

ELECTRIBE SX

ESX-1 Music Production Sampler

Owner's Manual



VALVE FORCE

KORG

Precautions

Location

Using the unit in the following locations can result in a malfunction.

- In direct sunlight
- Locations of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power supply

Please connect the designated AC/AC power supply to an AC outlet of the correct voltage. Do not connect it to an AC outlet of voltage other than that for which your unit is intended.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the switches or controls.

Care

If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keep this manual

After reading this manual, please keep it for later reference.

Keeping foreign matter out of your equipment

Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause a breakdown, fire, or electrical shock. Be careful not to let metal objects get into the equipment. If something does slip into the equipment, unplug the AC/AC power supply from the wall outlet. Then contact your nearest Korg dealer or the store where the equipment was purchased.

THE FCC REGULATION WARNING (for U.S.A.)

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 user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC). And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).

Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

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1. Introduction

Thank you for purchasing the ELECTRIBE SX (subsequently referred to as the “ESX-1”).

The ESX-1 Music Production Station can be used by anyone - from beginner to professional - to create stunningly original music.

The panel knobs and keys allow you to edit sounds intuitively and easily, and to create rhythms and phrase patterns without the need to use any other equipment. The ESX-1 is the ideal tool for the musician, DJ, sound creator, or desktop-music user who wants an easy way to add originality to their music. It’s also an ideal compliment to any of the other models in the ELECTRIBE series.

Main features

Ideally structured as a tool for creating dance music

The ESX-1 has nine drum parts, one slice part, two stretch parts, and two keyboard parts for inputting melodies and phrases, giving you a total of fourteen sample parts to which you can assign your own samples and process the sound of each part. The ESX-1 goes beyond the boundaries of conventional samplers and rhythm modules; it’s a comprehensive tool for dance music production.

Gigantic user sampling area

Internal memory can hold up to 384 user-sampled sounds (256 monaural, 128 stereo). (Maximum total capacity is 285 seconds of monaural samples.)

Analog synthesizer-style ease of editing

The front panel provides knobs and switches for important sound parameters, allowing you to edit sounds in realtime while you perform, and letting you create sounds in the same way as on an analog synthesizer.

Three simultaneous stereo effect processors

The ESX-1 provides three stereo effect processors, each featuring 16 cutting-edge effect types. You can use the Chain function to modify the way in which the effects are connected to each other.

1. Introduction

192 internal patterns programmed for many genres of dance music

The ESX-1 can hold 256 patterns in memory. Each one lets you store a sound and sequence (of up to 128 steps) for each part. When shipped, 192 of the internal patterns are pre-programmed specifically for dance music and other modern music styles.

64 songs

A sequence of patterns, mute data, and knob movements can be saved as a “song” in each of the 64 song memories.

Intuitive pattern programming

The sixteen step keys on the front panel allow you to enter data into pattern quickly, easily and intuitively. Of course, you can also use realtime recording or step recording.

Motion sequencing

The ESX-1’s Motion Sequence feature lets you record and loop both knob movements and switch operations, letting you create time-varying changes in the tone during playback.

Newly-developed VALVE FORCE vacuum tube circuit

The ESX-1 features Korg’s newly-developed VALVE FORCE technology, a completely analog circuit that contains two actual vacuum tubes and can be used as a mastering effect to enhance the overall sound level. It delivers a rich, warm, and clearly-defined sound that cannot be replicated by digital technology alone. Use the TUBE GAIN knob to adjust the level of the ESX-1’s output signal being sent through the vacuum tubes, controlling the smooth distortion and rich overtone structure that vacuum tubes add to the sound. Even at lower volume levels, you can adjust the TUBE GAIN to enjoy great tube-quality sound in any situation.

Process external audio sources

You can connect an audio source to the audio in jack, and process that sound using the internal filter and on-board effects.

Two-channel individual output jacks

In addition to the L/MONO and R main stereo audio outputs, you can route any combination of parts to the two independent audio outputs.

Auto BPM detection

The ESX-1 can automatically detect the tempo of an audio source connected to the audio in jack, and apply that tempo to the current pattern. Of course, you can also use tap tempo to input the tempo, or synchronize to an external MIDI clock.

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SmartMedia™ slot

Patterns and songs you create on the ESX-1 can be saved on SmartMedia™.

WAVE files or AIFF files you create on your computer or another device can be loaded via SmartMedia™ and used.

Pattern writing on-the fly

If you unexpectedly come up with a cool pattern or riff while playing patterns, you can write and save the pattern without stopping your performance.

Arpeggiator

Use the ribbon controller and slider for intuitive and hands-on control of automatically generated arpeggios.

Display

The large back-lit LCD keeps you informed of the operating status and provides other information.

Saving your data on the ESX-1

The patterns and songs you edit and create on the ESX-1 will be lost (the patterns and songs will return to their un-edited state) if you select a new pattern or song, or turn off the power before saving your changes.

If you want to save a pattern or song that you created or edited, or changes you made to global data, you must perform the Write operation.

About the vacuum tubes

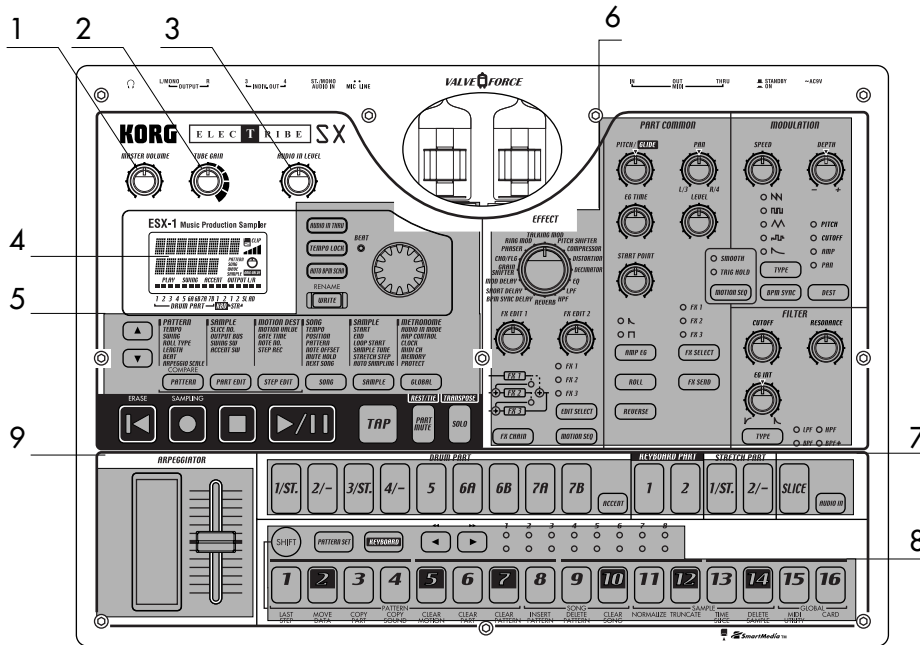
Do not attempt to remove, replace or change the tubes in the ESX-1. The tubes are not a user serviceable part.

What is VALVE FORCE?

VALVE FORCE is KORG's proprietary vacuum tube audio technology. The VALVE FORCE system provides the smooth distortion and rich overtone structure that is uniquely characteristic of analog tube circuitry. By providing the tube circuit with its own gain control, the VALVE FORCE system delivers excellent tonal quality in any situation.

2. Parts and their functions

Top panel




1. MASTER VOLUME

This knob adjusts the output volume of the line out jacks and the headphone jack. The master volume does not adjust the volume of the individual out jacks.

