



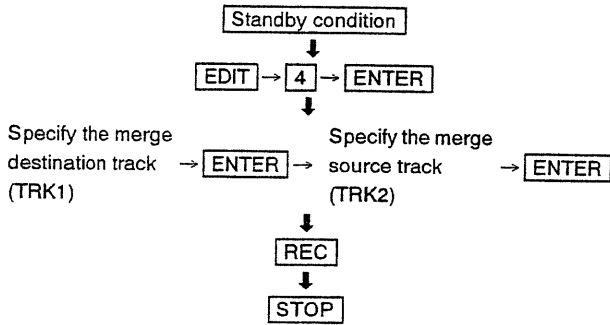
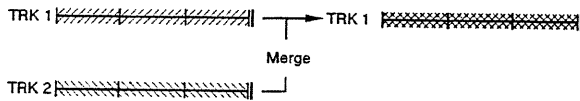
\* "If you specify "M=END", the data will be copied onto the end of the current data.



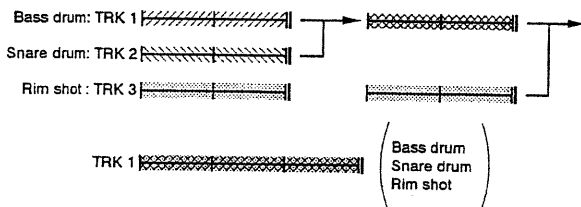


# <SONG DATA>

## ● Combine two Phrase Tracks into one Phrase Track

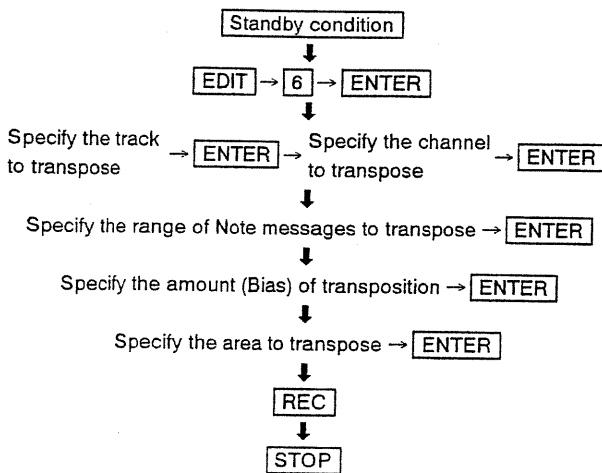


\* Using the Merge operation, you can create a Rhythm Part in the Phrase Track in realtime recording.

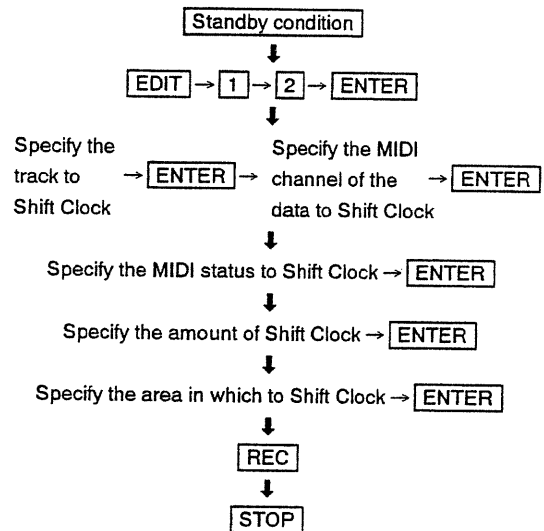
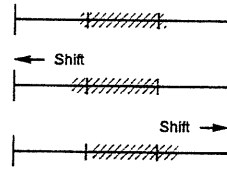


The Phrase Track allows you to create a Rhythm Part using 128 gradations of velocity. (The Rhythm Track provides only 8 gradations.)

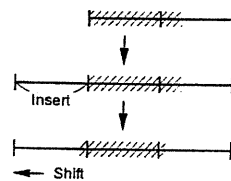
## ● Transpose the Note messages in a Phrase Track



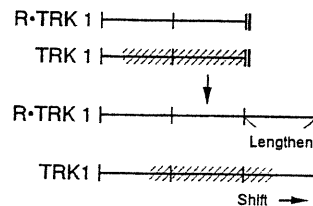
## ● Slide the timing of Phrase Track data behind / ahead of the beat



\* Movement towards the beginning is limited to the beginning of the song. If you wish to adjust the timing to be ahead of the beginning of the song, insert blank measures in measure 1 of all tracks.

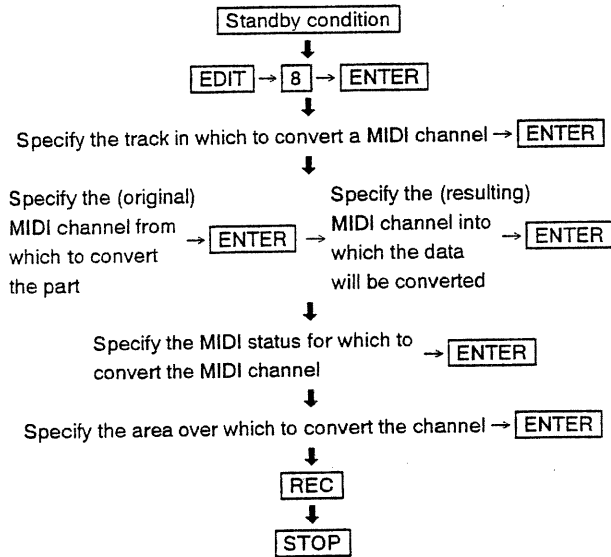


\* Data that has been shifted beyond the end of the song will not be played. You will have to lengthen the Rhythm Track.



