Technics

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# sx-EX10L/sx-EX20(L)/sx-EX30(L)

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.

IN: The terminal that receives data from external equipment.

OUT: The terminal that transmits data from the organ to external equipment.

● Use a 5-pin DIN cord (less than 15 m long) for these connections.

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

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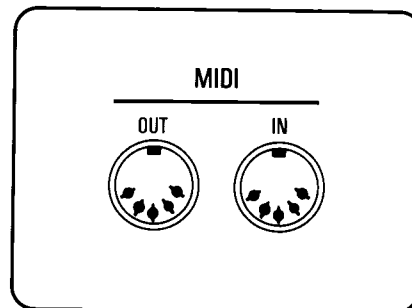
● When this organ is connected to other equipment in a loop (**IN→OUT, OUT→IN** connection), the organ may not operate properly. In this case, eliminate one of the connections.

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 tones for this instrument can be selected by operating the external equipment.
  ● The **VOICE SETTING COMPUTER (VSC)** is selected for the **UPPER** part; no voice is selected for the **LOWER** part (EX20/EX30).

● **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 effect 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 (when loading) Number (EX20/EX30)**
By operating the external equipment, the **FSC** 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 tone for the external equipment can be selected by operating the tone 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 effect and sustain of the external equipment can be controlled by operating the **EFFECT** and **SUSTAIN** buttons for this instrument. (Only **UPPER** and **LOWER** parts can be controlled.)

● **Start/Stop Data**
You can start and stop the external equipment from this instrument.

● **FSC (when loading) Number (EX20/EX30)**
The song of the external equipment can be selected by loading the **FSC** for this instrument. (By using the lower keyboard white number keys 1~20, song select numbers 0~19 can be sent.)

● **Song Select (EX10)**
The song of the external equipment can be selected by operating this instrument. (The procedure for sending song select data is explained on page 4.)

● These data cannot be received by some equipment.
● When connected to equipment that has a hold function, the **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 (EX30 only).

MIDI Mode Setting

When using MIDI signals, set the **MIDI** 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, tone 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 **MIDI** clock is received from external equipment.
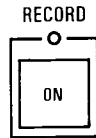
- **Program Change, Effect, Sustain, Start/Stop**
  Whether or not the data for each of these items is transmitted or received can be set.
  - Except for **START/STOP**, each can be set individually.

＜Procedure＞

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

RECORD

ON

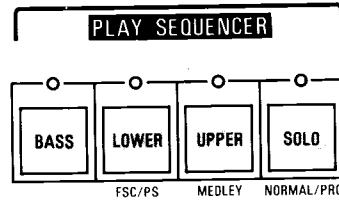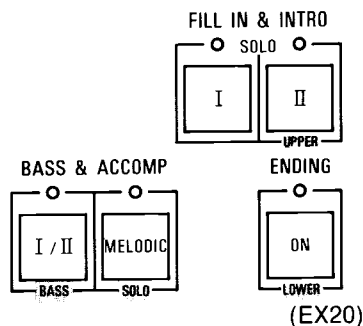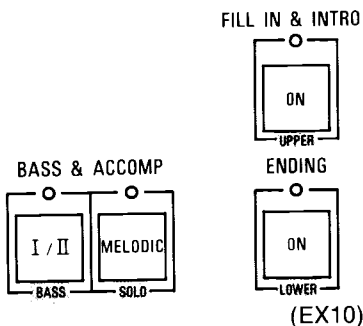2. Press the **MODE SET** button. The indicator will flash slowly. The MIDI set mode is now functioning.
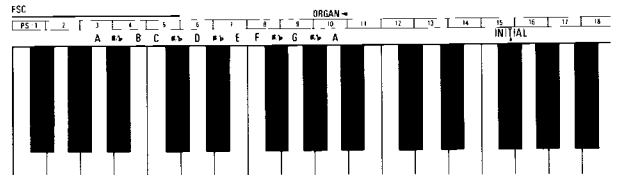
ONE TOUCH PLAY

[MODE SET]

3. Set the necessary mode.

● Setting by parts for basic channel, program change, effect, sustain

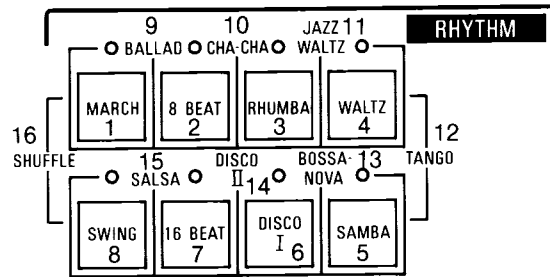1. Choose the part to be set with the buttons as shown below.