2. TUBE GAIN

This knob adjusts the level of the ESX-1's output signal that is being sent through the vacuum tubes. As you increase this level, the vacuum tubes will produce more effect. Normally you will leave this set to the minimum level.

 The effect of the vacuum tubes applies to the line out jacks (L/MONO, R) and headphone jacks.

3. AUDIO IN LEVEL

This knob adjusts the input level of the audio input.

4. Display (↔p.15)

This shows the name of the currently selected pattern, and displays information such as parameter values and messages.

5. Common section (↔p.10)

The controls grouped in the Common section allow you to switch modes, to use the display to edit parameters, and to control playback and recording.

6. Edit section (↔p.11)

Using these controls, you can edit the sound of each part and edit the effect settings.

7. Part select section (↔p.12)

Here you can select each of the drum, keyboard, stretch, slice parts.

8. Step key section (↔p.12)

Here you can view and edit the triggers of the rhythm or phrase pattern. You can also use the step keys as a keyboard to play the sounds of the keyboard parts.

9. Arpeggiator section (↔p.13)

This section lets you sound each part automatically.

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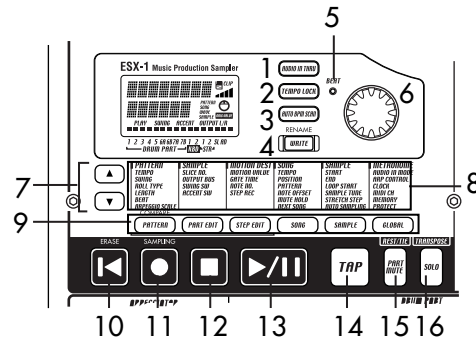
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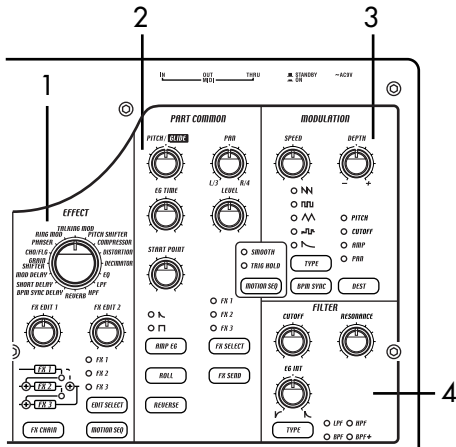
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Common section



1. **AUDIO IN THRU key**
Selecting this key will send the sound from the audio in jack directly to the line output jacks and headphone jacks unchanged.
 When this key is on, the effect, part common, modulation, and filter parameters of the Audio In part are disabled.
2. **TEMPO LOCK key**
If this key is on, the tempo will stay at its current value, even when you switch patterns.
3. **AUTO BPM SCAN key**
If this key is on, the tempo will be detected from the music connected to the audio in jack.
4. **WRITE/RENAME key**
This key allows you to save the changes you make in each mode, and to save any pattern set data you edit.
By holding down the SHIFT key and pressing this key, you can rename a pattern or song.
5. **BEAT LED**
This LED blinks at quarter-note intervals of the current tempo.
6. **Dial**
Use this dial to edit the value shown in the display.
7. **▲/▼ (cursor keys)**
Use these keys to select a parameter from the matrix menu. The currently selected parameter will be shown in the display.
8. **Matrix menu**
The matrix menu lists the parameters that are available in each mode. Use the cursor keys to select a parameter.
9. **Mode keys**
Use these keys to select either the PATTERN mode, PART EDIT mode, STEP EDIT mode, SONG mode, SAMPLE mode, GLOBAL mode.
10. **RESET, ERASE key**
Pressing this key will immediately reset the current pattern or song back to the beginning. During playback, you can hold down the shift key and press this key to erase data from the current part.
11. **REC key**
Use this key to record rhythms, phrases, or knob movements. During playback or recording, you can use this key to toggle recording on and off.
In Sample or Pattern mode, you can hold down the SHIFT key and press this key to enter sampling-ready mode; then press the PLAY key to start sampling.
12. **STOP/CANCEL key**
Use this key to stop playback of a song or pattern, or to cancel execution of an operation.
13. **PLAY/PAUSE key**
Use this key to begin, pause or resume the playback of a pattern or song.
14. **TAP key**
You can set the tempo by pressing this key at quarter-note intervals of the desired tempo.
15. **PART MUTE, REST/TIE key**
During playback, hold down this key and press a part key to mute that part. When you mute a part, this key will turn on (lit), and the muted part key will go dark. During step recording, use this key to input a rest or tie.
16. **SOLO, TRANSPOSE key**
During playback, hold down this key and press a part key to "solo" that part (i.e., you will hear only that part). When you solo a part, this key will turn on (lit). If you want to solo more than one part, hold down the solo key and select each part that you want to solo. Press this key once again to turn it off (dark) and defeat the solo function. Also, you can hold down this key and turn the dial or use the step keys to transpose a phrase. (☞ p.41 "Transpose")

Edit section



1. EFFECT

In this section you can select the type of effect and adjust various parameters. **M**: supports motion sequence.

TYPE (effect type): Selects the type of effect.

FX EDIT1 (effect edit 1) **M**: Adjusts the effect. The actual parameter being controlled will depend on the effect type.

FX EDIT2 (effect edit 2) **M**: Adjusts the effect. The actual parameter being controlled will depend on the effect type.

FX CHAIN (effect chain): On the ESX-1, the output of one effects processor can be fed to the input of another. The connection will change each time you press this, and the connection that is lit will be used.

EDIT SELECT: Chooses which effects processor is currently being edited.

MOTION SEQ. (motion sequence): Records and plays back movements of the FX EDIT1 and FX EDIT2 knobs. This will alternate between on (lit) and off (dark) each time it is pressed.

2. PART COMMON

These are the parameters that are common to the drum parts and to the keyboard parts. **M**: supports motion sequence.

MOTION SEQ. (motion sequence): Turning this function on will allow you to record and playback knob movements for each part. This key will change successively between on (SMOOTH lit), on (TRIG HOLD lit), and off (dark) each time it is pressed.

PITCH/GLIDE **M**: For a drum part, this knob sets the pitch. For a keyboard part, it specifies the time it takes for the pitch to change smoothly between two legato notes.

EG TIME **M**: Adjusts the envelope time (the time it takes for the note to decay) for each part.

PAN (panpot) **M**: This controls the position of the

part in the stereo field for the line outputs (L/MONO, R) or headphones. If a part is set to the individual (3/4) output bus (p.26: Output bus) this control will adjust the panning to the individual outputs (INDIV. OUT 3, 4).

LEVEL **M**: Adjusts the volume of each part. For an accent part, this will adjust the strength of the accent.

START POINT **M**: Sets the playback start point for the sample assigned to each part.

AMPEG **M**: Selects the amp envelope shape for each part. The envelope will alternate between \curvearrowright (decay) or \sqcap (non-decay) each time you press this.

ROLL **M**: For each part, this will switch the roll effect on (lit) or off (dark).

FX SELECT (effect select) **M**: Selects which effect processor will be applied to each part. If FX SEND is on, the selected effect will be applied. This setting is ignored for parts whose output bus (p.42: Output bus) setting is 3/4.

FX SEND (effect send) **M**: Selects whether the sound of the current part will be sent to the selected effect. This will alternate between on (lit) and off (dark) each time it is pressed. This setting is ignored for parts whose output bus (p.42: Output bus) setting is 3/4.

REVERSE **M**: Selects whether reverse playback will be used for each part. This will alternate between on (lit) and off (dark) each time it is pressed.

