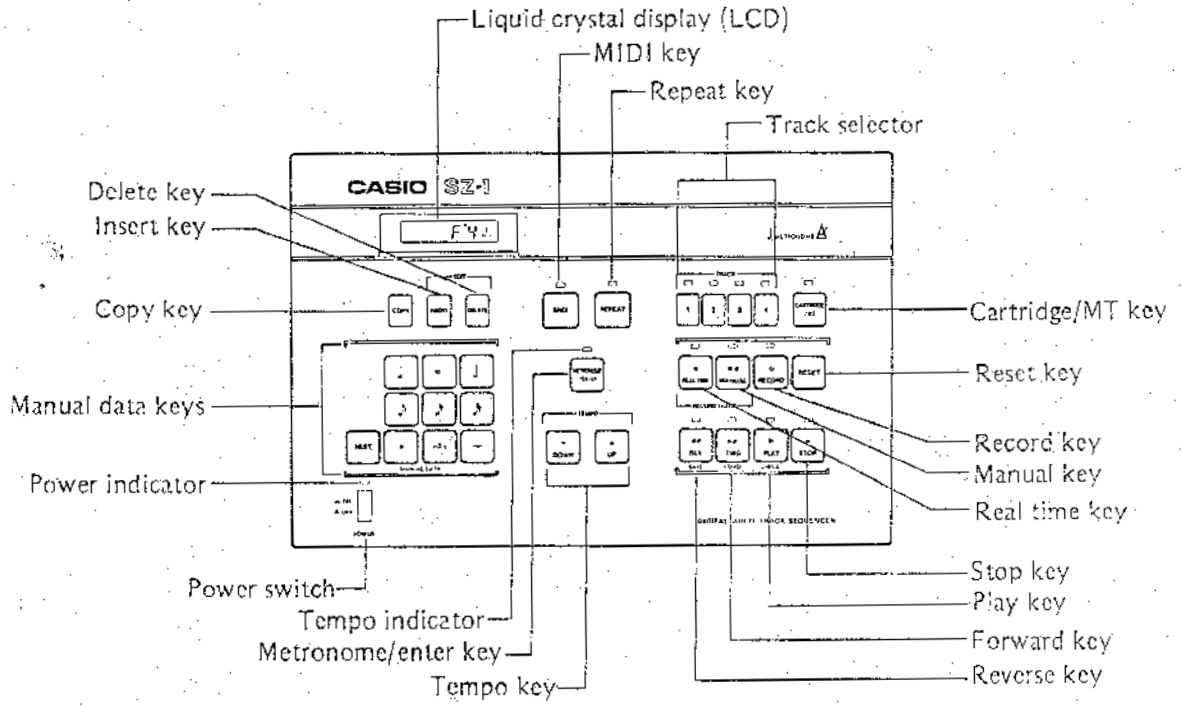
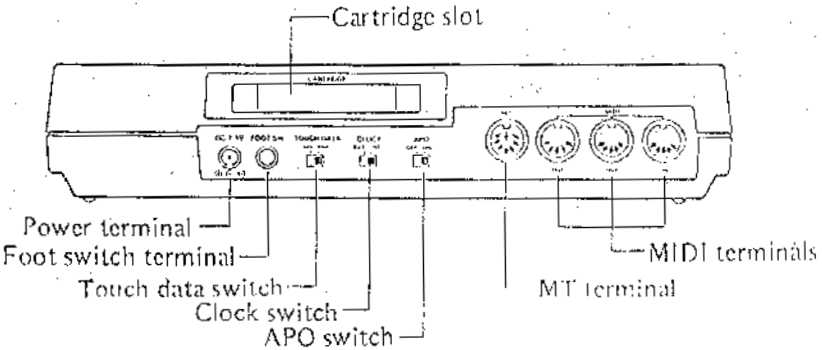
CASIO SZ-1 Manual



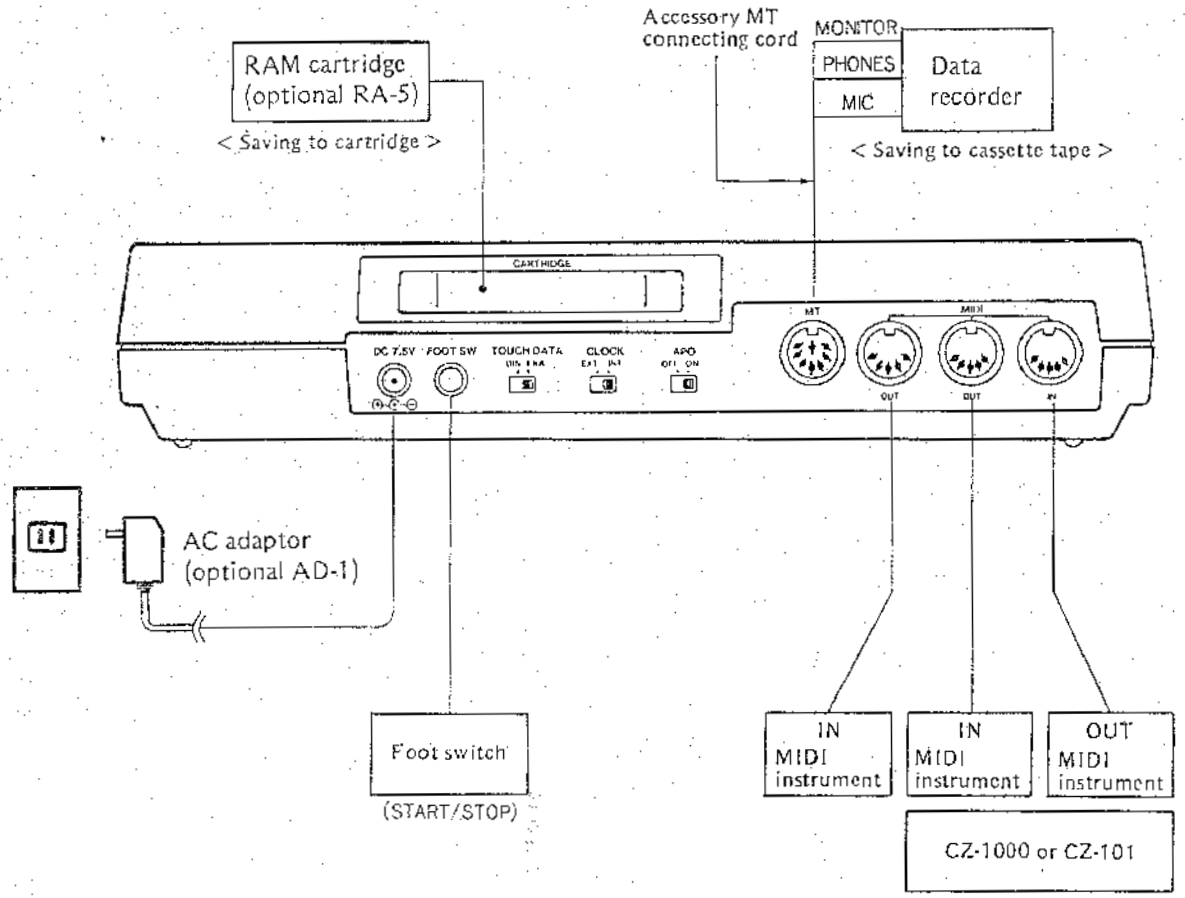
COSMO's CASIO WORLD · www.cosmosynthesizer.de


Liquid crystal display (LCD)
MIDI key
Repeat key
Track selector
Delete key
Insert key
Copy key
Manual data keys
Power indicator
Power switch
Tempo indicator
Metronome/enter key
Tempo key
Cartridge/MT key
Reset key
Record key
Manual key
Real time key
Stop key
Play key
Forward key
Reverse key
CASIO SZ-1

● REAR PANEL


Cartridge slot
Power terminal
Foot switch terminal
Touch data switch
Clock switch
APO switch
MT terminal
MIDI terminals

CONNECTIONS

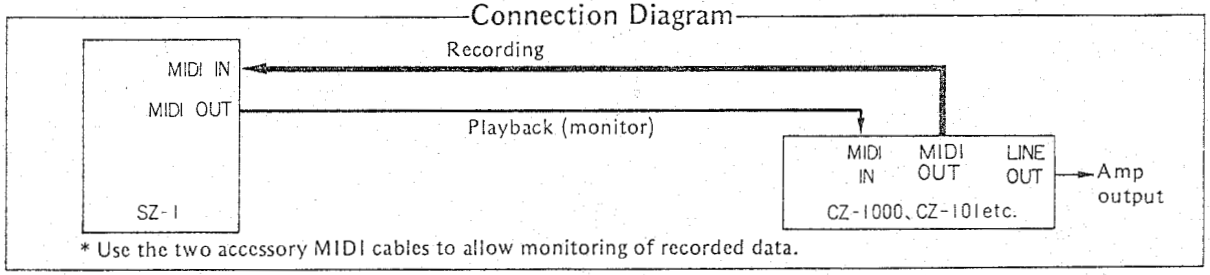


REAL-TIME RECORDING

Music is recorded as played on the keyboard, and each track is capable of receiving polyphonic input.

A maximum of 1,800 pieces of musical data can be input at one time if all input is made in the real time mode.

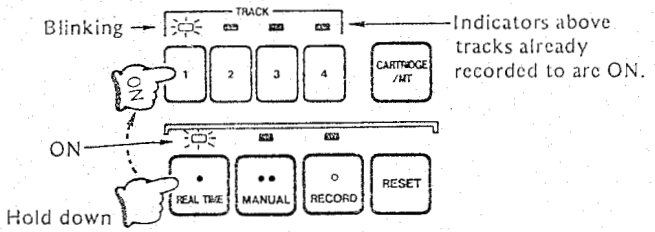
Connection Diagram



* Use the two accessory MIDI cables to allow monitoring of recorded data.

1) Setting the Recording Track

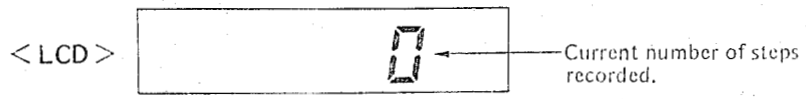
Press the track selector for the track you wish to record to while simultaneously holding down the REAL TIME key. The indicator lamp above the track selector pressed will blink.



★ The recording track should be selected while playback is stopped.

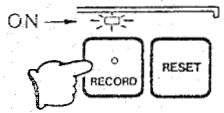
* Reset status is when the RESET key is pressed, directly after power is switched ON, or when the unit is paused at the beginning of a selection.