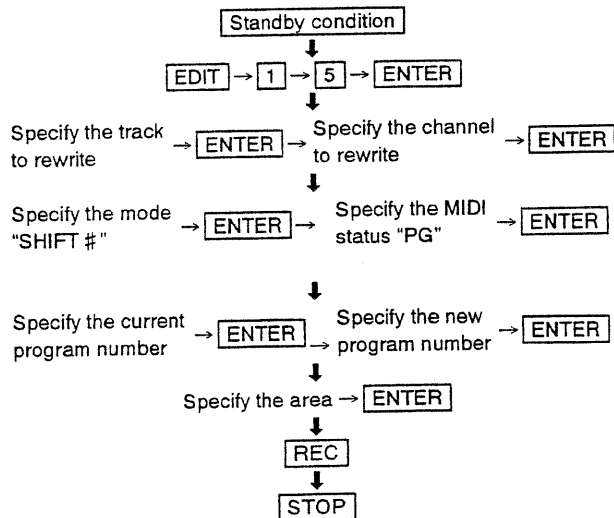
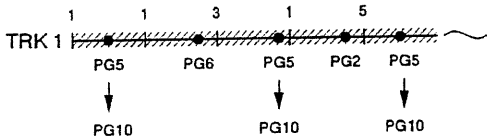
# 〈SONG DATA〉

## ● Modify the MIDI channel of a desired Part in the Phrase Track

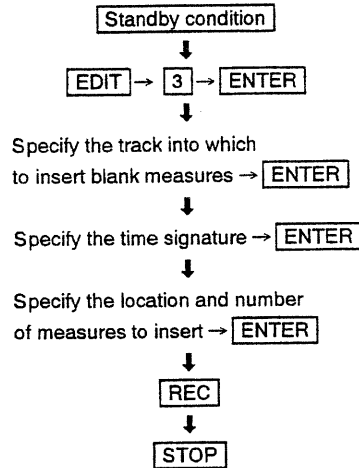
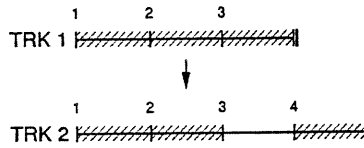


## ● Rewrite program numbers

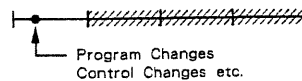
Change the program number of a Program message already existing in a Phrase Track.



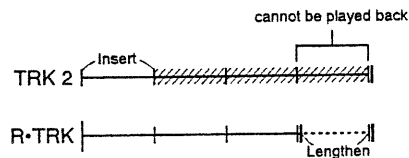
## ● Insert blank measures into song data



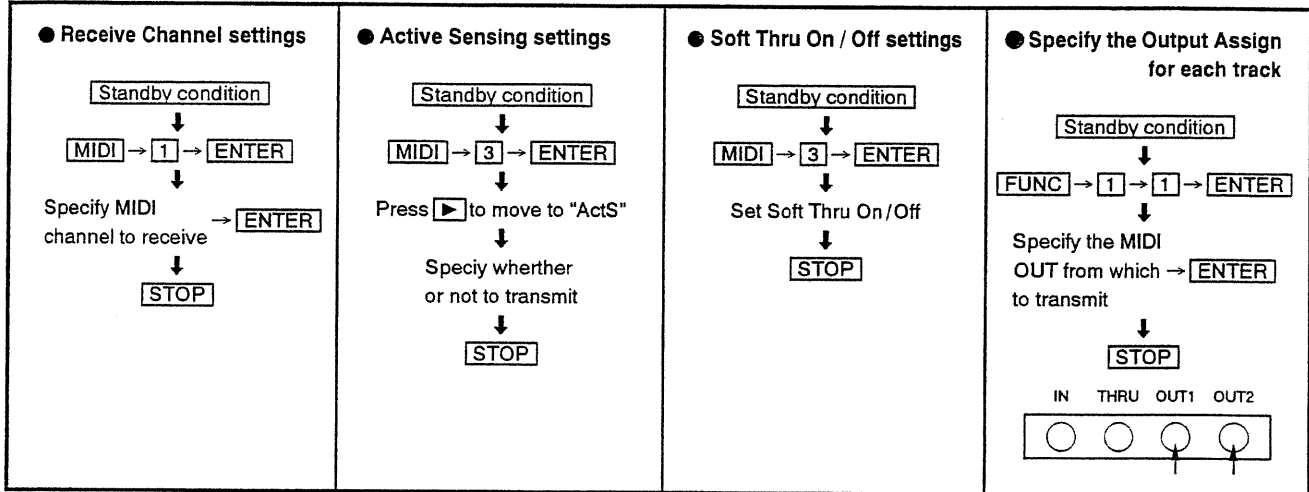
\* If you have recorded a Program Change or Control Change at the beginning of the song in a location which overlaps other musical data (such as a note), the sound module may not be able to perform the change at the correct time. In such cases, insert a blank measure at the beginning of the song to accommodate the Program Change and Control Change messages.