3. MODULATION

These are the parameters such as LFO and EG that create time-varying changes in the sound. **M**: supports motion sequence.

SPEED **M**: Adjusts the modulation speed.

DEPTH **M**: Adjusts the modulation depth.

TYPE (modulation type) **M**: Selects the type of modulation.

DEST (destination) **M**: Selects which parameter will be affected by the modulation.

BPM SYNC **M**: Turning this on (lit) will cause the modulation to be in sync with the current tempo.

4. FILTER

These parameters modify the tonal character of the part. **M**: supports motion sequence.

CUTOFF **M**: Adjusts the cutoff frequency of the filter.

EG INT (EG intensity) **M**: Adjusts the depth of the filter envelope.

RESONANCE **M**: Adjusts the resonance of the filter.

TYPE (filter type) **M**: Selects the type of filter.

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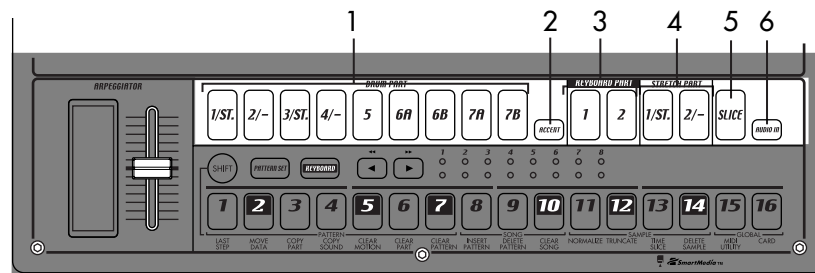
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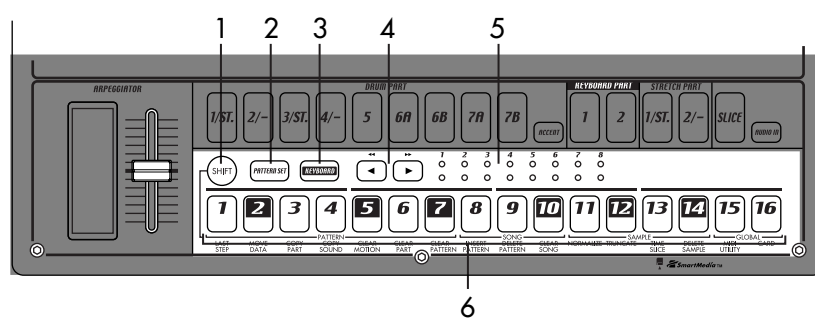
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Part select section



1. (DRUM PART) 1...5, 6A-6B, 7A-7B (drum part keys)
These keys select drum parts. By pressing these keys you can hear the sound that is assigned to each part.
2. ACCENT (accent part key)
This key selects the accent part.
3. (KEYBOARD PART) 1, 2 (keyboard part keys)
These keys select keyboard parts.
4. (STRETCH PART) 1, 2 (stretch part keys)
These keys select stretch parts. By pressing these keys you can hear the sample that is assigned to each stretch part.
5. SLICE (slice part key)
This key selects the slice part. By pressing this key you can hear the sample that is assigned to the slice part.
6. AUDIO IN PART (audio in part key)
This key selects the audio in part. By pressing this key you can hear the external audio input.

Step key section



1. SHIFT key
This key is used in conjunction with other keys. Hold down this key and press another key to access the secondary function of that key.
SHIFT+RESET key: Erase data from a pattern.
SHIFT+step key: Execute the function printed below the step key.
SHIFT+dial: Make larger or finer changes in the value. (This will depend on the selected part.)
SHIFT+PATTERN key: Compare patterns.
For details on using the shift key with other keys, refer to the explanation of each parameter.
2. PATTERN SET key
By holding down this key and pressing the STEP key, you can switch to the pattern that was registered for that step key (p.72: Pattern Set).
3. KEYBOARD key
When this key is on (lit), you can use the sixteen step keys as a keyboard to play a keyboard part (p.39: Keyboard function). This key will alternate on/off each time it is pressed.
4. [◀][▶] (select keys)
These keys are used to control the current position in the lower row (red) of select LEDs. These LEDs indicate different information - pattern set group, keyboard octave, step key position - in conjunction with other keys. (p.13: Select LEDs)
In Song mode, you can use these keys as fast-forward / rewind keys.

5. Select LEDs

The upper row of LEDs (green) indicates the location within the currently-playing pattern (length 1 through 8).

The lower row of LEDs (red) indicates the position shown by the step keys (length 1 through 8). When the Keyboard function is on, these LEDs indicate the octave position.

When the Pattern Set function is on, these LEDs indicate the pattern set group registered to the step keys.

6. Step keys 1...16

These keys can be used to enter data into a pattern, and will light to show the position or timing where each part will sound.

When the KEYBOARD key is on (lit), you can use these keys as a keyboard to play a keyboard part. When the Pattern Set function is on (blinking), you can use these keys to select patterns, as well as assigning patterns to the individual keys.

Arpeggiator section




1. Ribbon controller

When you touch the ribbon controller, the selected part will begin sounding automatically. When used with a keyboard part, 16th notes will be sounded, and the gate time will change depending on where you touch the ribbon controller. When a drum, stretch, slice part is selected, the note resolution will depend on where you touch the ribbon controller.

2. Slider

Moving this slider will change the pitches played by the arpeggiator. If a drum part is selected, the slider will have no effect.

 The GLOBAL mode "ARP CONTROL" setting lets you exchange the functions of the ribbon controller and the slider. (p.83)

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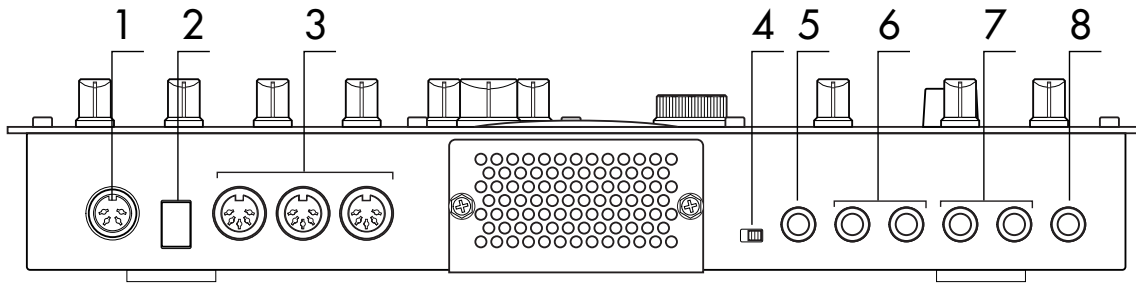
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Rear panel



1. ~AC 9V

Connect the included AC/AC power supply to this connector.

2. STANDBY, ON (power switch)

Pressing this switch will alternate between power-on and standby conditions.

3. MIDI connectors

IN This connector receives MIDI data. Use this when you want to control the ESX-1 from an external MIDI device, or to receive a data dump.

OUT This connector transmits MIDI data. Use this when you want to use the ESX-1 to control another MIDI device, or to transmit a data dump.

THRU This connector re-transmits MIDI data that was received at the MIDI IN connector. Use this when you want to send the same data to two or more MIDI devices.

4. MIC, LINE gain select switch


This switches the gain level of the audio in jack. Set this to the MIC position if you are connecting a mic, or to the LINE position if you are connecting a synthesizer or audio device.


5. AUDIO IN, ST./MONO (audio in jack)

This jack is used by the Audio In oscillator type setting. The sound input from this jack is used as the sound of the Audio In part. If you want to make connections in stereo, connect a stereo phone plug to this jack.