★ Tracks that have already been recorded to using manual recording cannot be selected for real time recording.



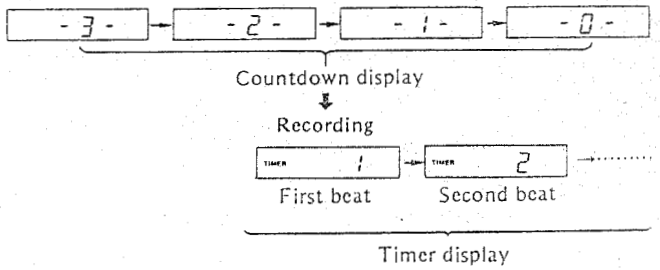
2) Beginning Real-Time Recording

Once the recording track is set, press the RECORD key. A 4-beat count will be heard, and recording can be begun from the fifth beat.



* The metronome will sound for four beats as a lead into the recording. Recording begins from the 5th beat. (Anything input during the first four beats is not recorded.)

★ The LCD will countdown the beats to the beginning of recording and then switch to the time display.



● REAL-TIME RECORDING INPUT DATA

The following data can be input and modified during real-time recording.

1. Keyboard ON/OFF data (polyphonic) and pitch.
2. Timbre number (program change: 0 – 127)
3. Effect ON/OFF (control change: 0 – 121)
4. Glide ON/OFF (exclusive)

* For control change, 0 is output as 0 (OFF) and anything other than 0 is output as 127 (ON).

NOTE

♪ Set the clock switch on the back of the unit to the INT position.
* Except when synchronizing this unit with an external device (see page 28), the clock switch should be kept in the INT position.

♪ Set the touch data switch on the back of the unit to the ENA position when key velocity is recorded. Be sure to set this switch to DIS when recording while connected to an external device that does not follow the key velocity. (See page 27.)

♪ When the remaining memory area becomes 0 during recording, End will appear on the LCD and further recording will be impossible. At this time, press the RESET key to cancel the recording track.

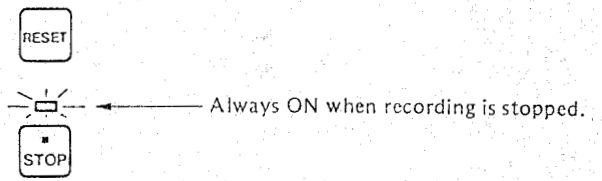
♪ When the timer display exceeds 1999 during recording, - - - will appear on the LCD and further recording will be impossible. At this time, press the RESET key to cancel the recording track.

3) Terminating Real-Time Recording

Press either the STOP key or RESET key when recording is complete.

★ STOP key: recording track is maintained and recording can be immediately resumed from the point at which it was terminated by pressing the RECORD key.

★ RESET key: cancels the recording track and automatically returns to the beginning of the piece.



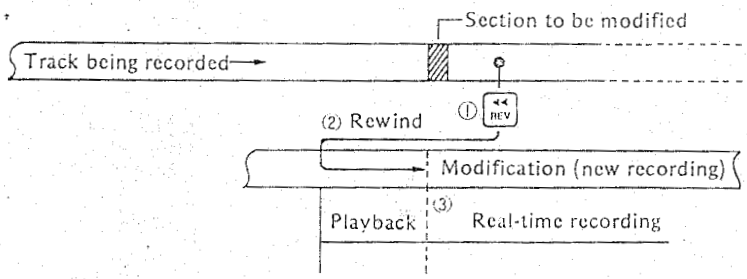
Real-time recording of tracks 1 through 4 can be accomplished by repeating steps 1) through 3) above. Recording to empty tracks can be performed while monitoring (playing back) what has already been recorded to other tracks. (Indicators are lit above the selectors for tracks that already contain data.) Real-time recording to tracks that have already been recorded (with real-time recording) will erase the previously recorded data.

ADD ON RECORDING

Corrections or modifications of recordings can be made during real-time recording or after real-time recording is complete. The two types of add on recording are illustrated below.

1) Modifications during Recording

① Use the REV key to move to a point slightly before the section to be modified.
② Playback will begin from the point at which the REV key is released.
③ When the section to be modified is reached, play the proper keys on the keyboard to make the modification.

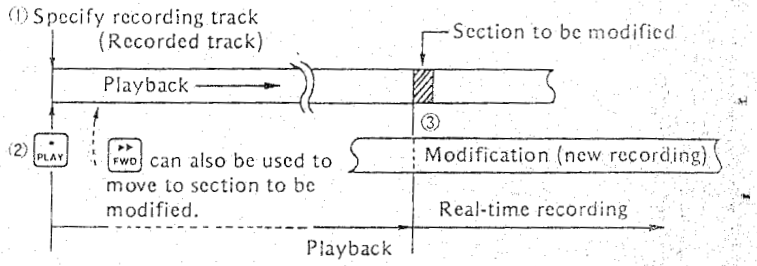


★ When rewind is performed during real-time recording, playback will begin in the recording track from the point at which the REV key is released. The difference between this and normal playback is that real-time recording begins from the point at which the keyboard is used. All previous data is erased from the point at which real-time recording is resumed.
★ Besides keyboard operation, timbre changes (program change) and turning effects ON or OFF (control change) also resume recording. (Again, all previous data is erased from the point at which these operations are performed.)

* The PLAY indicator is lit during the playback noted above, and the RECORD key indicator will light automatically when recording resumes.

2) Modifications of Complete Recordings

① Specify the track to be modified as the recording track.
② Playback will begin from the beginning of the selection when the PLAY key is pressed (indicator above the PLAY key is ON).
③ When the section to be modified is reached, play the proper keys on the keyboard to make the modification.
(Program changes and control changes can also be made.)



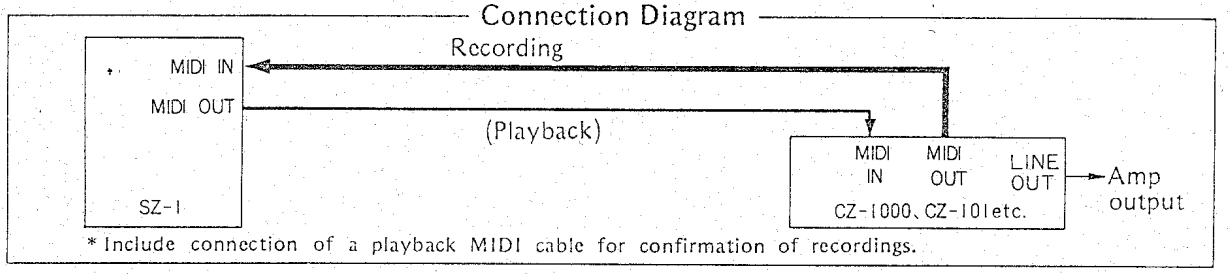
★ Real-time recording begins from the point at which new data is input.

MANUAL RECORDING

Each note, rest and timbre is input individually with separate key operations.

Each track is capable of receiving monophonic input, and a maximum of 3,600 pieces of musical data can be input at one time if all input is made in the manual mode.

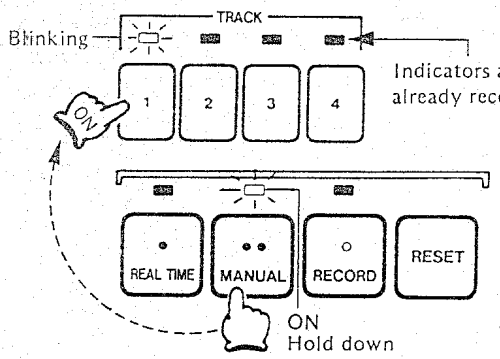
Connection Diagram



* Include connection of a playback MIDI cable for confirmation of recordings.

1) Setting the Recording Track

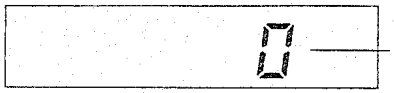
Press the track selector for the track you wish to record to while simultaneously holding down the MANUAL key. The indicator lamp above the track selector pressed will blink.



★ The recording track should be selected while playback is stopped.

★ Tracks that have already been recorded to using real-time recording cannot be selected for manual recording.

<LCD>

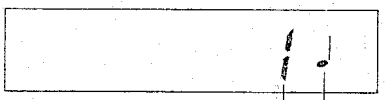


Current number of steps recorded.

2) Beginning Manual Recording

Once the recording track is set, press the RECORD key.
The RECORD key indicator will light and the following will appear on the LCD:

<LCD>

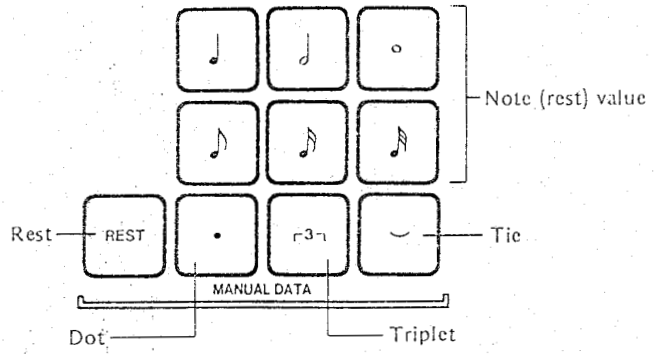


Number of steps
Shows the current number of notes (and rests) that have been input from the beginning of the piece. Since this is the initial display, 1 "step" is displayed.

Quarter note display: (♩)
Quarter note is the default value for a specified track that contains no data.
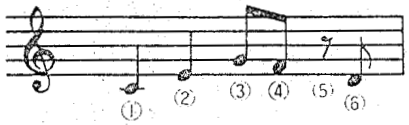
◦ INPUTTING NOTES AND REST (BASIC OPERATION)

Basically, a note (rest) value is input using the manual data keys, and then the pitch is input by pressing a key on the keyboard. Rests are input by pressing the REST key.



< Example 1 >

Input the following phrase:

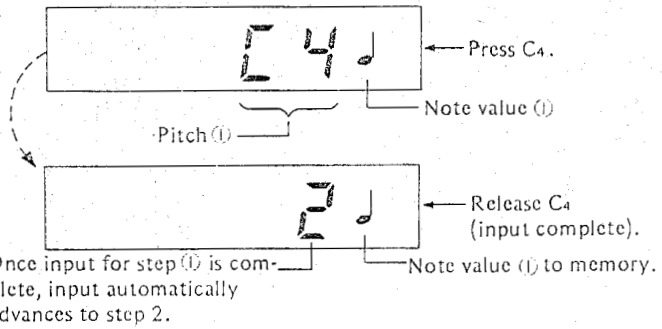


(6 steps)

1. Press C4.

Since quarter note is the default value, the pitch can be input without setting the note value.