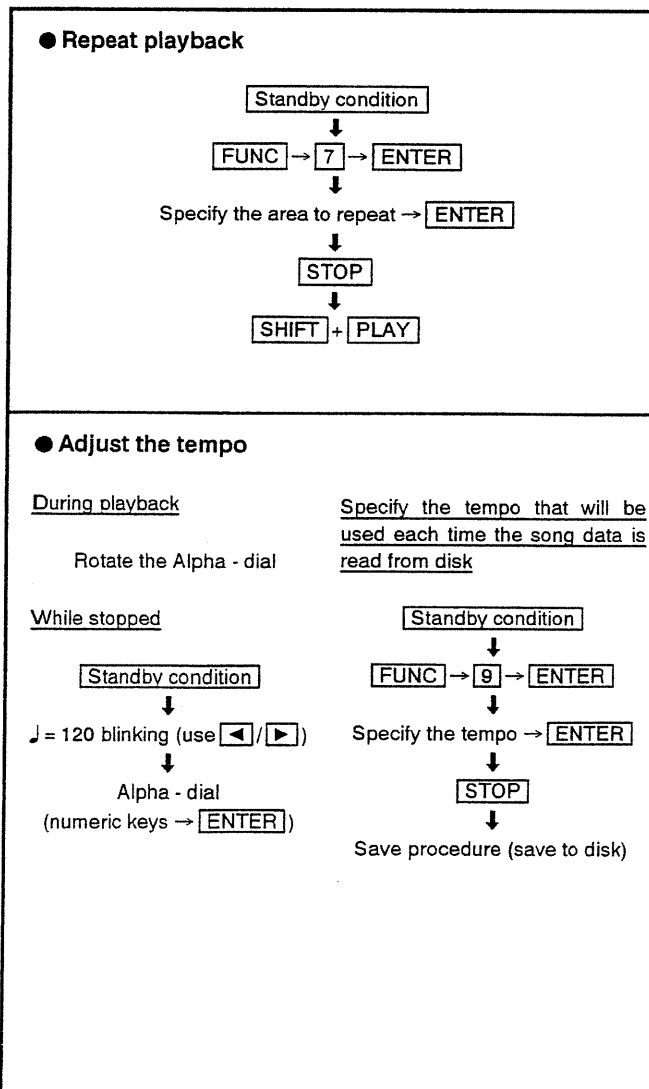
\* If you insert blank measures only into the Phrase Tracks, the Phrase Tracks will become longer than the Rhythm Track. Since the Phrase Track data that lies beyond the end of the Rhythm Track cannot be played back, be sure to insert blank measures into the Rhythm Track as well.