6. INDIV.OUT 3, 4 (individual out) jacks

These are individual output jacks. If the output bus of a part is set to 3/4, the sound of that part will be output from these jacks.

 For all of the factory-set sounds, the output bus is set to the line out jacks (L/R).

 The effect of the vacuum tubes applies to the line out jacks (L/MONO, R) and headphone jacks.

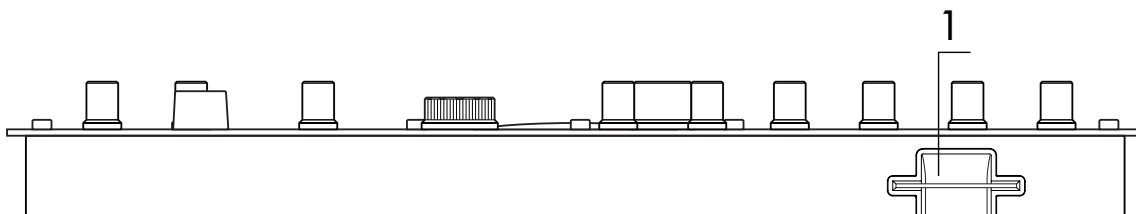
7. OUTPUT L/MONO, R (line out) jacks

Connect audio cables from these jacks to your mixer or powered monitor (amplified speaker) system. If you are using a monaural connection, use the L/MONO jack.

8. Headphone jack

You can connect a set of stereo headphones (phone plug) to this jack.

Front panel

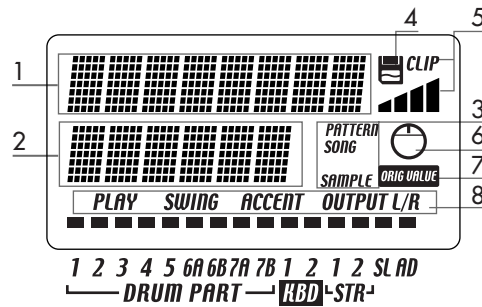


Card section

1. SmartMedia™ slot

You can insert a SmartMedia card here and use it to store or load ESX-1 data.

Items and functions in the display



1. Parameter display

This area displays pattern names, song names, and parameter names.

2. Value display


This area displays the selected parameter's value.

3. PATTERN, SONG, SAMPLE indicator

When the number of a pattern or song is shown in the value display, this will indicate the corresponding mode.

4. SmartMedia™ indicator

This indicator lights when data is being read or written to the SmartMedia™.

 Never remove the SmartMedia™ or turn off the power while this indicator is lit. Doing so may damage the data.

5. Input level meter

This meter shows the level of the signal connected to the audio in jack. If the input level is too high, the "CLIP" indicator will light. Adjust the AUDIO IN LEVEL knob so that the "CLIP" indicator does not light.

6. Knob indicator

When you turn a knob, data for that knob will appear in the parameter display and value display, and this indicator will light. After a time, it will go dark and the previous display will reappear.

7. Original value indicator

This will light when the value of the currently-operated knob is the same as the value stored in the pattern (i.e., the original value).

8. Part status indicator

This shows the status of the following parameters for each part.

PLAY: Indicates the mute status of each part.

On (lit): This part is not muted.

Off (dark): This part is muted.

SWING: Indicates which parts have the Swing function enabled. To change or view this setting, use SWING SW in Part Edit mode.

On (lit): Swing is enabled for this part.

Off (dark): Swing is disabled for this part.

ACCENT: Indicates which parts will be accented. To change or view this setting, use ACCENT SW in Part Edit mode.

On (lit): Accent is enabled for this part.

Off (dark): Accent is disabled for this part.

OUTPUT L/R: Indicates the output jack assignment for each part. To change or view this setting, use OUTPUT BUS in Part Edit mode.

On (lit): This part is being sent to the line out jacks (L/MONO, R).

Off (dark): This part is being sent to the individual out jacks (INDI.OUT 3,4).

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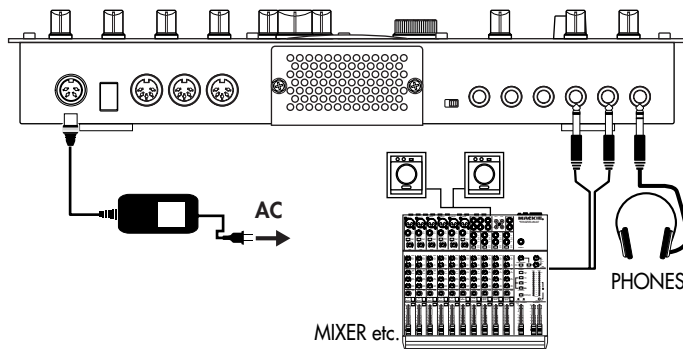
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3. Basic operation

Preparations

Connections



1. Connect the included AC/AC power supply to the ESX-1's ~AC 9V connector, and plug the AC/AC power supply to an AC outlet.
2. Connect audio cables from the ESX-1's line out jacks (L/MONO, R) to your mixer or powered monitor system (amplified speakers). If you are using a monaural connection, use the L/MONO jack.
3. If you are using headphones, plug them into the headphone jack.

note Sound will still be output from the line out jacks even if headphones are plugged in.

Turning the power on/off

To turn the power on

1. Check the connections
2. Turn on the power switch.
3. Slightly turn up the ESX-1's master volume, and touch the drum part keys to produce sound so that you can check that the connections are correct.
4. Adjust the ESX-1's master volume, and the gain and faders of your mixer or powered monitor system to an appropriate listening level.

! After you turn on the power, it will take approximately one minute before the vacuum tubes reach a stable state of operation. During this time, the output sound may be distorted even if the TUBE GAIN knob is turned down.

To turn the power off

1. Turn down the master volume to the minimum position. Also minimize the volume on your connected equipment.
 2. Make sure that the card indicator in the display is not lit.
 3. Set the power switch to the standby position.
- If you will not be using the ESX-1 for an extended period of time, unplug the AC/AC power supply from the AC outlet.

! You must turn off the power before making any connections. Careless operation can damage your speaker system or other equipment, and may cause malfunctions.

! You must first connect the AC/AC power supply to the ESX-1, and then plug it into the AC outlet.

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Playing a Demo song

The ESX-1 contains several demo songs. Here's how you can listen to the demo songs to get an idea of the ESX-1's sound and potential.

1. Press the SONG key. The SONG key will light.
2. The display will show the current song name and number.
If it does not, press the SONG key a second time.
3. Turn the dial to select a song.
4. Press the PLAY/PAUSE key to play back the song (the key will light).
When the song ends, playback will stop automatically (the key will go dark).

To pause playback

Press the PLAY/PAUSE key (the key will blink).

To resume playback

Press the PLAY/PAUSE key once again (the key will light).

To stop playback

Press the STOP/CANCEL key.

Demo Song List

S01: Party On	KEMMEI
S02: Das whut's Hot!	Ian Fisher & Cory Tyson
S03: D&B mix	KORG
S04: >AsTrAl<	Oliver Munyaiak

All Patterns and All Songs — © 2003 KORG Inc. All rights reserved.



The factory-set preset data has been created so that the optimal tone is produced when the TUBE GAIN knob is at the "0" position.

4. Sample mode

In this mode you can record (sample) a sound to create a new sample, modify samples in various ways, or delete an unwanted sample.

Sampling procedure on the ESX-1

Here's the procedure from sampling a new sound to assigning the new sample to a part.

1. Audition the existing samples (☞p.20)

Listen to the samples that are already saved in the ESX-1; one of them may already be what you want.