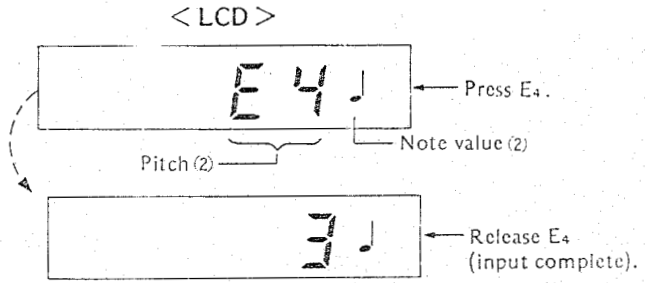
< LCD >



2. Press E4.

The quarter note value of (1) is retained in memory, so pitch can be input without setting the note value.

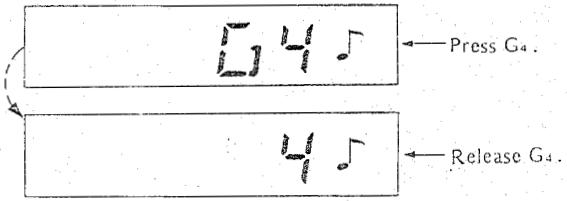
< LCD >



3. Press the ♪ key to input an eighth note.

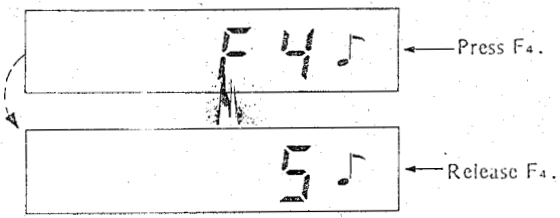


After the LCD changes to ♪ , press G4 on the keyboard.

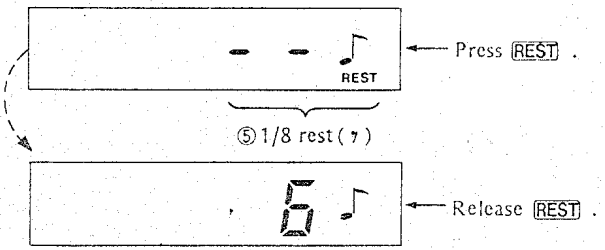


4. Press F4 on the keyboard.

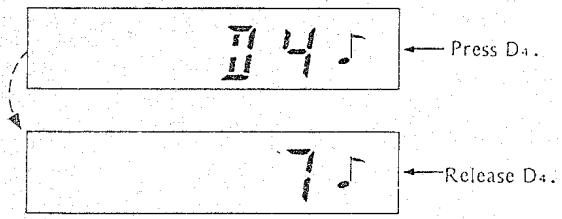
The eight note value of (3) is retained in memory, so pitch can be input without setting the note value.



5. Press the [REST] key.
The eighth note value of ④ is retained in memory, so a rest can be input without setting its value.

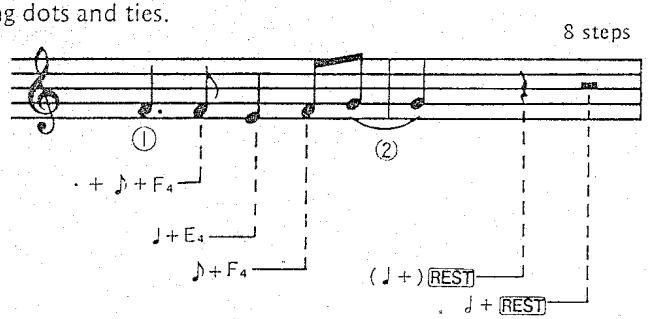


6. Press D4 on the keyboard.

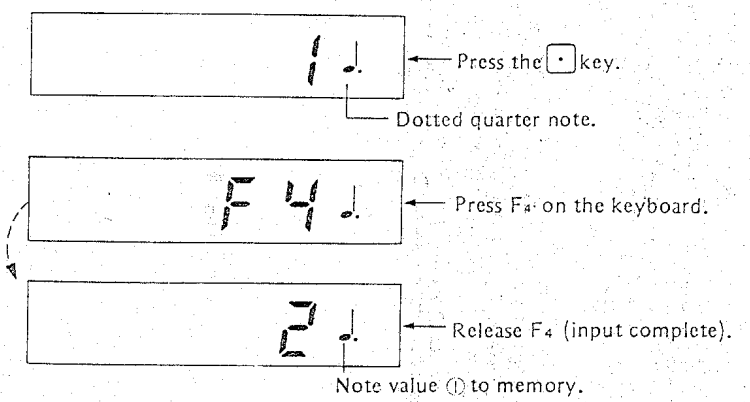


The operations outlined above are used to input the phrase ① through ⑥. Press the [RESET] key to release the recording track and then press the [PLAY] key to confirm proper input.

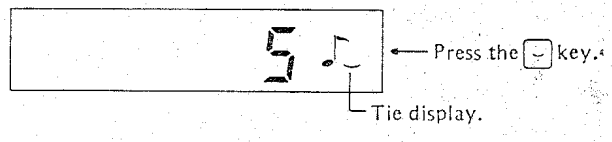
< Example 2 >
Inputting dots and ties.



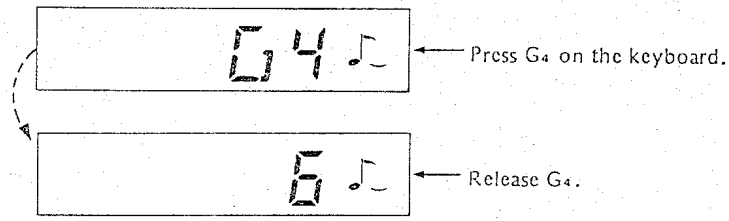
1. Pressing the [·] key after the [♩] key results in a dotted quarter note.
If inputting to an empty track, the quarter note is the default value.



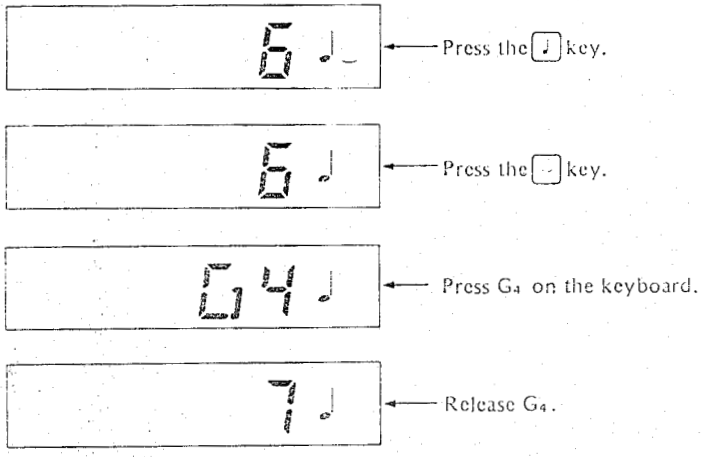
2. Press the [⌣] key to input a tie.



Press G4 on the keyboard after inputting the tie.
★ First input the initial note to be tied.



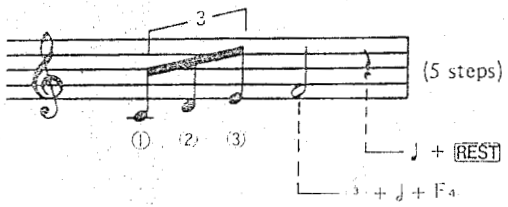
After 1/8 note + tie (♪ ‿) is input, the next note to be tied is input.



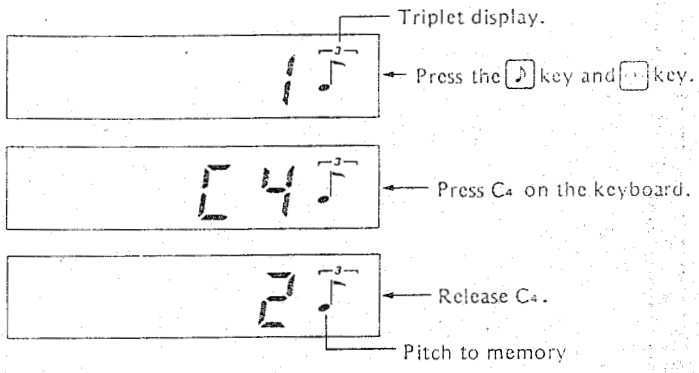
NOTE

♪ Tied notes are of the same pitch. If notes of different pitches are tied, the ties are disregarded during playback.

< Example 3 >
Triplet input.



1. Press the ♪ key, the 3 key and then C4 on the keyboard.



The operations outlined above are used to input the first note of a triplet (♫), in this case note ①.

2. Press D4 on the keyboard.

3. Press E4 on the keyboard.

Dots, ties or triplets are cancelled after input of notes. (See examples 2 and 3).
* Dots (·) cannot be used with full notes (𝅝) or thirty-second notes (𝅘𝅥𝅯).

● MANUALLY RECORDING INPUT DATA

The following data can be input and modified during manual recording.

1. Keyboard ON/OFF data (monophonic) and pitch.
2. Timbre number (program change: 0 – 127)
3. Effect ON/OFF (control change: 0 – 121)
4. Glide ON/OFF (exclusive)

* For control change, 0 is output as 0 (OFF) and anything other than 0 is output as 127 (ON).

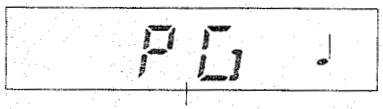
● PROGRAM CHANGE/CONTROL CHANGE INPUT

It is possible to input data to change timbres or effect ON/OFF status during recording.

＜Program change＞

1. During manual recording, timbre is selected by the connected MIDI keyboard. (For example, pressing a switch in the Programmer Section of the CZ-1000.) At this time, the LCD appears as follows:

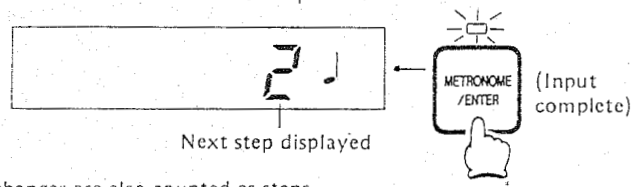
＜LCD＞



Program change (PG) display

★ It can be confirmed how many times timbre was switched during this display. (Notes cannot be input by pressing the keyboard.)