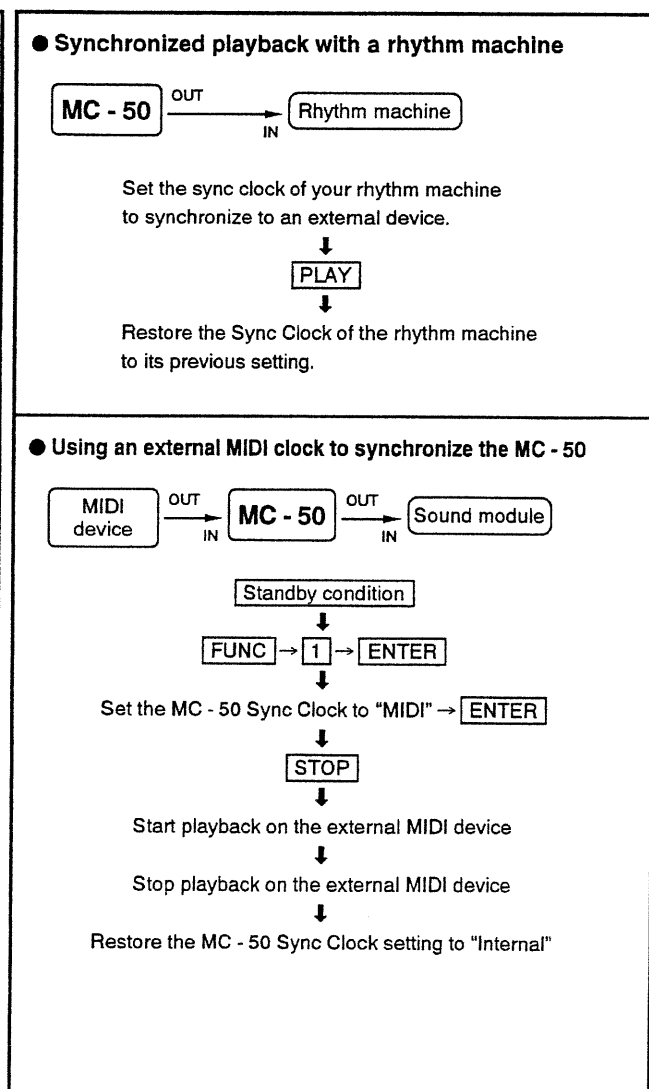
## <MIDI>




## <PLAY>



## <SYNC CLOCK>



# <OTHER>

<p><b>● Set the metronome</b></p> <pre> Standby condition ↓ FUNC → 2 → ENTER ↓ Specify beat → ENTER ↓ Specify the Beep mode → ENTER ↓ STOP                     </pre> <p>* If the rear panel Metronome knob is set too low, you will not hear the metronome.</p>	<p><b>● Restart the system</b></p> <pre> Standby condition ↓ SHIFT + MODE → 4 → ENTER ↓ 6 → ENTER ↓ (ENTER) ↓ Select the system to restart → ENTER                     </pre> <p>* It is also possible to restart from SUPER - MRP (☞ see II /page 171)</p>	<p><b>● Display the playing time of the song data</b></p> <pre> Standby condition ↓ SHIFT + UTIL → 2 → ENTER ↓ Specify the area for which to calculate → ENTER ↓ Playing time is displayed ↓ STOP                     </pre>	<p><b>● Delete internal memory data</b></p> <pre> Standby condition ↓ SHIFT + UTIL → 1 → ENTER ↓ Specify the song number to delete → ENTER (indicated by number) ↓ REC ↓ STOP                     </pre>
<p><b>● View the data contents of each track</b></p> <p>&lt; Track monitor &gt;</p> <p><u>Check which channels are present in each track</u></p> <pre> TRACKMONITOR (tracks 1 — 4) ↑↓ TRACKMONITOR (tracks 5 — 8)                     </pre> <p><u>Check which types of MIDI status (☞ see I /page 92) are present in each track</u></p> <pre> TRACKMONITOR → numeric key (tracks 1 — 4) TRACKMONITOR → numeric key → numeric key (tracks 5 — 8)                     </pre> <p>(MIDI monitor)</p> <p><u>Check which types of MIDI status are being received at MIDI IN</u></p> <pre> TRACKMONITOR → MIDI                     </pre> <p><u>Check each type of MIDI status being received at MIDI IN</u></p> <pre> TRACKMONITOR → MIDI → numeric key                     </pre> <p>* Enter this function from the standby condition. Press STOP to return to the standby condition.</p>	<p><b>● Use Microscope mode to change the note display from # to b</b></p> <p>For example, if the song is in F major (one flat) and you enter "Bb 4", the display will be as follows.</p> <div style="text-align: center;">  <span style="margin-left: 20px;">MC - 50</span> </div> <p>From the standby condition MICROSCOPE</p> <pre> ↓ MC-50 display A# 4 A# 4=Bb 4(enharmonic)                     </pre> <p>When editing in Microscope mode, change the inappropriate # display to b.</p> <pre> ↓ STOP ↓ FUNC → 1 → 3 → ENTER ↓ Modify the enharmonic note display as appropriate for the key of the song (use the Alpha - dial). (例) Example: B flat major (two flats) A# → Bb D# → Eb                     </pre> <p style="text-align: center;">MICROSCOPE</p> <p style="text-align: center;">Check the display again</p> <pre> ↓ STOP                     </pre>		

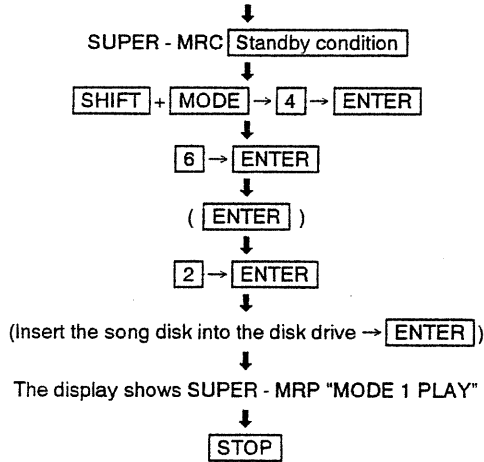
# <OTHER>

## ● Successive playback of two or more songs

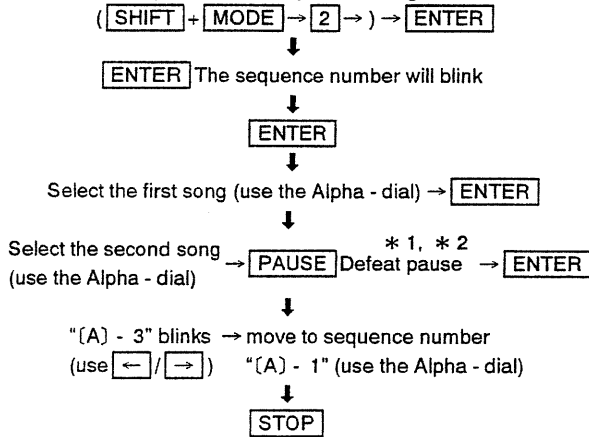
This section shows how to use SUPER - MRP to play two songs in succession.

<Specify the song order, playback, and save to disk>

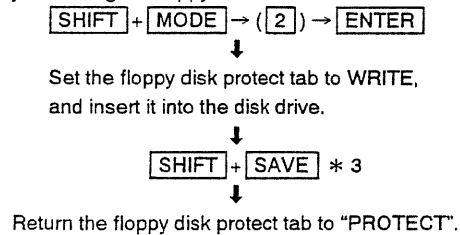
1. Restart the SUPER - MRP system  
(If necessary, save the song data in internal memory to disk.)