2. Record a new sample (☞p.21)

Sample (record) your new sound. You can either sample an external input sound (☞p.21) or directly resample the sound from the ESX-1 (☞p.25).

3. Edit a sample (☞p.23)

You can specify the loop points for your sample, and adjust its pitch. You can also adjust the overall level, remove unneeded portions at the beginning and end of the sample, or perform operations such as Slice Sample or Stretch Sample.

4. Save a sample (☞p.32)

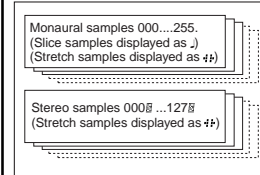
Save the edited sample into the ESX-1's internal memory. If you want to save the sample on SmartMedia, refer to "Using SmartMedia™" (☞p.84).

5. Assign the sample to a part

The saved sample can be assigned to one of the parts in a pattern. This is done in Part Edit mode "SAMPLE." (☞p.44)

Sample mode

Sampling area = total 285 seconds



→ Edit in Sample mode
← Write
Normalize, Truncate, Time Slice, Start, End

↓
Assign to each part
Edit in Pattern mode
Pitch/Speed, Filter, Level, Pan

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Auditioning samples

1. Press the SAMPLE key to enter Sample mode (the key will light).
2. Press the [▲] cursor key to make the display read "(sample name)."
3. Turn the dial to select a sample.

There are six types of sample.

"001": monaural sample

"001 $\frac{st}{2}$ ": stereo sample

"001 \downarrow ": slice sample

"001 $\#$ ": stretch sample

"001 $\frac{st}{2}\#$ ": stereo stretch sample

"001 $\downarrow\#$ ": slice stretch sample

4. Press the PLAY/PAUSE key or one of the part keys to hear the sample.

To stop playback, press the STOP/CANCEL key.



In Song mode or Pattern mode, you can audition a sample by pressing the part key to which the sample is assigned. (See p.38 "Listening to sound of a part")

What is a sample?

A "sample" is a piece of recorded sound, either with or without further editing. The ESX-1 makes it easy for you to record new samples. You can easily assign a sampled sound ("sample") to the parts of each pattern. The sampling area of internal memory holds a maximum of 285 seconds, and can contain up to 384 samples (256 monaural, 128 stereo) that do not exceed this total time. Stereo samples occupy twice the sampling area of monaural samples.



If you rewrite or erase the factory-preloaded samples, they cannot be recovered.

If you want to keep the factory-preloaded samples, back them up on SmartMedia™.



Sampling will end automatically if you run out of sampling area during sampling. Use the Global mode "MEMORY" display to check the remaining sampling time before you begin. Since stereo sampling uses twice as much memory as monaural sampling, 1/2 of the displayed time will be the amount available for stereo sampling.

Recording a new sample

Here's how to sample the output of an audio device (e.g., MD or CD player).

Sampling

Preparations for sampling

1. Connect the ESX-1's AUDIO IN jack to the output of the audio device you want to sample.

note This jack is a stereo phone jack, but can also be used with a monaural phone plug. Before you continue, set the Global mode AUDIO IN MODE setting to either monaural or stereo, as desired (p.83).
2. Set the rear panel MIC/LINE gain select switch to LINE.
3. Turn the AUDIO IN THRU key on (key lit), and check the input sound.
4. Using the output level control of your external device or the ESX-1's AUDIO IN LEVEL knob, adjust the output level of your external device so that the peak icon (CLIP) does not light even at the loudest point of the sound.

Sampling mode settings

5. Press the SAMPLE key (the key will light). Press the [▲] cursor key to make the display read "(sample name)" (the SAMPLE icon will light).
6. Hold down the SHIFT key and press the REC key to enter sampling-ready mode. (The REC key and the PLAY/PAUSE key will blink.) If you decide to cancel the sampling operation before you begin sampling, press the STOP/CANCEL key at this point.
7. Choose stereo or mono sampling mode (the display indicates "SmpMode"). Turn the dial to select stereo sampling ("Stereo") or monaural sampling ("Mono").

Recording the sample

8. Press the PLAY/PAUSE key, and sampling will begin at the specified timing. (The REC key will blink, and the PLAY/PAUSE key will light.)
9. Press the STOP/CANCEL key to stop sampling. (The REC key and PLAY/PAUSE key will go dark.)

After you have completed sampling, the parameter display will indicate "New-Smp" and the value display will indicate "_", indicating that a new sample has been recorded. You can press the PLAY/PAUSE key to hear the sample you just recorded.

Now you can use the Write/Rename operation "Saving a sample" (p.34) to save the newly-recorded sample. If you don't want to keep the new sample, select a different sample or just sample again.

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Using the external input sound to trigger sampling

AUTO SAMPLING Off, 1...15

From sampling-ready mode, this function automatically begins sampling when the input sound exceeds the "threshold level" you specify.



If you set the Auto Sampling "Threshold" value to other than Off, the ESX-1 will be waiting for external input whenever it is in the sampling-ready mode; in this case, you will not be able to begin sampling by pressing the PLAY/PAUSE key.

1. First make the preparations described in steps 1–4 of "Sampling". When you have finished making preparations, stop playback on your external device.
2. Press the SAMPLE key.
3. Press the [▼] cursor key to make the display read "AutoSmpl."
4. Turn the dial to change the threshold level from "Off" to "10."



The appropriate level will depend on your input source; try various settings.



5. Hold down the SHIFT key and press the REC key to enter sampling-ready mode. Now you can turn the dial to choose stereo or mono sampling mode.
6. Press the PLAY/PAUSE key.
7. Start playback on your external device. If you set the threshold level appropriately, sampling will start as soon as you begin playback.
8. Press the STOP/CANCEL key to stop sampling. Then press the PLAY/PAUSE key to check the sample you recorded. If you want to keep the sample, perform the Write/Rename operation (p.34).

If sampling does not start when you begin playback

Press the STOP/CANCEL key to exit sampling-ready mode, and try setting the threshold level below 10. Alternatively, if noise in the input causes sampling to begin sooner than you intended, try setting the threshold level above 10.

Editing a sample


You can use the knobs and keys of the Part Edit section and Effect section to modify the sound in Sample mode as well (see p.35 "Pattern mode").

-  The state of the knobs and keys in Sample mode are not saved when you execute the Write operation.
-  The ROLL key is not available in Sample mode.

Setting the start point

START

1. Use the [▲]/[▼] cursor keys to make the parameter display read "Start."
2. Turn the dial to adjust the start point. The display shows the lowest five digits of the start point. The upper three digits are displayed when you press the SHIFT key. To edit the start point, hold down the SHIFT key and turn the dial.
3. While editing the start point, you can press the PLAY/PAUSE key to hear the result of your changes.


-  The "START" value is always lower than the "END" value.

Setting the end point

END

1. Use the [▲]/[▼] cursor keys to make the parameter display read "End."
2. Turn the dial to adjust the end point. The display shows the lowest five digits, but you can press the SHIFT key to view the three upper digits. To edit the end point, hold down the SHIFT key and turn the dial.
3. While editing the end point, you can press the PLAY/PAUSE key to hear the result of your changes.


note The part key will light while the sample is playing back, and will go dark at the end of the sample. This lets you check the END location.

-  The END value cannot be greater than the length of the sample.