2. Press the METRONOME/ENTER key when the timbre is decided. The selected timbre number will be input.

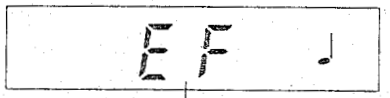


* Program changes are also counted as steps.

＜Control change＞

1. During manual recording, effect is turned ON and OFF by the connected MIDI keyboard. (For example, pressing the vibrato or portamento ON/OFF key of the Effect Section of the CZ-1000.) At this time, the LCD appears as follows:

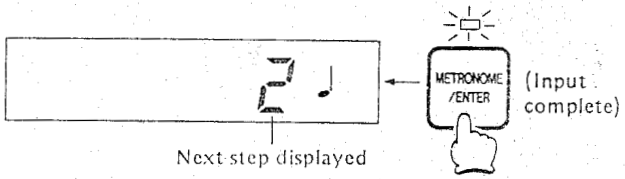
＜LCD＞



Control change (EF: effect) display

★ It can be confirmed how many times effect was switched ON/OFF during this display. (Notes cannot be input by pressing the keyboard.)

2. When the METRONOME/ENTER key is pressed, effect ON/OFF will be input according to the last mode set by the MIDI keyboard.



* Control changes are also counted as steps.

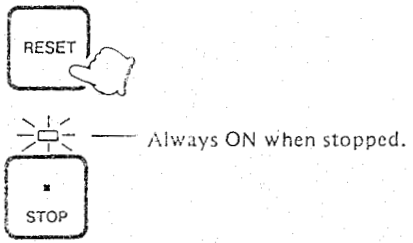
Both control procedure and display of control change input for exclusive glide ON/OFF is exactly the same.

NOTE

- ♪ When the remaining memory area becomes 0 during recording, *End* will appear on the LCD and further recording will be impossible. At this time, press the [RESET] key to cancel the recording track. The [REV] key can also be used at this time to move to a section in the recording for modifications or corrections.
- ♪ When the timer display exceeds *1999* during recording, - - - will appear on the LCD and further recording will be impossible. At this time, press the [RESET] key to cancel the recording track. The [REV] key can also be used at this time to move to a section in the recording for modifications or corrections.

3) Terminating Manual Recording

Press the [RESET] key when input is complete. The recording track will be cancelled, the unit will return to the beginning of the recording, and recording will be terminated.

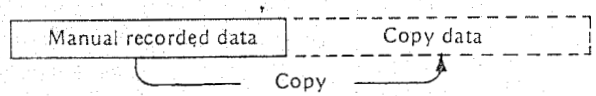


Manual recording of tracks 1 through 4 can be accomplished by repeating steps 1) through 3) above.
Recording certain tracks using manual mode and others using real-time mode is possible.

The SZ-1 includes such editing functions as copy, insert, delete and clear.

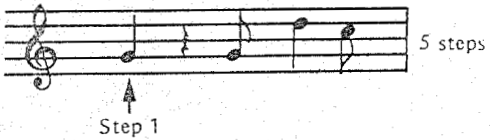
1) COPY

An exact copy can be made of data that have already been input using manual recording. This function is very convenient when inputting patterns that are often repeated in a piece.



< Example >

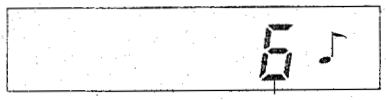
Copy data that have already been manually recorded.



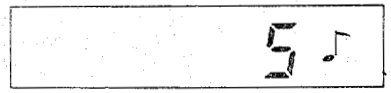
1. After specifying the recording track, press and hold down the REV key until the LCD shows that step 1 has been reached.

* If the above notes were input and then the recording track was cancelled, specify the track again as the recording track and then press the RECORD key once to bring the display to step 1.

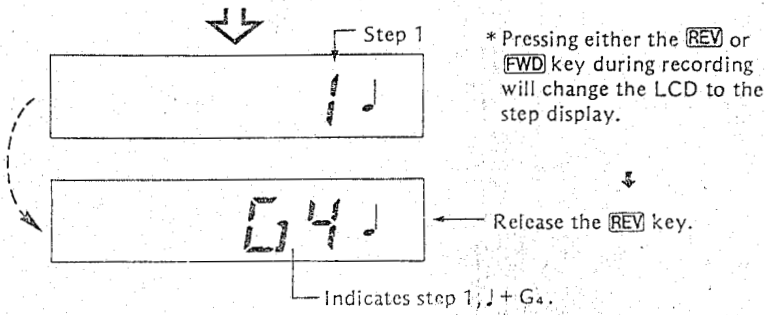
< LCD >



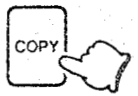
No data input after step 6.



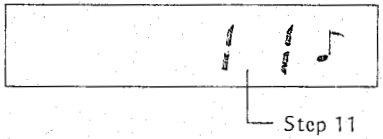
If the REV key is held down, the step numbers will continue to decrease until step 1 is reached.



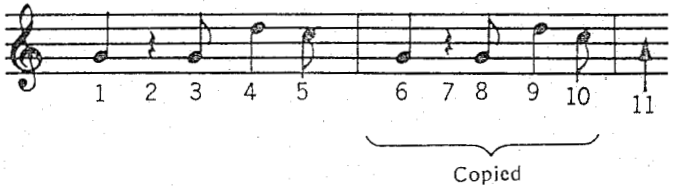
2. Press the COPY key.
   Begins copy operations.



3. An audible signal will sound when copy is complete, and the LCD will show the following:



< Data after copy >



The copy function is in no way limited to complete measures. The number of steps are doubled using the copy function. The only limitation is that the result does not exceed the memory capacity (3,6000 notes/rests), and that the total number of steps in a single track does not exceed 1,999.

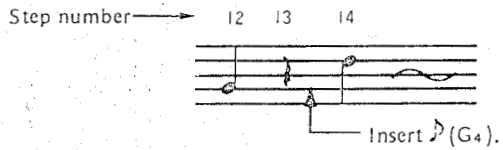
2) INSERT

Data can be inserted between notes (as well as rests, program changes, and control changes) that have already been manually recorded.

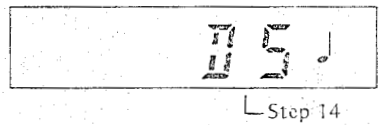
< Example >

1. Use the REV and FWD keys to find and display the location at which data are to be inserted.

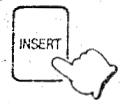
★ If the recording track was cancelled, specify the track to be modified as the recording track and then press the FWD key until the location where data are to be inserted is displayed.



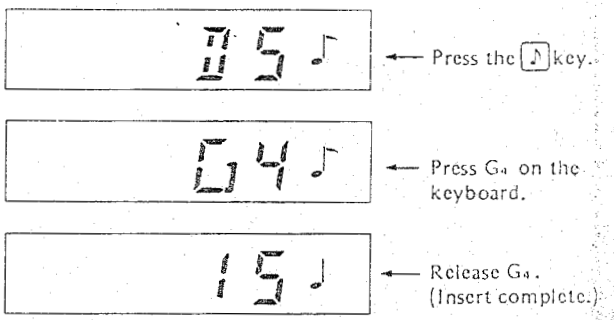
In the example shown here, step 14 (the step immediately after the insert location) is displayed.



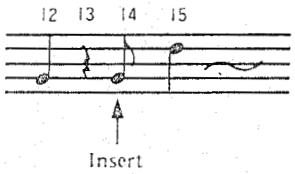
2. Press the INSERT key.



3. Input the data to be inserted (♪ + G4).



< Data after insert >



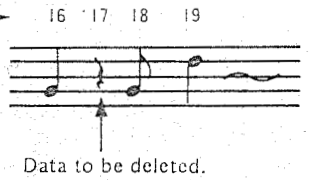
3) DELETE

Individual pieces of data already manually recorded can be deleted.

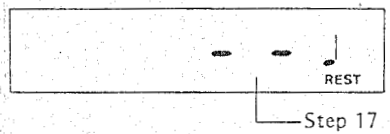
< Example >

1. Use the REV and FWD keys to find and display the location at which data are to be inserted.

* If the recording track was cancelled, specify the track to be modified as the recording track and press the FWD key until the location where data are to be deleted is displayed.



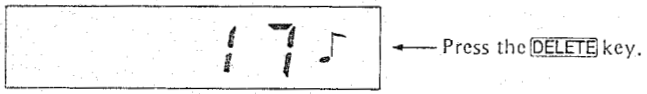
In the example shown here, step 17 is displayed.



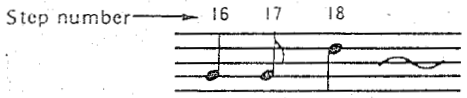
2. Press the DELETE key.



The rest at step 17 is deleted. (A beep will be heard.)



< Data after delete >



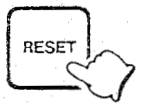
4) CLEAR

Individual tracks of data recorded manually or in real time can be cleared in their entirety.

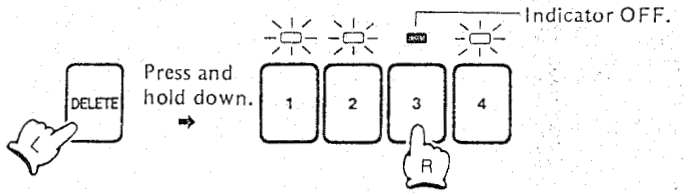
< Example >

Clear the track 3.

1. Press the RESET key.



2. Press the selector for the track to be cleared (in this case track 3) while simultaneously holding down the DELETE key.

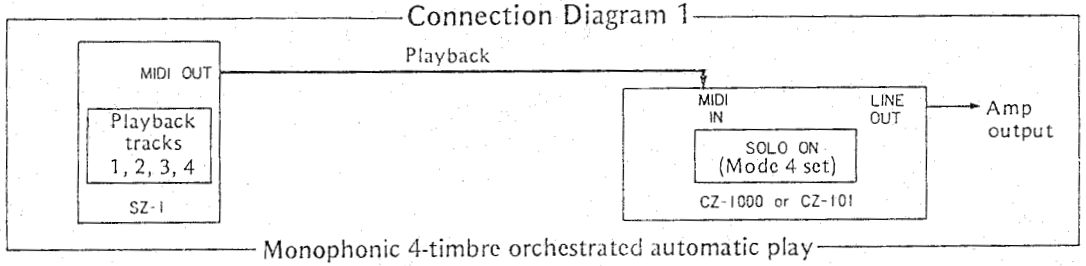


The above operation results in track 3 being cleared of data. To clear the data from all of the tracks, hold down the DELETE key and press each of the track selectors: 1 → 2 → 3 → 4.