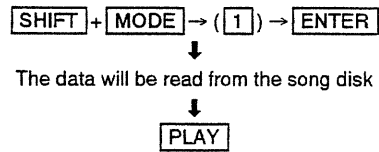
2. Specify the song order and the pause settings



3. Save your settings to floppy disk

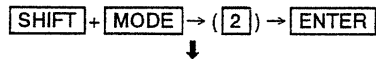


4. Playback

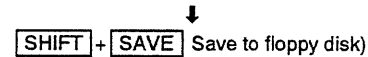


5. Modify settings such as the song order, etc.

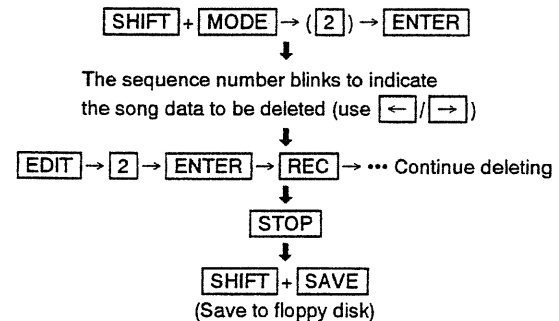
Modify settings such as the song order, etc.



Modify the song order  
(refer to 2. Specify the song order and the pause settings) )

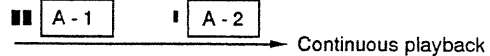


Restore the condition before settings were made



\* 1: "■" indicates a pause mark.

■ ——— Pause setting (playback will stop)  
 | ——— Pause defeated (playback will continue)  
 Each time you press [PAUSE], "■" and "|" will alternate.  
 For this example, defeat the pause mark of the second song.



\* 2: It is also possible to make settings for Interval Time, Count In, Loop Play, etc. (☞ see II /page 175).

\* 3: When you turn the power on and start up SUPER - MRP again, these settings will automatically be read into internal memory.

# [11] APPLICATION GUIDE

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Refer to this material when you want to learn more advanced ways to take advantage of the MC - 50.

## [Record a composition with more parts than you have MIDI sound modules]

When recording a song with a large number of parts, such as an orchestral ensemble, you may not have enough MIDI sound modules to play all the parts. In such cases, assign non - overlapping parts to a single sound module, and use Program Change messages to switch sounds. Parts which appear only in certain sections of the song (such as only in the introduction or ending) can be combined into a single part as long as they do not overlap. In this way, you can take full advantage of your MIDI sound modules (⇨ see I /page 76).

Track 1	Piano	Strings		
Track 2	Bass			
Track 3	Violin 1	Electric piano		
Track 4	Violin 2	E. Guitar		
Track 5	Cello			
Track 6	Oboe	Sax		
Track 7	Timpani	Orchestra hit		
Track 8	Harp	Cemballo	Organ	Marimba

## [Recording Program Change messages or Bender/Modulation messages in a song]

The MC - 50 is able to record not only notes from the keyboard, but also other messages such as Program Changes. However it is not easy to select programs while you play the keyboard in realtime recording. In such cases, you can record Program Change data afterward.

The MC - 50's Quantize operation affects only the timing of Note messages. This means that when Quantize is used, the notes may become aligned with other messages such as Program Change or Bender/Modulation messages. In this case also, it may be helpful to first record only the notes in realtime, and quantize the track. Then, while listening to the track playback, you can record Program Change and Bender/Modulation messages on another track.

### [Procedure]

- ① Record the notes as usual.  
If necessary, use the Quantize operation to correct the timing.
- ② Record Program Change or Bender/Modulation messages on another track. While listening to the playback, press the program select buttons on your synthesizer, etc., or move the bender/modulation levers.
- ③ If the timing of the newly recorded data is correct, merge the two tracks into one track.

---

## [Record sound module settings at the beginning of a song]

It is a good idea to record Program Change messages and/or exclusive messages, control change messages, etc. at the beginning of your song, so that when the song is played back, the correct sounds (and settings) will automatically be used. Even if you stop playback in the middle and then resume playing from the beginning, the sounds and settings will be correct.

### ○Program Change messages

These messages tell a MIDI sound module to switch to the specified sound (program number). Program Change messages simply specify a program number, not the actual sound data. This means that if the sound data in the specified memory of the sound module has changed since you recorded the song, the resulting playback will sound different.

### ○Exclusive messages

These messages are often used to specify the actual sound data for a MIDI sound module. Even if the sound data in the memory of the MIDI sound module has been modified since you recorded the song, the incoming Exclusive message will re - write the sound data memory to the same data that was used during recording. This guarantees that the correct sound data will be used, so that playback will sound exactly the same as when you recorded the song. This technique allows you to playback the song using a different MIDI sound module or synthesizer (of the same model type, of course). To record Exclusive messages, refer to the manual for your synthesizer. (For Roland synthesizers, refer to the explanation of Bulk Dump/Load.)

### ○Control Change messages

These messages specify sound generator settings such as volume, pan, or portamento. (⇐ see I /page 92)

\* If you connect other synthesizers or sound modules when playing back a song that contains these types of "sound module initialization" messages, remember that Exclusive messages can be received only by another device of the same type. Also, different models of synthesizer will have different sounds in each program memory, so that identically - numbered Program Change messages will select completely different sounds.

## 【Procedure】

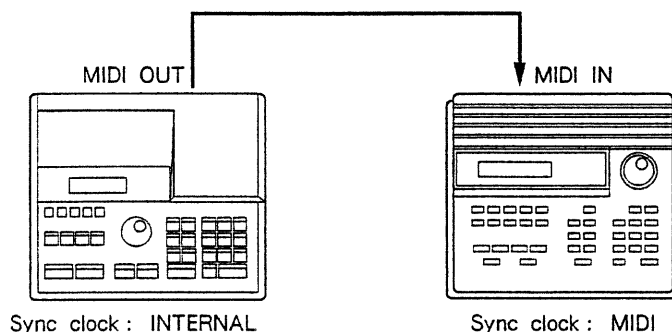
- ① Since we will input Program Change messages etc. in measure 1, begin recording the musical data from measure 2. (If the song begins after the first beat of the measure, it may be ok to begin recording from measure 1.)
- ② Use Mix Recording to record Program Change settings etc. into measure 1.