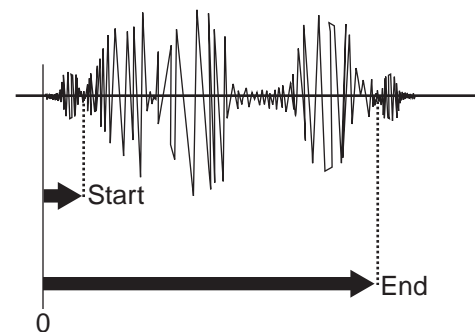
Setting the loop location

LOOP START

1. Use the [▲]/[▼] cursor keys to make the parameter display read "LoopStat".
2. Turn the dial to set the loop start location. With a setting other than "Off," the sample will play from the start point to the end point, and then jump back to the loop start point and play repeatedly from the loop start point to the end point. If you want the sound to decay, assign the sample to a part, and then select the decay-type AMP EG and adjust the EG TIME.

-  Looping is valid only for a sample assigned to a keyboard part. The loop point is ignored for a drum part; the sample will use one-shot playback.

-  You cannot set the loopstart location to a stereo sample.



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Adjusting the pitch of the sample

SAMPLE TUNE -64.00...+64.00(Cent)





This lets you adjust the pitch (tuning) of the sample. When assigned to a drum part, a stretch part, or the slice part, the sample will sound at the pitch you specify here. When assigned to a keyboard part, the sample will sound at this pitch for the C4 note of the keyboard.

1. Press the SAMPLE key.
2. Press the [▲] cursor key to make the display read "(sample name)." (The SAMPLE icon will light.)
3. Turn the dial to select the sample whose tuning you want to adjust.
4. Use the [▲]/[▼] cursor keys to make the display read "SmpITune."
5. Turn the dial to edit the sample tune value. To edit the upper digits, hold down the SHIFT key and turn the dial.

While editing, you can press the PLAY/PAUSE key to hear the result of your changes.

Directly sampling the sound of the ESX-1 (Resampling)

You can sample the sound of the ESX-1 as it is playing. This is called “resampling.” Resampling lets you create a new sample that mixes several samples, or apply effects to an existing sample and record the result as a new sample.


-  You cannot record a motion sequence and perform sampling at the same time.
-  Resampling will capture the part(s) whose OUTPUT BUS is assigned to L-R. You cannot resample the sound of parts that are assigned to 3-4.
-  Digital clipping may occur when you resample. If this occurs, lower the part level and try sampling again.
-  You cannot resample the sound processed by the vacuum tubes.

Resampling from the beginning of a pattern or song

1. Make sure that you are in Pattern mode or Song mode.
2. Press the STOP/CANCEL key to stop playback.
3. Hold down the SHIFT key and press the REC key to enter sampling-ready mode. (The REC key and the PLAY/PAUSE key will blink.) If you decide to cancel before you start sampling, press the STOP/CANCEL key.
4. Set the sampling mode (the display indicates “SmplMode”). Turn the dial to select stereo sampling (“Stereo”) or monaural sampling (“Mono”).
5. Press the PLAY/PAUSE key, and sampling will begin at the specified timing. (The REC key will blink, and the PLAY/PAUSE key will light.) To cancel sampling-ready mode, press the STOP/CANCEL key.
6. Sampling will end when you press the STOP/CANCEL key. (The REC key and PLAY/PAUSE key will go dark.)

note If you press the REC key instead of pressing the STOP/CANCEL key, sampling-ready mode will be cancelled and playback will continue. (The REC key will go dark, and the PLAY/PAUSE key will be lit.)

7. Return to Sample mode, and press the PLAY/PAUSE key to hear the results.


 When you turn on the power (i.e., in the ESX-1’s initial state), the sampling mode is set to “monaural.”

note If you press the PLAY/PAUSE key during resampling, the pattern or song playback will pause, but sampling will continue.

Resampling from the middle of a pattern or song

1. Make sure that you are in Pattern mode or Song mode.
2. Press the STOP/CANCEL key to stop playback.
3. Press the PLAY/PAUSE key to start playback of the pattern or song. (The PLAY/PAUSE key will light.)
4. At the moment you want to start resampling, hold down the SHIFT key and press the REC key. (The REC key will blink, and the PLAY/PAUSE key will light.)
5. Press the STOP/CANCEL key to stop sampling. (The REC key and the PLAY/PAUSE key will go dark.)

note If you press the REC key without pressing the STOP/CANCEL key, sampling will be stopped but playback will continue. (The REC key will go dark and the PLAY/PAUSE key will light.)

 The sampling mode (monaural/stereo) will be the setting described in the preceding section, “Resampling from the beginning of a pattern or song.”

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note During resampling, you can press the PLAY/PAUSE key to pause the pattern or song playback while continuing to sample.

Resampling just one note of a part

1. Make sure that you are in Pattern mode, Song mode, or Sample mode.

note Pattern or Song mode are appropriate when you want to resample multiple parts together, but the sampled volume will be lower. If you are resampling only one sound, we recommend that you use Sample mode.

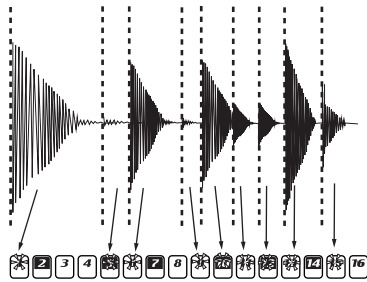
2. Press the STOP/CANCEL key to stop playback.
3. Hold down the SHIFT key and press the REC key to enter sampling-ready mode. (The REC key and the PLAY/PAUSE key will blink.) The display will indicate the mode for resampling.
4. Turn the dial to select "Mono" (monaural) or "Stereo" (stereo).
5. Press the key of the part you want to sample. You will hear the sound of the part you pressed, and sampling will begin at the same time. (The REC key will blink and the PLAY/PAUSE key will light.) In the case of a keyboard part, sampling will begin the instant you use the step keys to play.
6. Press the STOP/CANCEL key to stop sampling. (The REC key and the PLAY/PAUSE key will go dark.)

If you decide to cancel while still in sampling-ready mode, press the STOP/CANCEL key before you start sampling.

Slice

What is "Slice"?

This is a function used mainly on samples that contain definite attacks, such as rhythm loops. It divides the sample into separate notes (attacks). For example if you have a rhythm phrase sample that consists of kick, snare, and hi-hat, the Slice function can detect the attack of each note and divide the sample into separate notes. Each of the divided samples can also be assigned to a part as a one-shot sample.



Beat	Steps to which notes are assigned															
Slice sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16 (♩ × 16)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
32 (♩ × 16)	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31
8Tri (♩ × 12)	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
16Tri (♩ × 12)	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24

Creating a slice sample (TIME SLICE)



You can't slice a stereo sample.

- Use the dial to select the monaural sample you want to slice.
- Hold down the SHIFT key and press step key 13 (TIME SLICE). (Key 13 will light, and the slice sample part key will blink.)
- Press the slice sample part key. The ESX-1 will automatically detect the number of steps and the beat of the sample, and show them in the display.

Turn the dial to specify the number of steps into which you want to divide the sample.
- Hold down the SHIFT key and turn the dial to specify the beat. You can choose one of four beats; 16, 32, 12, or 24. When you use the slice in a pattern, and this setting is the same as the beat recorded in the pattern itself, this will be the beat setting of the pattern. If it is different, the step to which the slice is assigned will change (⇒p.44).
- Press the slice sample part key once again. The display will indicate "Threshld."

Now you can specify the sensitivity at which the slices will be detected; this will adjust the way in which the notes are divided. The step keys will light at each division of the notes. Press a key to hear the note assigned to that location. When you use the dial to adjust the sensitivity, the way in which the sample is divided will change. You can adjust the sensitivity in a range of 0–32; lower numbers produce higher sensitivity, meaning that the sample will be sliced more finely.