Here, a basic connection example will be given and playback procedures will be explained.
First of all, as shown in Connection Diagram 1, all of the tracks that have been recorded in monophonic can be simultaneously played back.

However, MIDI keyboards that do not have the MODE 4 (OMNI, OFF, MONO, MODE) of the CZ-1000 and CZ-101 cannot playback all of the tracks with a single keyboard.

Connection Diagram 1



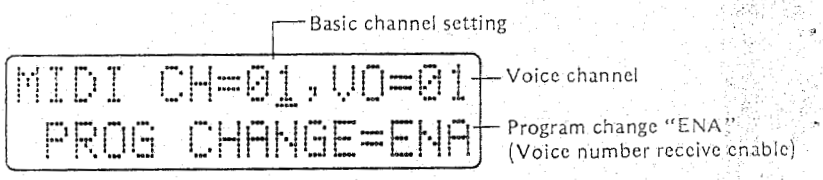
In Connection Diagram 1, tracks 1 through 4 are monophonic, and it is assumed that 4 timbres were recorded separately.

* Virtually no other keyboard besides the CZ-1000 and CZ-101 is capable of such replay on a single unit.
  A through box and a total of four keyboards are required with other systems.

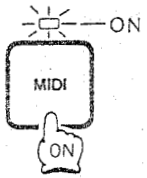
< Example >

1. Press the SOLO key of the keyboard (CZ-1000 or CZ-101) so the indicator above the key is ON.
2. Press the MIDI key of the keyboard (CZ-1000 or CZ-101) so the indicator above the key is ON.
   Looking at the LCD of the CZ keyboard, set the basic channel to CH = 01 using the controls in the Data Entry Section (see illustration below). At this point, the voice channel is divided into four channels (1 through 4), and VO = 01 is displayed.

< CZ LCD >

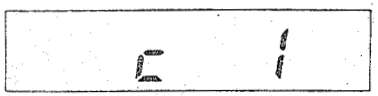


3. Press the MIDI key of the SZ-1 so the indicator above the key is ON, and set the transmit channel of the sequencer.

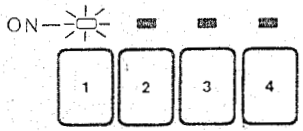


At this time, all indicators except those above the MIDI key and the track 1 selector are extinguished.
The following will appear on the LCD:

<SZ-1 LCD>



"1" indicates that track 1 is the transmit channel.

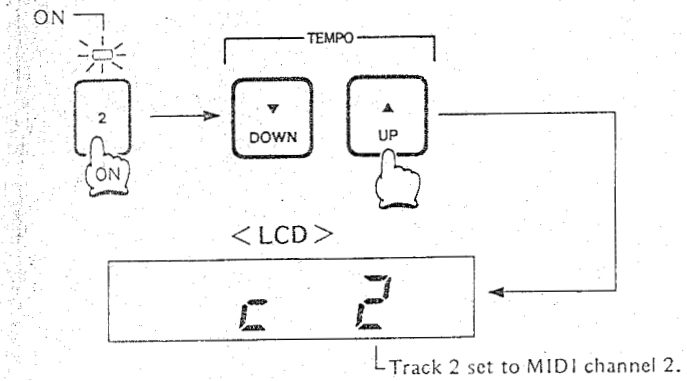


★ Any one of the MIDI channels corresponding to the tracks (1 through 4) available on the SZ-1 can be set. The receive CZ voice channels (01 ~ 04) must correspond to the SZ (transmit) MIDI channels.

< Example >

TRACK 1 . . . Track 1 was already set to CH1 above.

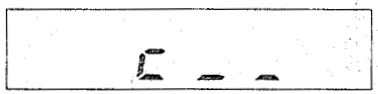
TRACK 2 . . . Press the track 2 selector so the indicator above the key is ON. Press the tempo UP and DOWN keys to set CH2.



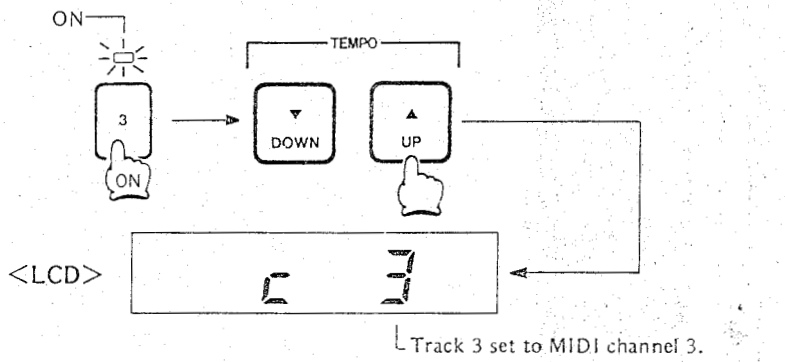
NOTE

♪ When attempting to set the MIDI channel, the following is displayed. The MIDI channel cannot be set when the selected track is empty.

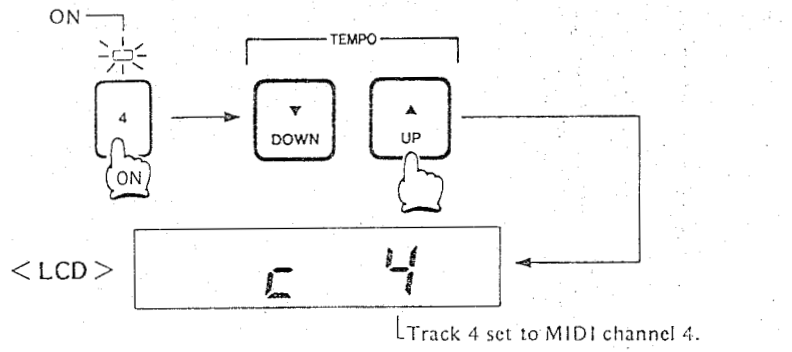
<LCD>



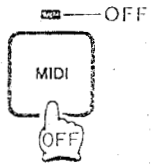
TRACK 3 . . . Press the track 3 selector so the indicator above the key is ON. Press the tempo UP and DOWN keys to set CH3.



TRACK 4 . . . Press the track 4 selector so the indicator above the key is ON. Press the tempo UP and DOWN keys to set CH4.



4. Press the MIDI key of the SZ-1 so the indicator above the key is OFF.



5. When the PLAY key of the SZ-1 is pressed, the 4-timbres are automatically orchestrated and played back.

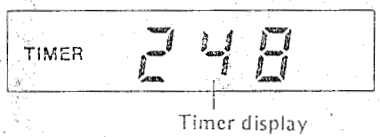
< Example >

SZ-1 MIDI channel	Voice CH	Part	Timbre	Portamento
1	01	Bass	SYNTH. BASS	OFF
2	02	Obbligato	SYNTH. STRINGS 2	OFF
3	03	Percussion	PERCUSSION	OFF
4	04	Melody	TRUMPET	ON

1) Playback Functions

- PLAY

Initiates playback. The timer appears on the LCD and beats are added one-by-one.

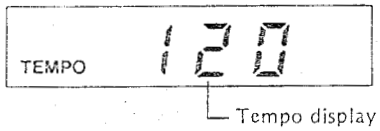


- STOP

Suspends playback and maintains the position in the recording where playback was stopped. The timer displayed also maintains the value that indicates the position where playback was suspended.

- RESET

Terminates playback and returns to the beginning of the recording. The timer display is cancelled and the tempo display appears.



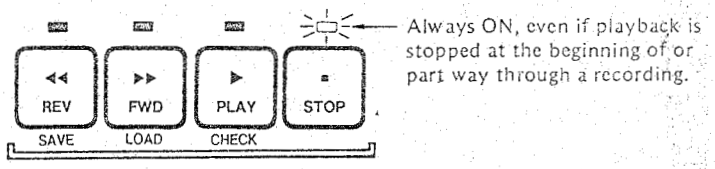
- FWD (forward)

Advances playback at high speed (♩ = 256).

- REV (reverse)

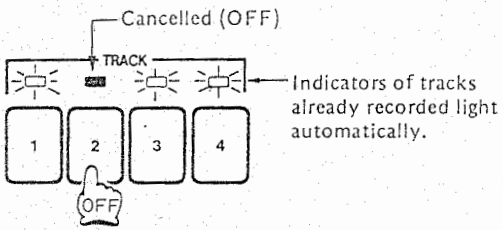
Reverses playback at high speed (♩ = 256).

When the FWD or REV key is pressed during playback, normal playback is resumed when the respective key is released. Pressing the FWD or REV key while playback is stopped at some point in the recording will advance the recording until the respective key is released. At that time playback will be stopped at the new location.



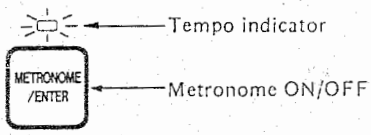
• TRACK ON/OFF

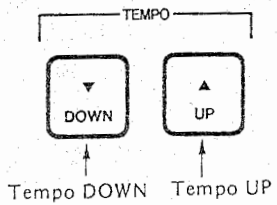
The indicators are lit above track selectors corresponding to tracks that have already been recorded. To cancel playback output from a specific track, press the corresponding selector to turn the indicator above the selector OFF. This can be done either before playback or at any time during playback. Any of the tracks that have been recorded can be turned ON and OFF.



• SETTING THE TEMPO

Tempo can be set at any of 45 levels (♩ = 40 through 256) with the tempo UP DOWN keys. The tempo that is set appears on the LCD.





• METRONOME ON/OFF

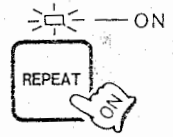
Each press of the METRONOME/ENTER key at the center of the SZ-1 turns the tempo indicator ON and OFF. When it is ON, the tempo indicator blinks according to the setting made using the tempo keys, and a metronome signal will sound at each beat. When it is OFF, there is no indication of tempo and no metronome signal. The metronome can be turned ON and OFF even during playback.

* The metronome can be turned ON and OFF for real-time recording. However, even when it is OFF, a 4-beat introductory measure will be included at the beginning of each recording.