FILL IN & INTRO

ON

UPPER

BASS & ACCOMP

I / II   MELODIC

BASS   SOLO

ENDING

ON

LOWER

(EX10)

FILL IN & INTRO

SOLO

I   II

UPPER

BASS & ACCOMP

I / II   MELODIC

BASS   SOLO

ENDING

ON

LOWER

(EX20)

PLAY SEQUENCER

BASS   LOWER   UPPER   SOLO

FSC/PS   MEDLEY   NORMAL/PRO

(EX30)

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

- The **RHYTHM** button indicators will light to indicate the number of the basic channel.

RHYTHM

9   10   JAZZ 11

BALLAD   CHA-CHA   WALTZ

MARCH 1   8 BEAT 2   RHUMBA 3   WALTZ 4

16   12
SHUFFLE   15   DISCO   BOSSA-13   TANGO
SALSA   II 14   NOVA

SWING 8   16 BEAT 7   DISCO I 6   SAMBA 5

- 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.

3. For the part of the program change, effect or sustain desired, turn on the corresponding button for transmission or reception and turn off the others.

PLAY MODE

PROGRAM CHORD COMPUTER   PCC   FIN- GERED   MEMORY

P CHANGE   EFFECT   SUSTAIN
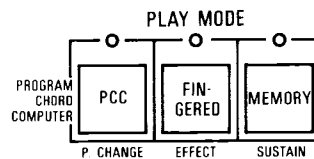
- Only the **UPPER** and **LOWER** parts for effect and sustain can be set.

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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.
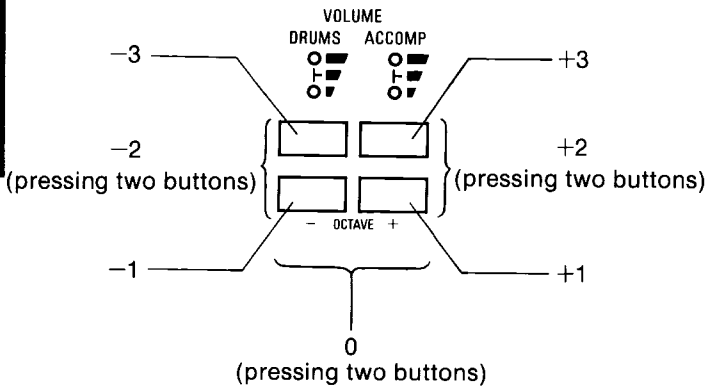
Note Number

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 / 53 60 96
Bass	36 48

5. Repeat steps **1** through **4** for other parts.

II. Setting for clock, song select (EX20/EX30) 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** (EX20/EX30) and **START/STOP** are transmitted/received is determined by the on or off state of the respective buttons.
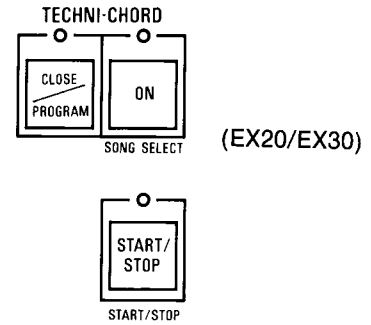
4 Press the **RECORD** button to turn it off.

● 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 (EX20/EX30).

Storage of parts (EX20/EX30)

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.

<Procedure>

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 MIDI Mode Setting, 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**.
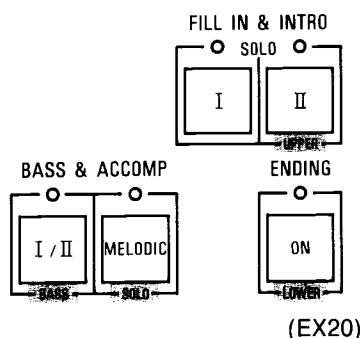
Organ Sound Off Mode (EX20/EX30)

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.
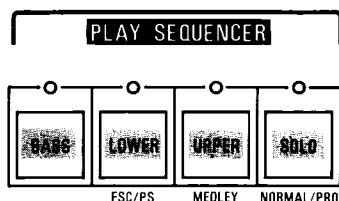
<Procedure>

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.