Step/Beat
32/16

1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
— DRUM PART — [KBD]-STR —

Threshld
10

1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
— DRUM PART — [KBD]-STR —

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If you specified the number of steps as 16 or higher in "4" (above), you can use the [◀|▶] keys to change the region of slice steps that is displayed. (The currently displayed region is shown by the lower line of LEDs.)

6. You can increase or decrease the number of slices into which the sound is divided by holding down SHIFT and pressing a step key. This lets you manually specify a division that was not automatically detected, or delete an unwanted division.

 Depending on how the sound is divided, a small amount of time may be required for the division to change when you adjust the sensitivity (threshold).

 Depending on the volume or type of the sample, adjusting the sensitivity (threshold) may not change the way in which the sound is divided.

 If you set the Beat to 12 or 24, steps 13–16 are not used.

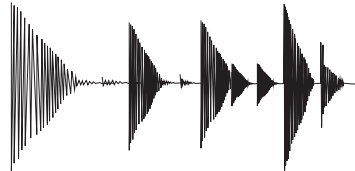
7. When you have finished making adjustments, press the slice sample part key to complete the Slice operation. (The key will go dark.)
8. Press the WRITE/RENAME key to save the sample.
If you decide to cancel mid-way through the procedure, press the STOP/CANCEL key.
The sliced sample will have a "J" following its sample number.

If you were not successful in creating a slice sample

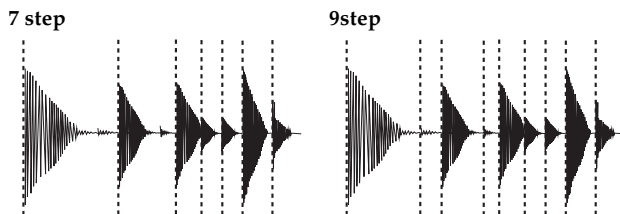
When you execute Time Slice to create a slice sample, the sample may not always be sliced as you intended. In this case, you can try the following two techniques.

Try changing the slice step setting (step 3, above)

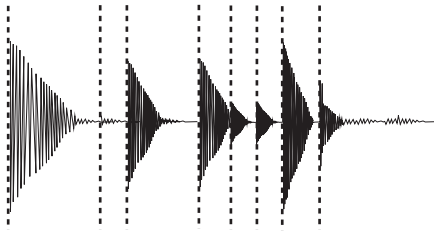
The slice step tells the ESX-1 "how many steps the entire slice sample should occupy," and is automatically determined during the Slice process based on the length of the sample, the attacks, and the tempo. If the detected result is obviously different than your intentions, use the dial to change the setting. For example, suppose you have a sample like the one shown below: ">_>_>>>>" (where ">" is a note, and "_" is silence).



This sample contains six attacks, but judging from the overall length, it should occupy eight steps, so an automatically-detected result of "8" would be correct. If the ESX-1 displays a different value, such as "7" or "9," turn the dial to specify the correct number of steps.



As a different example, suppose there were two steps of quiet notes following the ">_>_>>>>", as in the example shown below: ">_>_>>>>_".



We want the ESX-1 to determine this as "10" steps, but if it displays an incorrect value such as "8," the sample will be sliced incorrectly, so you will need to specify the correct setting.

You can also specify the desired number of slices by holding down the SHIFT key and pressing one of the step keys.

Manually turning slices on/off while you adjust the sensitivity (paragraph 6, above)

In some cases, simply adjusting the sensitivity (Threshold) will not produce the desired slices.

For example, suppose you have a sample ">_>_>>>>"

that you want to slice into eight steps.

When you enter the page for setting the sensitivity (Threshold=10), the display might indicate

[1][][3][][5][6][][8]

However since the desired result is

[1][][3][][5][6][7][8]

this means that [7] is missing.

In such cases you would normally raise the sensitivity (i.e., lower the Threshold), but suppose that lowering the Threshold to "9" causes [4] to light instead of [7], producing

[1][][3][4][5][6][][8]

which is still not what you want.

In a case like this, there is no way to adjust the sensitivity (Threshold) to obtain the desired result, so you will need to turn the slices on/off manually.

When you enter the Threshold setting page (Threshold=10) and the display indicates

[1][][3][][5][6][][8]

hold down the SHIFT key and press [7]. This will cause the ESX-1 to detect an attack exactly mid-way between [6] and [8], causing [7] to light.

This gives you the desired result of

[1][][3][][5][6][7][8]

In the same way, you can turn off a step by holding down the SHIFT key in the sensitivity setting page and pressing a step that is lit.

By paying attention to the above two points when you execute Time Slice, you will be able to create the best possible sliced samples.

However, depending on the state of the original sampled phrase, there will be cases in which the sample cannot be sliced as you would like.

Even if you notice slight timing discrepancies when you play back a slice sample you created, you may be able to reduce the unnaturalness by raising the SWING setting when the slice sample is assigned

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to the slice part in Pattern mode, or by changing the pitch. Don't feel limited by the phrase of the original pattern you sampled; you can use motion sequences or effects to create truly original patterns.

Using individual sample slices

The individual slices (notes) produced by executing the Slice operation can be assigned to the drum parts or keyboard parts. (see p.44 Assigning individual slices of a sample)

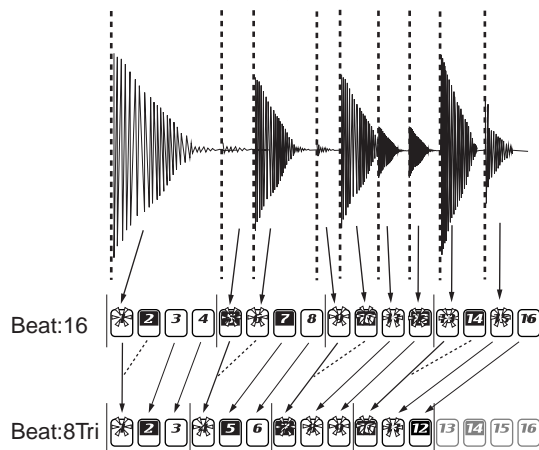
Using a slice sample in a pattern that has a different beat

When using a slice sample in a pattern, and the beat of the sample is the same as the beat of the pattern itself, it will be the beat of the pattern. However if the sample has a different beat, the slices will be assigned to different steps.

If you assign a slice sample with a different number of beats to a "8tri" pattern, the slices will be reassigned to the steps as follows.

Step No.	Waveform slice number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16 (♩ × 16)	1+2	3	4	5+6	7	8	9+10	11	12	13+14	15	16	-	-	-	-
32 (♩ × 16)	1-4	5+6	7+8	9-12	13+14	15+16	17-20	21+22	23+24	25-28	29+30	31+31	-	-	-	-
12 (♩ ₃ × 12)	1	2	3	4	5	6	7	8	9	10	11	12	-	-	-	-
24 (♩ ₃ × 12)	1+2	3+4	5+6	7+8	9+10	11+12	13+14	15+16	17+18	19+20	21+22	23+24	-	-	-	-

For example if a slice sample created with a beat of "16" is assigned to an "8tri" pattern, the slices will be assigned to the step keys as follows.



If a Last Step is specified for the pattern

If no Last Step is specified for the pattern, the slice step assignments will be adjusted to 16 or 12 steps.

If a Last Step is specified, the slice samples will be played repeatedly.

When Slice Step is set to "9"

Last Step setting																
Step No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Not specified	1	2	3	4	5	6	7	8	9	2	3	4	5	6	7	8
LAST STEP: 15	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	-

Stretch

What is "Stretch"?

This is a function that automatically matches the playback speed to the tempo without changing the pitch, letting you play a sample at a tempo different from the sample's original tempo.