★ The metronome is always ON immediately after switching power ON. However, the metronome and tempo functions are not operational when the clock switch on the back panel is set to EXT.

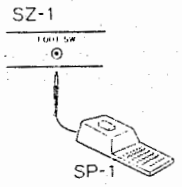
• REPEAT

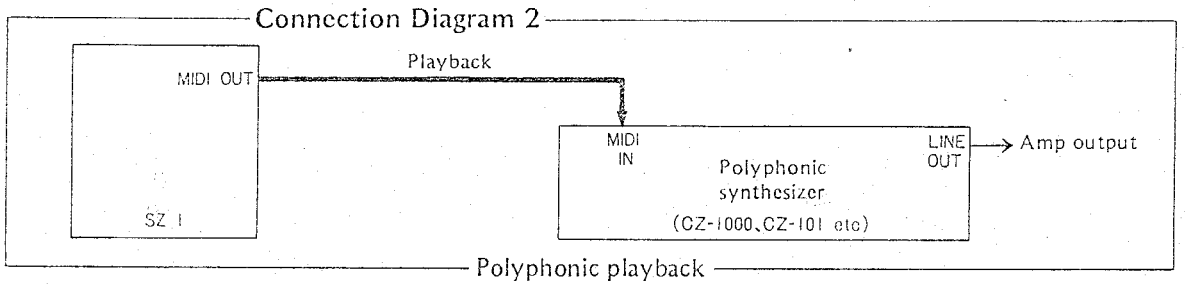
When the indicator above the REPEAT key is ON, the selection being played back repeats endlessly from beginning to end. When OFF, playback is terminated when the end of a selection is reached.



• FOOT SW (FOOT SWITCH)

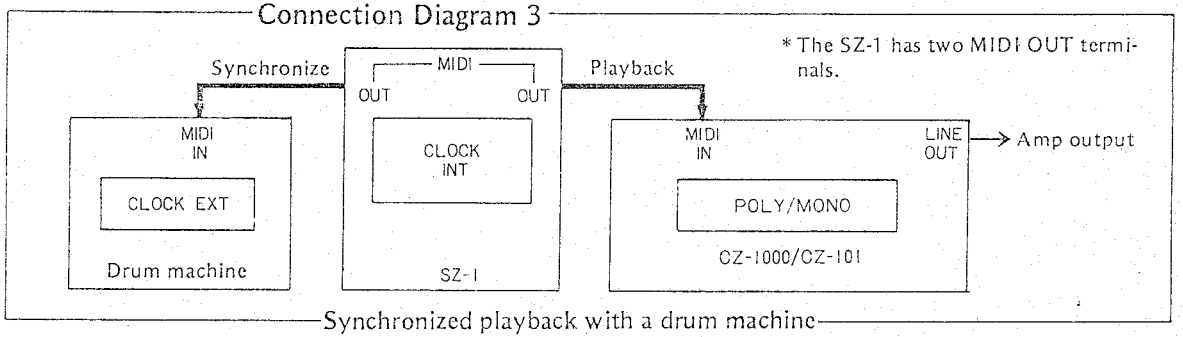
Playback START/STOP can be controlled by an optional SP-1 systain pedal connected to the foot switch terminal on the back panel of the SZ-1.





Connection Diagram 2 shows playback of polyphonic recording to each of tracks 1 through 4. In this case, a polyphonic synthesizer is connected at the receive side. (If a CZ-1000 or CZ-101 are used, they are set to the POLY mode.)

In this configuration, it is necessary to match the channel numbers of the receiver and the send channels of the SZ-1.



Connection Diagram 3 shows a configuration that represents the addition of a drum machine to Connection Diagram 1 or 2. Rhythm start/stop and tempo can be synchronized with keyboard playback.

In this configuration, the SZ-1 is the master. For synchronization, the clock switch on the back panel of the SZ-1 must be set to INT and the drum machine clock to EXT.

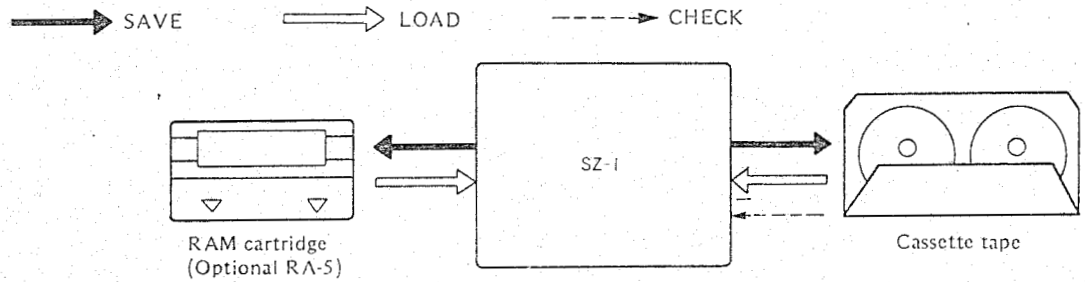
Connection Diagrams 1 through 3 show basic examples of SZ-1 applications, other configurations include connection of two CZ-101's and use of a through box and four MIDI keyboards. For details, see the appendix "APPLICATIONS".

DATA TRANSMISSION/SAVE

With the SZ-1, musical data can be stored exactly as it is to optional RAM cartridges or commercially available cassette tapes.

When required again, the data can easily be recalled into the SZ-1. Using two SZ-1's makes it possible to transmit data through the MIDI.

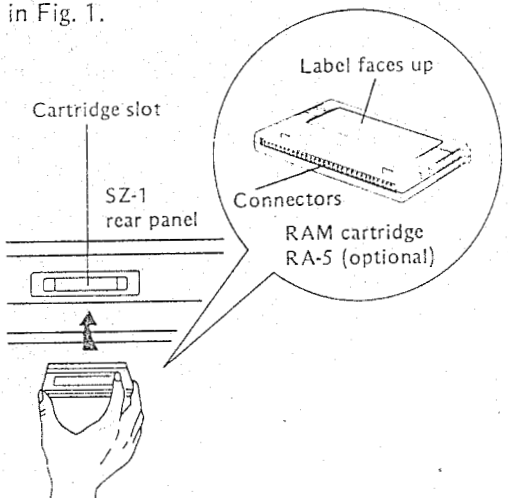
< Data transmission >



1) Transmission of RAM Cartridge Data

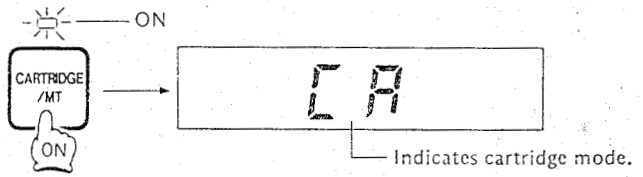
Align the connectors of a RAM cartridge (RA-5, optional) with the cartridge slot on the back panel of the SZ-1. Load the cartridge straight into the slot as shown in Fig. 1.

Fig. 1

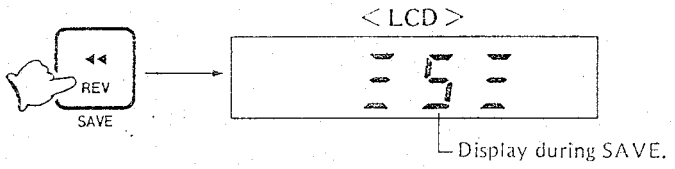


- SAVE

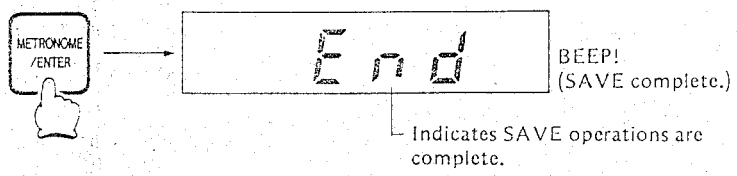
1. Correctly load a cartridge (Fig. 1).
2. Press the RESET key. (Data transmission is performed in the reset mode.)
3. Press the CARTRIDGE/MT key so the indicator above the key is ON. The LCD will appear as follows:



4. Press the [SAVE] ([REV]) key.



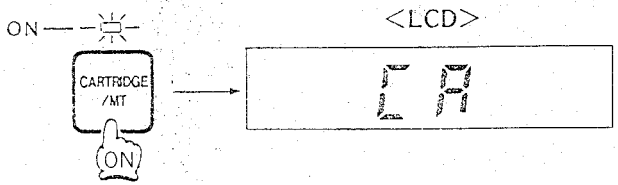
5. Press the [METRONOME/ENTER] key to begin SAVE operations.
Shortly, SAVE operations will be complete. A beep will sound and End will appear on the display.



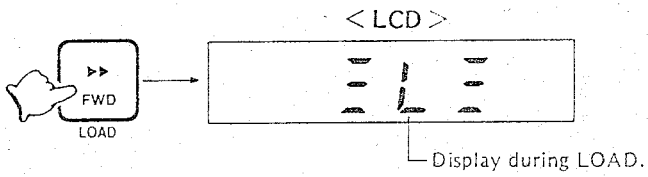
★ Press the [CARTRIDGE/MT] key to return to the reset mode.

● LOAD

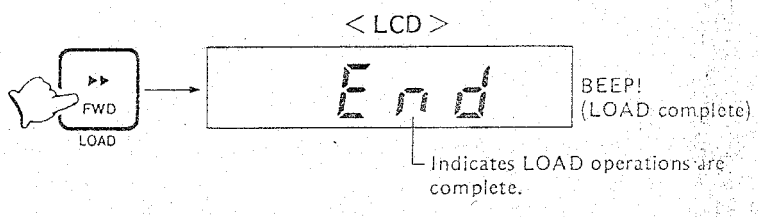
1. Correctly load a cartridge (Fig. 1).
2. Press the [RESET] key. (Data transmission is performed in the reset mode.)
3. Press the [CARTRIDGE/MT] key so the indicator above the key is ON.



4. Press the [LOAD] ([FWD]) key.



5. Press the [METRONOME/ENTER] key to begin LOAD operations.
Shortly, LOAD operations will be complete. A beep will sound and End will appear on the display.