(EX20)

(EX30)

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 cancelled when the **POWER** is turned off and on again, and when the initial mode is reset.

Loading stored MIDI data (EX20/EX30)

All MIDI data that have been set can be stored in the organ's memory or in devices such as an optional digital disk recorder (EX30), simply by performing storage procedures for the **PLAY SEQUENCER** or the **FULLBAND SETTING COMPUTER**. However, these stored MIDI settings cannot be recalled for playback in the initial mode. Follow the procedure below in order to recall these stored MIDI settings for playback.

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

- If the **POWER** is turned off, then on again, the **FSC** will be turned off.

Sending song select data (EX10)

The song of the external equipment can be selected by operating this instrument.

1. Press the **RECORD** button. The indicator will flash.
2. Press the **MODE SET** button. The indicator will flash slowly.
3. Press the **TECHNI-CHORD** button on.
4. Press one of the lower keyboard white number keys **1~20**, and the corresponding song select number **0~19** will be sent. The **TECHNI-CHORD** indicator goes off automatically.
5. Press the **RECORD** button to turn it off.

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MIDI Implementation Chart

Technics Organ
[SX-EX10L/SX-EX20(L)/SX-EX30(L)]   **(Transmitted)**

Function...		upper	lower	bass	solo	Remarks
Basic Channel	Default	1 1~16	2 1~16	3 1~16	4 1~16	(EX10) memorized (EX20/EX30)
	Changed	1~16	1~16	1~16	1~16	
Mode	Default	3	3	3	3	
	Messages	✕	✕	✕	✕	
	Altered	———	———	———	———	
Note Number		36~127	36~119	36~84	36~127	Including the use of Octave Shift
	True voice	———	———	———	———	
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
	92	*○ ✕	*○ ✕	✕	✕	tremolo
	93	*○ ✕	*○ ✕	✕	✕	chorus
	94	*○ ✕	*○ ✕	✕	✕	celeste (EX20/EX30)
Prog Change		*○ (0~7: EX10 / 0~12) ✕	*○ (0~7: EX10 / 0~8) ✕	*○ (0~2: EX10 / 0~7) ✕	*○ (0~7) ✕	
	True #	———	———	———	———	
System Exclusive		✕				
System Common	Song Pos	✕				
	Song Sel	○ (EX10) *○ ✕ (EX20/EX30)				
	Tune	✕				
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

MIDI Implementation Chart

Technics Organ
[SX-EX10L/SX-EX20(L)/SX-EX30(L)]   **(Recognized)**

Function...		upper	lower	bass	solo	Remarks
Basic Channel	Default	1 1~16	2 1~16	3 1~16	4 1~16	(EX10) memorized (EX20/EX30)
	Changed	1~16	1~16	1~16	1~16	
Mode	Default	3	3	3	3	OMNI OFF POLY Mode
	Messages	×	×	×	×	
	Altered	——	——	——	——	
Note Number		**36~107 (EX10) 35~119	**36~107 (EX10) 36~119	24~107 (EX10) 24~119	48~107	Changes depending on the position of the Transpose slide control or Octave Shift.
	True voice	**36~107 (EX10) 36~119	**36~107 (EX10) 36~119	**36~107	48~107	
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
	92	*○ ×	*○ ×	×	×	tremolo
	93	*○ ×	*○ ×	×	×	chorus
	94	*○ ×	*○ ×	×	×	celeste (EX20/EX30)
Prog Change		*○ × 0~7 (EX10) 0~4 (EX20) 0~7 (EX30)	*○ ×(EX10) ×(EX20/EX30) 0~7 (EX10)	*○ × 0~2 (EX10) 0~7 (EX20/EX30)	*○ × 0~7	
	True #					
System Exclusive		×				
System Common	Song Pos	×				
	Song Sel	×(EX10) *○ ×(EX20/EX30)				
	Tune	×				
System Real Time	Clock	○				
	Commands	*○ ×				
Aux Messages	Local ON/OFF	×	×	×	×	
	All Notes OFF	○	○	○	○	(123~127)
	Active Sense	○				
	Reset	×				
Notes		*○ ×.......... Whether or not the data for each of these items is received can be set. **Changes depending on the selected voice.				

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

- This product adheres to MIDI specifications as published by the Japan MIDI Association.

ENGLISH   DEUTSCH   FRANÇAIS   ESPAÑOL   NEDERLANDS   ITALIANO