

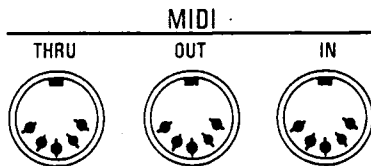
Technics

M I D I

SX-EX15(L)/SX-EX25(L)/SX-EX35

MIDI terminals

MIDI (Musical Instrument Digital Interface) is the standard specification that enables connection to equipment such as synthesizers and personal computers. Data transmission and reception are possible between the Technics organ and equipment provided with MIDI terminals.



This organ can transmit or receive data for **UPPER, LOWER, BASS** and **SOLO** parts.

- For these connections, use a standard MIDI cable (5-pin DIN male plug, each end on a cable less than 15 meters [50 feet] long).

- IN:** The terminal that receives data from external equipment.
- OUT:** The terminal that transmits data from the organ to external equipment.
- THRU:** The terminal that transfers data from the IN terminal directly to other equipment.

- When this organ is connected to other equipment in a loop (**IN-OUT, OUT-IN** connection), the organ may not operate properly. In this case, eliminate one of the connections.

The following data can be received.

[Connect the **IN** terminal of this instrument to the **OUT** terminal of the external equipment.]

- **Keyboard On/Off Data of External Equipment**
The sound for this instrument can be heard by playing the external equipment.
- **Program Change Data**
The voices for this instrument can be selected by operating the external equipment.
 - The **VOICE SETTING COMPUTER** is selected for the **UPPER** part; no voice is selected for the **LOWER** part (**EX25/EX35**).
- **MIDI Clock Signal**
You can play this instrument in synchronization with the clock on the external equipment (MIDI clock mode).
- **Effect Data, Sustain Data**
The effects and sustain for this instrument can be controlled by operating the external equipment. (Only **UPPER** and **LOWER** parts can be controlled.)
- **Start/Stop Data**
You can start and stop this instrument from the external equipment.
- **FSC Number (when loading) (EX25/EX35)**
By operating the external equipment, the **FSC** number for this instrument can be selected.

The following data can be transmitted.

[Connect the **OUT** terminal of this instrument to the **IN** terminal of the external equipment.]

- **Keyboard On/Off Data**
The sound from the external equipment can be heard by playing this instrument.
- **Program Change Data**
The voices for the external equipment can be selected by operating the voice buttons for this instrument.
 - The following buttons are used to select voices for each part.
 - UPPER** part **UPPER POLY** voice buttons
 - LOWER** part **LOWER POLY** voice buttons
 - BASS** part **BASS** voice buttons
 - SOLO** part **SOLO** voice buttons
- **Internal Clock Signal**
You can synchronize the external equipment with this instrument (internal clock mode).
- **Effect Data, Sustain Data**
The effects and sustain of the external equipment can be controlled by operating the **EFFECT** and **SUSTAIN** buttons for this instrument. (Only the data of **UPPER** and **LOWER** parts can be transmitted.)
- **Start/Stop Data**
You can start and stop the external equipment from this instrument.
- **FSC Number (when loading) (EX25/EX35)**
The song of the external equipment can be selected by loading the **FSC** number for this instrument. (By using the lower keyboard white number keys 1~20, song select numbers 0~19 can be sent.)
- These data cannot be received by some equipment.
- When connected to equipment that has a hold function, the respective **SUSTAIN** buttons for this instrument will work with this function to hold a note indefinitely.
- When using the **PLAY SEQUENCER**, the external instrument can be played automatically (**EX25/EX35**).

Setting MIDI functions

When using MIDI signals, set the MIDI functions mode as follows:

Basic Channel Designation

Basic channels numbered from 1 to 16 are available for MIDI signals. The channels on the transmission side and receiving side must match before keyboard on/off data, voice data, effect data and sustain data can be transmitted and received.

- Set the necessary basic channel number for each **UPPER**, **LOWER**, **BASS** and **SOLO** part.

Clock Selection

Select the internal clock when playing in time with this instrument's clock. Select the **MIDI CLOCK** when playing in time with the external equipment clock.

- When the **MIDI CLOCK** is selected, the rhythm can only be started if the MIDI clock signal is received from external equipment.

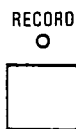
Program Change, Effect, Sustain, Start/Stop

Whether or not the data for each of these items is transmitted or received can be set.

- Except for **START/STOP**, each can be set individually.

<Procedure>

- Press the **RECORD** button. The indicator will flash.