\* Some Exclusive messages may be too large to fit into measure 1. In this case, record a song which contains only Exclusive messages. To set up your sound module, playback the song containing only the Exclusive messages, and then playback the song containing the musical data.

---

## [Transfer musical data from another sequencer]

It is possible to transfer musical data from another sequencer into the MC - 50. Make connections as follows.



Put the MC - 50 in recording mode, and playback the musical data from the other sequencer. If the other sequencer has a function corresponding to the MC - 50's Track Mute function, you can playback one part at a time and record it on its own MC - 50 track.

This method of transferring musical data is quick and easy, but has the disadvantage that the measure positions of the original data will not correspond with the measure positions of the data recorded in the MC - 50. By using the method explained below, you can synchronize the two sequencers to transfer data while preserving measure positions (☞ see II /page 22).

To transfer musical data between two synchronized sequencers, set the sequencer which is playing the data (the Master) to transmit MIDI Clock messages, and set the receiving MC - 50 (the Slave) to be controlled by MIDI Clock messages from an external device (☞ see II /page 62). (If you are transferring data from the MC - 50 to the other sequencer, make the opposite settings.)

When you transfer musical data with these settings, the slave device will follow the tempo of the master device, so you can raise the tempo for faster transfer.

However this method does not transfer tempo changes (i.e., tempo control data) which may have been programmed into the original data in the master. After you have recorded the data into the MC - 50, you will need to set the basic tempo, and record tempo change data into the tempo track.

If the timing resolutions of the master and slave sequencers are different, the timing of the recorded data will be forced into the resolution of the receiving sequencer. If you transfer data (especially realtime recorded data) from a sequencer with a high timing resolution into a sequencer with a low timing resolution, the notes of the resulting playback will sound as though they have been quantized, and Modulation or Bender messages will sound as though they were moving up or down a staircase.

\* Roland sequencers (MC - 50/300/500/500MK II , MT - 100, PR - 100) have a timing resolution of 96 clocks per quarter note.



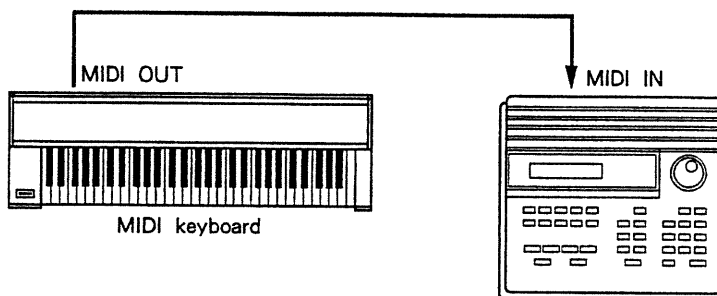
## [Store synthesizer sound data on an MC - 50 floppy disk]

Normally, the MC - 50 is used as a sequencer, to record and playback musical data. However it is also possible to store sound data from a synthesizer onto the MC - 50's floppy disk. Most synthesizers are able to transmit and receive sound data via MIDI as Exclusive messages. By recording these Exclusive messages from your synthesizer into the MC - 50, and then playing them back from the MC - 50 into your synthesizer, you can store and transfer synthesizer sound data. Remember that Exclusive messages are usually specific to each MIDI device, and can be received only by another MIDI device which uses the same parameters.

### 【Procedure】

- ① Use a MIDI cable to connect the MIDI OUT of the synthesizer or other device to the MIDI IN of the MC - 50.

\*This is known as the One Way method. If you use two MIDI cables to connect the MIDI OUT to the corresponding MIDI IN of both devices (the Handshake method), data may not be transferred correctly.



- ② Make sure that the MC - 50 setting "MIDI 2 RCV STATUS" is turned On so that Exclusive messages can be received. (Initially this will be turned On.) If it is turned Off, turn it On.
- ③ Begin recording on the MC - 50, and when the measure display reaches 1 (M=1), transmit the Exclusive message from your synthesizer. (Refer to the manual for your synthesizer.)

### Note!

Some synthesizers transmit very large Exclusive messages which the MC - 50 may not be able to record completely.

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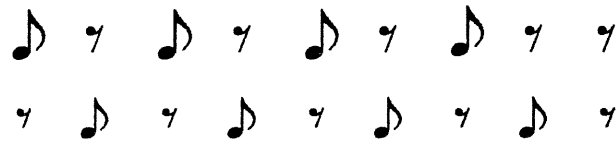
## [Create “effects” using only the MC - 50 and sound modules]

The echoes that are heard when an instrument is played in a large room are often simulated using an effect device. Echoes are created using a Delay device. There are many other types of effect devices. Chorus, for example, adds depth to the sound.

These effect devices process the actual “sound” in various ways. However, the MC - 50 can be used to simulate such effects by modifying the musical data that is transmitted to the MIDI sound modules or synthesizers. Here will explain how to use the MC - 50 with two or more MIDI sound modules to create delay (echo) and chorus effects.