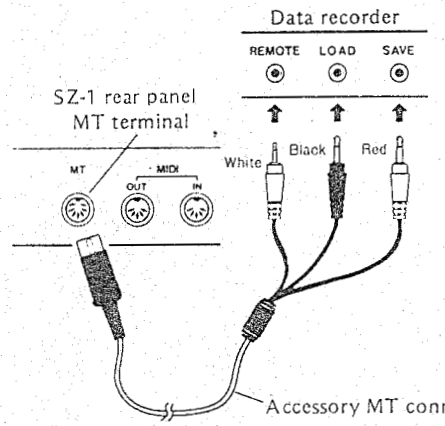


★ Press the [CARTRIDGE/MT] key to return to the reset mode.

2) Transmission of Cassette Tape Data (MT Function)

First of all, prepare a commercially available data recorder or standard tape recorder, plus one blank, unused cassette tape.
Next, use the accessory MT connecting cord to connect the recorder as shown in Fig. 2 to the built-in tape interface of the SZ-1.

Fig. 2



* The recorder end of the cord is divided among white (REMOTE), black (LOAD), and red (SAVE).

< Connecting to the Recorder >

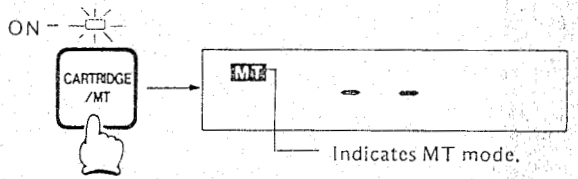
White . . . Remote (REM) terminal.
* Not used for recorders without remote terminals.

Black . . . Earphone (EAR) terminal or load (LOAD) terminal.
Red . . . . Microphone (MIC) terminal or save (SAVE) terminal.

* Connections can differ for certain recorders. See the operation manual of the specific recorder for details on correct connections.
* The MT function is not operational when a RAM cartridge is inserted in the unit. Ensure that a RAM cartridge is not loaded in the unit before attempting to use the MT function.

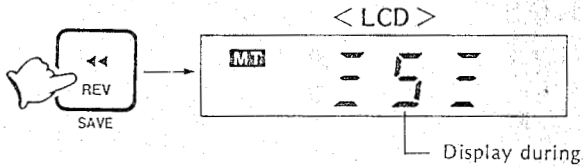
• SAVE

1. Load a cassette tape into the recorder.
★ If the recorder being used is equipped with a remote terminal, perform the proper operation to put the recorder into the record mode.
2. Press the [RESET] key. (Data transmission is performed in the reset mode.)
3. Press the [CARTRIDGE/MT] key so the indicator above the key is ON. The LCD will appear as follows:

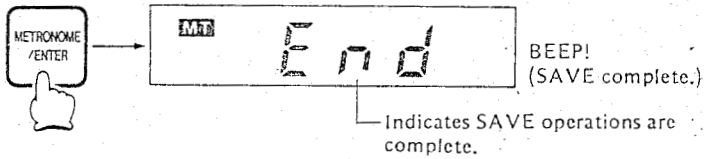


* If CA appears in place of this display, it means that a RAM cartridge is loaded in the unit. Remove the cartridge and ensure that MT is displayed.

4. Press the [SAVE] ([REV]) key.

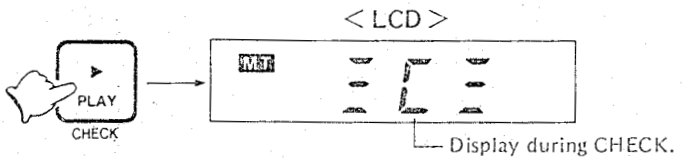


5. After putting the recorder into its record mode, press the [METRONOME /ENTER] key to begin SAVE operations.
After all data are transmitted, SAVE operations will be complete. A beep will sound and End will appear on the display.

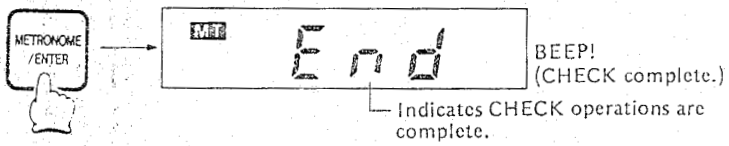


The following operation ensures that data were correctly passed from the SZ-1 to the cassette tape.

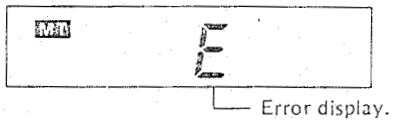
6. Press the [CHECK] ([PLAY]) key.



7. Release the record mode of the recorder and rewind the tape to the beginning.
8. Put the recorder into its play mode.
9. Press the [METRONOME/ENTER] key to begin CHECK operations.
   After all data is checked, CHECK operations will be complete. A beep will sound and End will appear on the display.



A beep will sound and the LCD will appear as follows if an error is detected during CHECK operations:



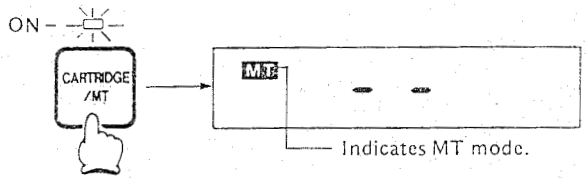
In this case, resave the data from the beginning and check again to see if any errors exist.

◦ LOAD

1. Load a cassette tape into the recorder.

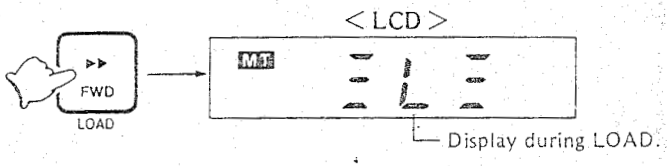
★ If the recorder being used is equipped with a remote terminal, perform the proper operation to put the recorder into the play mode.

2. Press the [RESET] key. (Data transmission is performed in the reset mode.)
3. Press the [CARTRIDGE/MT] key so the indicator above the key is ON. The LCD will appear as follows:

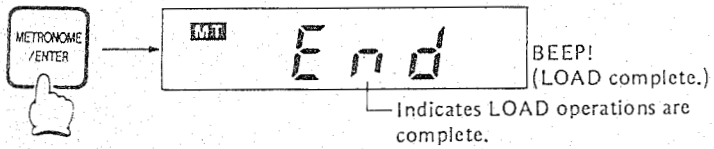


* If CA appears in place of this display, it means that a RAM cartridge is loaded in the unit. Remove the cartridge and ensure that MT is displayed.

4. Press the [LOAD] ([FWD]) key.



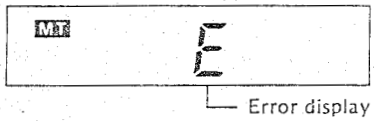
5. Press the METRONOME/ENTER key to begin LOAD operations.
After all data is transmitted, LOAD operations will be complete. A beep will sound and End will appear on the display.



★ Press the CARTRIDGE/MT key to return to the reset mode.

NOTE

♪ The following will appear on the display if an error is generated during data transmission:



In this case, restart LOAD operations from the beginning.
* Pressing the RESET key during LOAD or CHECK operations results in an error being generated.

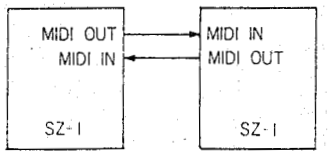
♪ Damaged tapes and dirty recording heads can result in errors being generated.

♪ During LOAD operations, the volume of the recorder should be set as high as possible (without generating an error).
Some recorders with low output cannot perform LOAD operations even at maximum volume. If this occurs, use another recorder.

3) MIDI Data Transmission

Connection Diagram 1

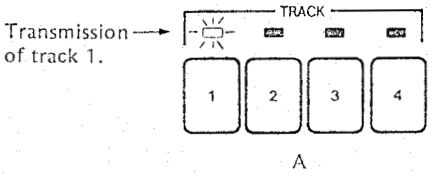
Connecting two SZ-1 units allows the interchange of data.



* Connect using two MIDI cables.

Using SZ-1 unit A and SZ-1 unit B, explanation will be made according to A → B data transmission.

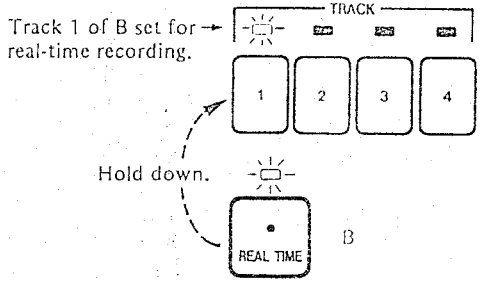
1. Set the clock switch of A to EXT.
2. Select the transmission track of A. The indicator above the corresponding track key will light.



★ Data transmission is performed one track at a time. Simultaneous transmission of multiple tracks is possible, but the tracks are "mixed down" to the selected track of B. For example, the separate, multiple tracks of recorded data from A are recorded to a single track of B.

3. Set the clock switch of B to INT.

4. Select the receive track of B. The indicator above the corresponding track key will light.

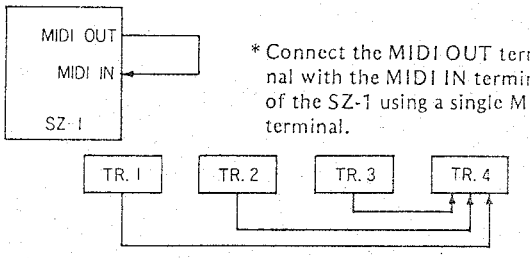


5. Press the RECORD key of B to begin recording by B and simultaneously start playback by A. (Data transmission begins.)
6. When playback by A stops, press the RESET key of B to terminate recording. (Data transmission complete.)
7. Press the RESET key of A.

When multiple tracks are recorded on A, repeat steps 2, 4, 5, 6, and 7 to transmit each track to a corresponding track of B.

Connection Diagram 2

This configuration allows transmission of data from one track of a single SZ-1 to another track. This makes it possible to mix down 2 or 3 tracks to another single, empty track.



The following will show how to mix down with three recorded tracks going to the fourth, empty track.

1. Set the clock switch to INT.
2. Press the RESET key.
3. Press the MIDI key. Set all three tracks to the same MIDI channel.

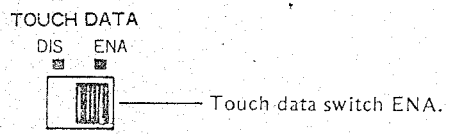
TR. 1 → Set to CH1
TR. 2 → Set to CH1
TR. 3 → Set to CH1
} Press each track selector and use the tempo UP DOWN keys to set all of the MIDI channels to the same value.