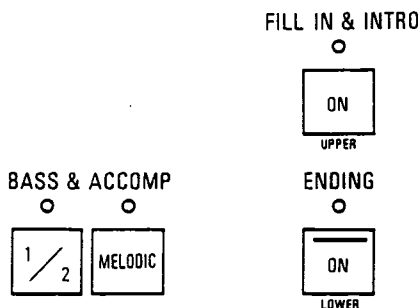
- Press the **MODE SET** button. The indicator will flash slowly. The MIDI function-setting mode is now active.



- Set the necessary functions.

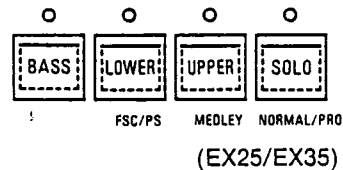
I. Setting by parts (basic channel, program change, effect, sustain)

- Choose the part to be set with the buttons as shown below.



(EX15)

PLAY SEQUENCER



(EX25/EX35)

- Press the key on the lower keyboard (1 to 16) to set the basic channel number for the part.

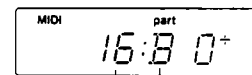


MUSICAL DISPLAY

- The **MUSICAL DISPLAY** will show the part and basic channel.

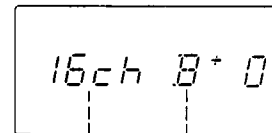
U...UPPER L...LOWER
B...BASS S...SOLO

EX15



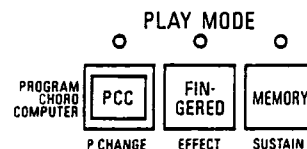
basic channel part

EX25/EX35



basic channel part

- Multiple parts cannot be assigned to the same basic channel. When a key for a basic channel that has already been designated is pressed, an error sound is heard.
 - In the initial mode, the parts are preset as follows: **UPPER...1, LOWER...2, BASS...3, SOLO...4.**
- For transmission or reception of program change, effect and sustain data for the part, turn on the corresponding button for transmission or reception and turn off the others.



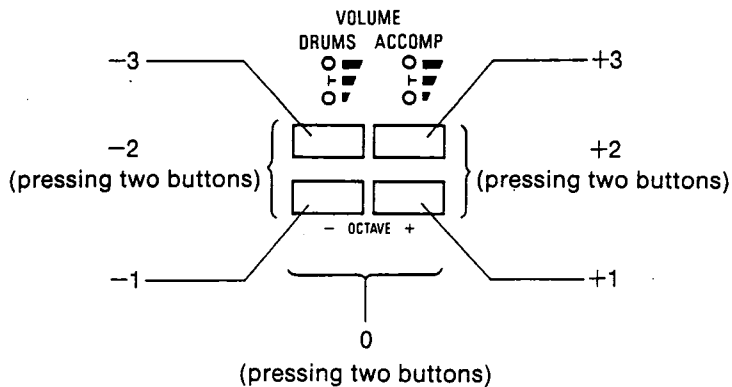
- EFFECT** and **SUSTAIN** can be set to on only for the **UPPER** and **LOWER** parts.

4. Octave Shift

Each part can also be shifted as far as 3 octaves up or down.

MIDI IN and MIDI OUT octave shifts are interrelated. If OUT is +1, IN is automatically set to -1.

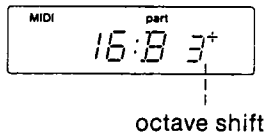
Use the **DRUMS** and **ACCOMP** buttons of the **VOLUME** control to set the octave shift.



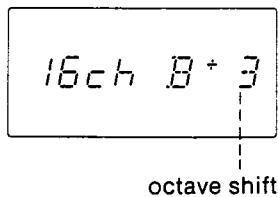
MUSICAL DISPLAY

The OUT octave shift is displayed.

EX15



EX25/EX35



Note Number

Keyboard note numbers are as shown below during normal operation.

Part	Note Number
UPPER	53 60 96
LOWER	41 60 84
SOLO	53 60 96
BASS	36 48

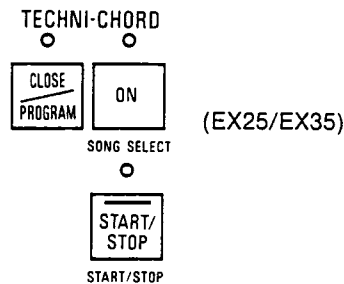
5. Repeat steps 1 through 4 for other parts.

II. Setting functions common to all parts (clock, song select [EX25/EX35] and start/stop)

- Set the clock by pressing the **MIDI CLOCK** button.
- The internal clock is set when the button is turned off and the MIDI clock is set when the button is turned on.



- Whether data for **SONG SELECT** (EX25/EX35) and **START/STOP** are transmitted/received is determined by the on or off state of the respective buttons.