### **【Delay】**

- ① Copy the musical data onto the same MIDI channel of another track.
- ② Using step edit etc., insert a rest at the beginning of the copied track. This will delay the track relative to the original track, simulating a single repeat echo.
- ③ Using microscope edit etc., reduce the velocities of the echoed notes. This will result in an echo effect with a single repeat.



- ④ To create a second repeat, copy the original musical data to another track, at step ② insert two rests, and at step ③ reduce the velocities even more. In this way you can create any desired number of repeats.



\*When creating rhythmic echoes using an external effect device, you will need to set the delay time to match the tempo of the song, and if the MC - 50 playback tempo changes, you will have to reset the delay time. However if you use the above method to create echo effects from the MC - 50 itself, the delay time will always be synchronized with the playback tempo.

### **【Chorus】**

- ① Copy the musical data onto a different MIDI channel of another track.
- ② Adjust your two MIDI sound modules to slightly different tuning settings, and playback. This will produce a rich chorus effect. In general, you should set both of the MIDI sound modules to the same sound. However by programming slight differences in the filter or LFO of the two sounds, you can create very rich chorusing effects that would not be possible using conventional effect devices.

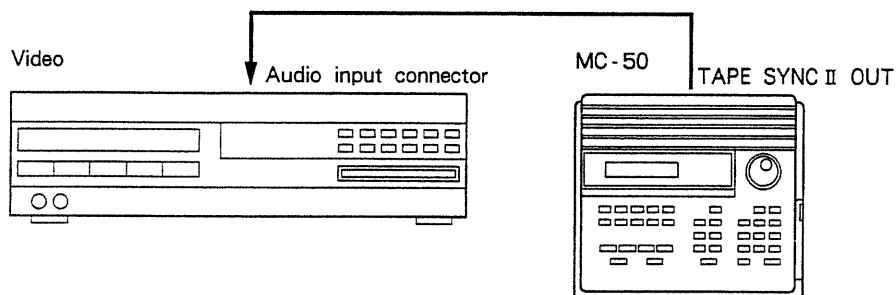
\*By combining these delay and chorus effects, you can create even more interesting sounds.

## [Add sound effects during video editing]

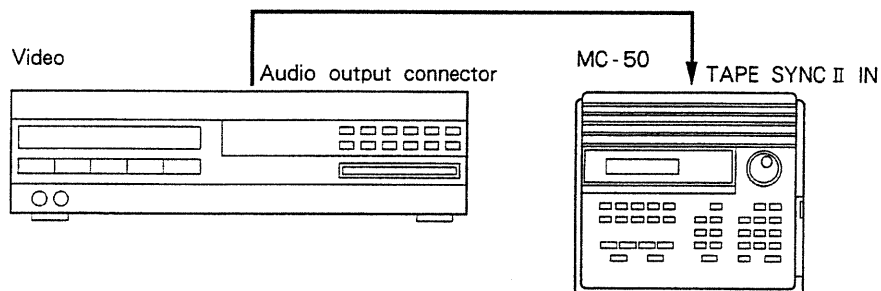
If you have a hi-fi video that allows you to re-record the audio track afterward, you can record the MC-50 tape sync signal in the audio track of the video tape. Then, play back the video tape as the master timing source, and use samplers and synthesizers controlled by the MC-50 to add sound effects.

### 【Procedure】

- ① Set the MC-50 sync clock to "INTERNAL", and use an audio cable (RCA pin ↔ RCA pin) to connect the TAPE SYNC II OUT connector to the audio input of the video recorder.



- ② Record the tape sync signal from the MC-50 TAPE SYNC II OUT onto either audio channel of the video tape.
- ③ Set the MC-50 sync clock to "TAPE", and connect the audio output of the video recorder to the TAPE SYNC II IN.



- ④ Set the MC-50 in recording standby mode. When you start the video, recording will begin in synchronization with the video. Select the appropriate instrumental sounds (or sound effects) on your sampler or synthesizer, and play the keyboard.

When the tape sync signal ends, the MC-50 will stop recording.

This completes the recording procedure. To playback the samplers or synthesizers in synchronization with the video, make the same settings as when you recorded, press **PLAY**, and start the video.

For details on recording the tape sync signal and synchronized playback, refer to page 22—24 of Owner's Manual II .

# 12 ABOUT MIDI STATUS

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"MIDI status" refers to the type of MIDI message. The MC - 50 is able to handle all types of MIDI status, as explained below.

## ● Note messages (NOTE)

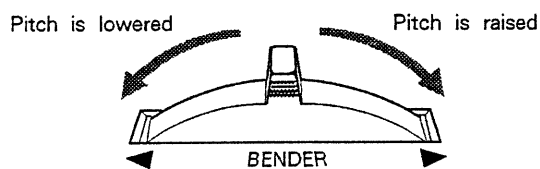
These messages carry musical performance information from a MIDI instrument. A Note On message tells which key was pressed (the Note number) and how strongly it was pressed (Velocity), and a MIDI Note Off message tells which key was released. Note numbers are expressed by a number 0—127, where 60 indicates middle C. The sound module will produce the appropriate pitch for the note number it receives, with higher note numbers resulting in higher pitches. Rhythm sound modules, however, usually have a different rhythm sound assigned to each note number, and the received note number will determine which rhythm instrument is sounded.

## ● Program Change messages (PG)

These messages select sounds. The MC - 50 can transmit Program Change messages to make a synthesizer, etc. automatically switch sounds. MIDI-equipped effects devices are also able to change effect settings in response to these messages.