4. Set track 4 for real-time recording.
5. Press the RECORD key to begin playback from tracks 1 through 3 and recording to track 4. (Mix down begins.)
6. Press the RESET key when playback of tracks 1 through 3 is complete.

Now the data existing in tracks 1 through 3 can be erased so the tracks can be used for further recording.

1) Key Velocity Recording

When a MIDI keyboard with a key velocity function is connected for real-time recording, setting the touch data switch on the rear panel of the SZ-1 to ENA allows storage of key velocity data.

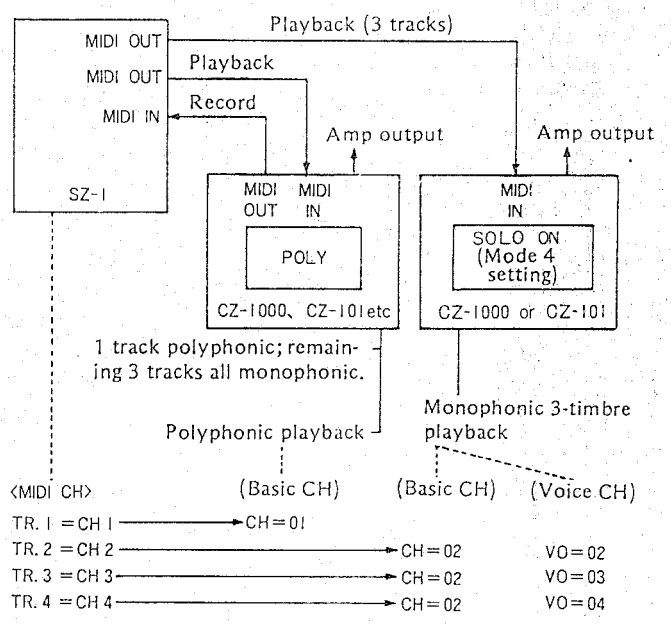


☆ Key velocity data cannot be stored when this switch is in the DIS position or during manual recording.

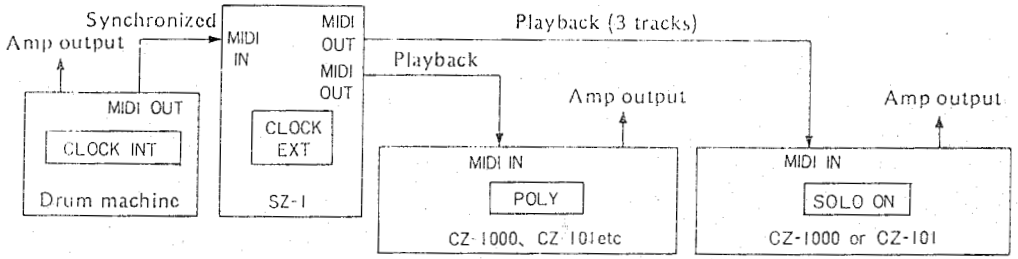
Setting the touch data switch to ENA causes twice as much memory area to be used than DIS. Only use this setting when recording key velocity data. Otherwise, always keep the switch set to DIS.

2) Record/Playback Application Examples

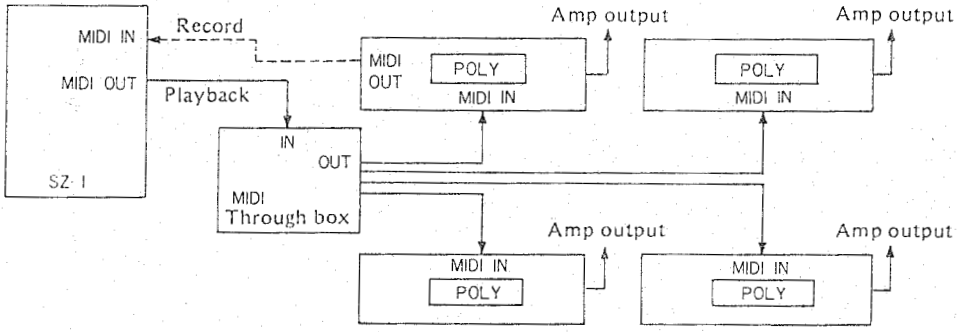
1. Synchronized playback of a single polyphonic track and three monophonic tracks.



2. Configuration similar to 1) synchronized with a drum machine.

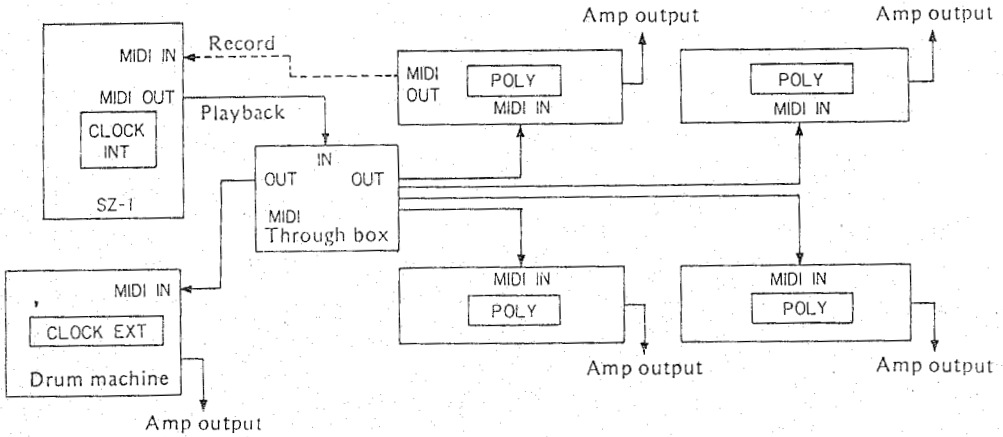


3. Synchronized playback of 4 polyphonic tracks.

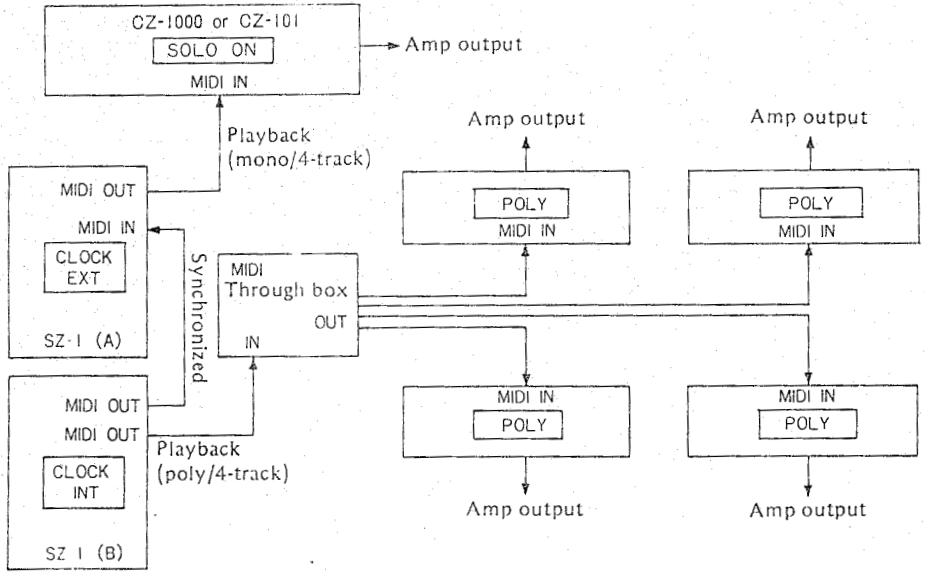


* The MIDI channels of each SZ-1 track are combined with each receive channel of the four polyphonic keyboards.

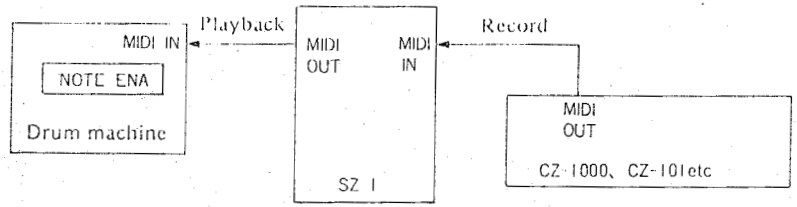
4. Configuration similar to 3) synchronized with a drum machine.



5. 8-track playback using two SZ-1 units.
(4 polyphonic synthesizers + 4 monophonic synthesizers)



6. Playback with drum machine rhythm data input to SZ-1.



GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

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

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

If necessary, the user should consult the dealer or an experienced radio/television technicial for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-00345-4.

SPECIFICAIONS

Memory capacity	Manual: 3600 notes/rests Real-time: 1800 notes/rests (except for key velocity data)
Number of tracks	4
Recording modes	Real time/manual
Function keys	RESET, STOP, RECORD, PLAY, REVERSE, FORWARD
Manual data	♩、𝅗𝅥、𝅝、♪、𝅘𝅥𝅯、𝅘𝅥𝅰、・、𝄾、⌣、REST
Edit function	COPY, INSERT, DELETE, CLEAR
MIDI channel select	1 – 16 (output channels)
Tempo	♩ = 40 – 256
Metronome	ON/OFF (sounds every beat when ON)
REPEAT	ON/OFF
Clock	INT/EXT
Touch data	DIS/ENA
LCD	Timer, Step, Tempo, Channel select, Cartridge mode, MT mode, Save, Load, Check, End, Error, Pitch, Note value, Rest, Program change, Control change, Memory over, Timer over, Step over
Connection terminals	MIDI IN x 1 (DIN 5pin) MIDI OUT x 2 (DIN 5pin) MT x 1 (DIN 8pin) CARTRIDGE x 1 (30pin) FOOT SWITCH (START/STOP) DC 7.5V
Memories (SAVE/LOAD)	Cartridge/MT (tape interface) * CHECK function only available with MT.

Main power supply	Five SUM-1 batteries AC adaptor (AD-1, optional) Car adaptor (CA-1, optional) * Batteries also used for memory back up power supply. * Battery life: Approx. 5 hours (When used as main power supply) Approx. 1 year (When used as memory back-up)
Auto power off (APO)	ON/OFF (Automatically cuts power supply approx. 6 minutes after last operation when ON.)
Consumption power	3.0 W
Dimensions	325(W) x 220(D) x 62(H) mm 12⅞" (W) x 8⅝" (D) x 2½" (H)
Weight	1.7 kg (including batteries) 3.7 lb.
Accessories	MIDI cable x 2 MT connection cord x 1 SUM-1 batteries x 5