4 Press the **RECORD** button to turn it off.

- When the **POWER** to this instrument is turned off and then on again, the clock is set to the internal mode. All information except the clock remains the same as it was before the power was turned off (EX25/EX35).

Storage of parts (EX25/EX35)

The data regarding any parts to be transmitted or received can be stored in the **VOICE SETTING COMPUTER** and recalled by simply using the **VOICE SETTING COMPUTER** buttons.

- When the **CANCEL** button on the **VOICE SETTING COMPUTER** is pressed, the data for all parts are transmitted or received.
1. Press the **RECORD** button. Its indicator will flash.
 2. While holding down one of the **VOICE SETTING COMPUTER** buttons, turn on the buttons corresponding to the part to be transmitted or received (see "Setting MIDI functions," above).
 3. Turn off the **RECORD** button to complete storage.
- Other arrangements can be stored in the same way using the other **VOICE SETTING COMPUTER** buttons.
 - Storage can be continued by pressing another **VOICE SETTING COMPUTER** button instead of the **RECORD** button in step 3.

Organ sound off mode (EX25/EX35)

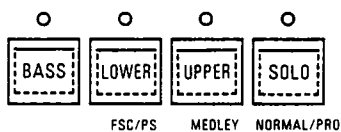
Organ sound output can be turned off when the organ is connected with the MIDI terminal to an external instrument for sound reproduction.

- The on or off condition of each part (**UPPER**, **LOWER**, **BASS**, **SOLO**) can be set, and the settings can be stored in the respective **VOICE SETTING COMPUTER** buttons.

■ Setting each part

1. Press the **RECORD** button.
2. Press one of the **VOICE SETTING COMPUTER** buttons.
3. With the **FSC** button held down, press the button for the desired part as shown below to enable or disable audio output.
- The part whose indicator is lit will be output.

PLAY SEQUENCER



4. Press the **RECORD** button to turn it off.

■ Turning the sound off mode on/off

1. Press the **RECORD** button.
2. With the **FSC** button held down, press the **SET** button of the **VOICE SETTING COMPUTER** to turn the sound off mode on. With the **FSC** button held down, press the **CANCEL** button of the **VOICE SETTING COMPUTER** to turn the sound off mode off. The **RECORD** button automatically turns off.
- The sound off mode is canceled when the **POWER** is turned off and on again, and when the initial mode is reset.

Loading stored MIDI data (EX25/EX35)

All MIDI data that have been set can be stored in the organ's memory or in devices such as a memory disk, simply by performing storage procedures for the **PLAY SEQUENCER** or the **FULLBAND SETTING COMPUTER**. When the organ is in the initial mode, these stored MIDI settings are automatically recalled during playback. If you do not wish to recall the stored settings during playback, follow the procedure below.

1. Press the **RECORD** button. The indicator will flash.
2. Press the **MODE SET** button. The indicator will flash slowly.
3. Press the **FSC** button to turn it off.
4. Press the **RECORD** button to turn it off.

MIDI Implementation Chart

Technics Organ

[SX-EX15(L)/SX-EX25(L)/SX-EX35]

(Transmitted)

Function . . .		upper	lower	bass	soto	Remarks
Basic Channel	Default	1~16	1~16	1~16	1~16	memorized
	Changed	1~16	1~16	1~16	1~16	
Mode	Default	3	3	3	3	
	Messages Altered	×	×	×	×	
Note Number	True voice	36~127	36~119	36~84	36~127	Including the use of Octave Shift
Velocity	Note ON Note OFF	×	×	×	×	
		× (9nH:V=0)	× (9nH:V=0)	× (9nH:V=0)	× (9nH:V=0)	
After Touch	Key's	×	×	×	×	
	Ch's	×	×	×	×	
Pitch Bender		×	×	×	×	
Control Change	64	*○ ×	*○ ×	×	×	sustain
	94	*○ ×	*○ ×	×	×	celeste
Prog Change	True #	*○ × 0~ 8 (EX15) 0~15 (EX25/EX35)	*○ × 0~ 8 (EX15) 0~11 (EX25/EX35)	*○ ×	*○ ×	
System Exclusive				×		
System Common	Song Pos Song Sel Tune	×		×	*○ × (EX25/EX35)	
System Real Time	Clock Commands			○ *○ ×		
Aux Messages	Local ON/OFF All Notes OFF	×	×	×	×	
	Active Sense Reset	○	○	○	○	
Notes		*○ × Whether or not the data for each of these items is transmitted can be set.				

Mode 1: OMNI ON, POLY **Mode 2:** OMNI ON, MONO ○ : Yes
Mode 3: OMNI OFF, POLY **Mode 4:** OMNI OFF, MONO × : No