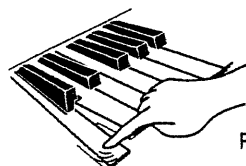
## ● Pitch Bend messages (PB)

Most synthesizers have a pitch bender (pitch wheel) located at the left of the keyboard. By moving this, you can transmit Pitch Bend messages to smoothly change the pitch while a note is sounding. Some devices are able to respond to Pitch Bend messages in other ways as well, but this will depend on the settings of the sound module.



## ● Aftertouch messages (CAf/PAf)

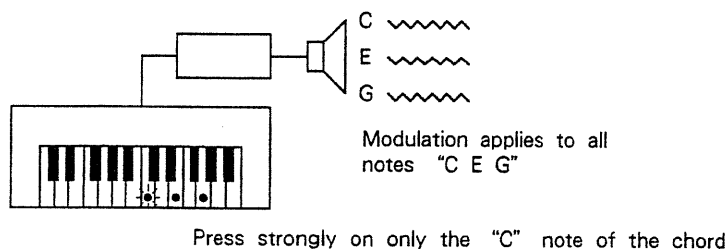
Some synthesizers are able to transmit Aftertouch messages when you press down harder on the keyboard after playing a note, to modify the tone or volume. The settings of the sound module will determine the effect of Aftertouch messages.



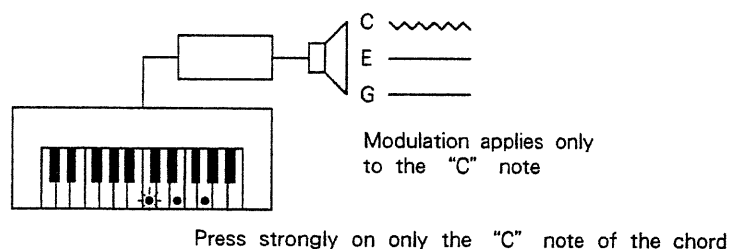
Pressing more strongly causes greater effect (change)

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There are two types of aftertouch; **Channel Aftertouch** and **Polyphonic Aftertouch**.  
Channel Aftertouch (CAf) affects an entire MIDI channel.



Polyphonic Aftertouch (PAf) operates independently for each key (note).



## ● Control Change messages (CC)

These messages allow you to make your musical performance more expressive by controlling aspects of the sound such as vibrato (cyclic change in pitch), tremolo (cyclic change in volume), hold (sustain the note; i.e., damper pedal), and pan (the stereo position of the sound). However, not all MIDI instruments are able to respond to all of these messages. Control numbers are numbered from 0 to 120 according to their function. (Not all numbers have been defined.) The way in which an instrument responds to each control number will depend on the device and the manufacturer.

## ● Exclusive messages (EX)

These messages are used mainly to transmit settings which are unique to a specific device, such as synthesizer parameter settings or sampler sound data, etc. We have mentioned earlier (see I /page 9) that MIDI is a world-wide standard, but these Exclusive messages are an exception to this, and can normally be exchanged only between devices of the same type made by the same manufacturer. For this reason, each manufacturer of MIDI equipment has been assigned an Exclusive ID number, and Exclusive messages can be exchanged only between devices which are able to recognize this ID number. For details, refer to manual II /page 188, "Roland Exclusive Messages".

## ● Tune Request message (TU)

This message requests analog synthesizers to perform their self-tuning function to set themselves to standard pitch. Most recent synthesizers produce their sound digitally, meaning that there is no possibility of pitch drift, and therefore do not respond to this message.

# 13 READING MUSIC

## How to read printed music.

### Inputting printed music that contains repeat marks

Printed music often contains repeat marks such as D.C. (da capo) or D.S. (dal segno), telling you to jump to another measure. Since the MC - 50 is not able to automatically jump to a different measure and continue playback, you must input all measures just as you want them to be played back.

The Copy function is convenient when you need to input repeated phrases.

### Various symbols used in printed music

Printed music uses a wide variety of symbols and abbreviations in addition to notes. Here are some of them.

- 8va*      play (input) notes 1 octave higher than printed
- 8vb*      play (input) notes 1 octaves lower than printed
- 2/4 time
- 4/4 time
- repeat the phrase of the previous beat
- repeat the phrase of the previous measure
- repeat the phrase of the previous two measures
- repeat the phrase of the previous four measures
- col. **A**      play the same as section **A**
- simile*-      play the same as phrase ~ (play the same as another instrument)

# Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

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Instrumentos Musicales  
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ARGENTINA  
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Roland Canada Music Ltd.  
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Mexico D.F. 06080 MEXICO  
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La Casa Wagner de  
Guadalajara s.a. de c.v.  
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Guadalajara, Jalisco Mexico  
C.P.44100 MEXICO  
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Centro Parque de Cristal, Nivel  
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Dee Why West. NSW 2099  
AUSTRALIA  
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TEL: (04) 360715

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Roland (Switzerland) AG  
Musitronic AG  
Gerberstrasse 5, CH-4410 Liestal,  
SWITZERLAND  
TEL: (061) 921 1615

## UNITED KINGDOM

Roland (U.K.) Ltd., Swansea  
Office  
Atlantic Close, Swansea  
Enterprise Park SWANSEA  
West Glamorgan SA7 9FJ,  
UNITED KINGDOM  
TEL: (01792) 702701

Roland Corporation

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