A "stretch sample" is a sample whose length in 16th note steps (the STRETCH STEP parameter) has been specified beforehand. You can use a stretch sample only with a stretch part. In the same way as for drum parts 1-7B, you can place the sample at a single step of Pattern mode, and it will play to the end for the specified length (as long as it does not overlap the end of the next step).


note When playing a pattern or song, the stretch sample will also stop playing when you stop playback.


Creating a stretch sample

STRETCH STEP Off, 1...128

Specifies the length of the sample, in terms of a number of 16th notes. When a step of the stretch part is placed in a pattern/song, the playback speed of the sample will be automatically adjusted (while preserving its pitch) to match the tempo of the pattern/song. If you set this Stretch Step parameter to other than Off, the sample will be handled as a stretch sample; "#" will be added following the sample number.

1. Press the SAMPLE key.
2. Press the [**▲**] cursor key to make the display read "(sample name)." (The SAMPLE icon will light.)
3. Turn the dial to select the sample that you want to stretch.
4. Use the cursor keys to make the display read "StrcStep."
5. Turn the dial to set the Stretch Step to other than "Off."

 The stretch effect is active when a stretch sample is assigned to a stretch part.

 A stereo sample may be used to create a stereo stretch sample. You must assign a stereo stretch sample to stretch part 1. In this case, stretch part 2 will be unavailable.

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Convenient sample-editing functions

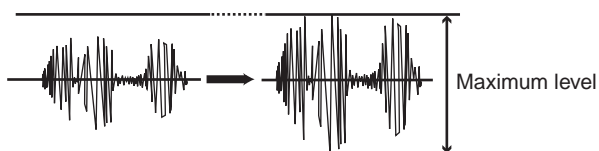
If you want to save the edits that you made to sample, you must Write it before you switch to another sample or turn off the power. (p.32 "Saving a sample")

Normalize

This operation boosts the level of the sample as much as possible without causing distortion.

1. Use the dial to select the sample you want to normalize.
2. Hold down the SHIFT key and press step key 11 (NORMALIZE). (Key 11 will blink.)
3. Press step key 11 once again to execute the Normalize operation. (Key 11 will go dark.)

If you decide to cancel without executing, press the STOP/CANCEL key.





Truncate

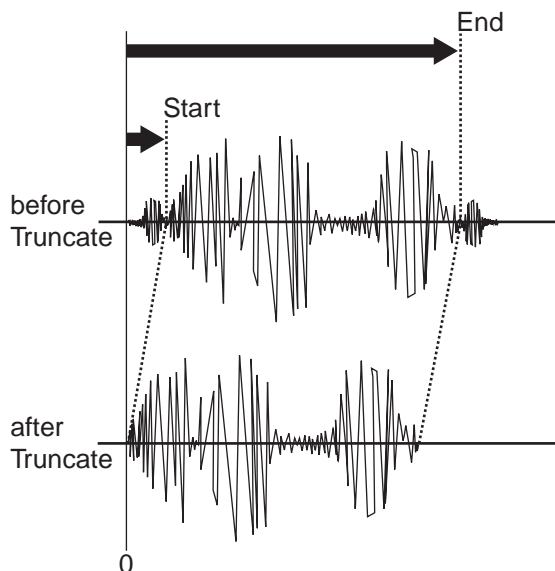
This operation deletes the regions of the sample before the START point and after the END point settings.

1. Use the dial to select the sample you want to truncate.
2. Hold down the SHIFT key and press step key 12 (TRUNCATE). (Key 12 will blink.)
3. Specify the START and END points.
4. Press step key 12 once again to execute the Truncate operation. (Key 12 will go dark.)

If you decide to cancel without executing, press the STOP/CANCEL key.

 After Truncate is executed, the START value will be 0 and the END value will be the length of the sample.

 If you execute Truncate on a slice sample, the slice settings will be discarded and the sample will become a one-shot sample.



Saving a sample

If you want to keep a newly recorded or edited sample, you must perform this Write operation.


If you edited a sample but decide that you want to return to its original state, simply switch samples without writing.

1. Press the WRITE/RENAME key (the key will blink.) The display will indicate the writing-destination sample number.
2. Use the dial to select the writing-destination sample number. For a monaural sample you can select "000" through "255." For a stereo sample you can select "000.☐" through "127.☐".


If you select an already-used sample number, an asterisk "*" is displayed following the sample number.

3. Press the WRITE/RENAME key once again, and the display will show a progress indicator. When writing is completed, the display will change to the writing-destination number, and the WRITE/RENAME key will go dark.

If you decide to cancel, press the STOP/CANCEL key.

 With the factory settings, memory protect is turned on, so you will be unable to save. Turn memory protect off before you perform this operation (Ⓢp.83 "Memory protect").

When you save a sample, the sample previously saved to the writing-destination will be overwritten.

 When you save a sample, the ESX-1 optimizes the data locations in internal memory. This will take a certain amount of time. While this is being done, the display shows a progress indicator.


Never turn off the power until the Write operation has been completed (i.e., until the WRITE/RENAME key goes dark).


Saving a sample under a different name

1. Hold down the shift key and press the WRITE/RENAME key. (The key will blink.) The parameter display will indicate "Rename," and the value display will show "(six characters of the sample name)".
2. Assign the name for the sample that you want to save. Use the [▲]/[▼] cursor keys to move the cursor to left or right in the parameter display, and turn the dial to edit the parameter name. You can assign a name of up to eight characters to the sample. When you have finished assigning the name, press the WRITE/RENAME key.
3. Select the save-destination sample number.

The parameter display will indicate "WriteTo," and the value display will indicate "(save-destination pattern number)."

4. Press the WRITE/RENAME key to begin saving the data. The WRITE/RENAME key will light while the data is being saved, and will go dark when saving is complete. If you decide to cancel, press the STOP/CANCEL key. When saving is complete, the save-destination sample number will be selected.

 If you saved while playing back, the playing sample will not change.

 If you had initiated the saving process while a sample was playing back, and you then canceled the save operation, playback will not stop when you press the STOP/CANCEL key. Playback will stop if you press the STOP/CANCEL key once again after canceling.

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Deleting a sample

This operation completely deletes a saved sample from the ESX-1's internal memory.

1. Use the dial to select the sample that you want to delete.
2. Hold down the SHIFT key and press step key 14 (DELETE SAMPLE). (Key 14 will blink.)
3. Press step key 14 once again to execute the Delete operation. (Key 14 will go dark.)

If you decide to cancel without executing, press the STOP/CANCEL key.



Once deleted, a sample cannot be recovered.

When you save a sample, the ESX-1 optimizes the data locations in internal memory. This will take a certain amount of time. While this is being done, the display shows a progress indicator.

Never turn off the power until the Write operation has been completed (i.e., until the WRITE/RENAME key goes dark).

Checking the remaining amount of sampling area

Press the GLOBAL key, and use the [▲]/[▼] cursor keys to make the parameter display read "Memory."

The display will show the remaining amount of sampling memory in units of seconds.



You cannot edit this parameter.

Since stereo sampling uses twice as much memory, the available amount of time for stereo sampling will be half the displayed amount.

5. Pattern mode

Playing patterns

What is a Pattern?

A "pattern" is a short segment of a performance that consists of rhythm patterns created by drum parts (drum sounds) and phrase patterns (melodic lines) created by keyboard parts.

The ESX-1 lets you create and store 256 patterns. Each pattern consists of 16 parts. In addition to the sound of each part, a pattern contains effect settings and phrases, and can also record knob movements.

Part(→p.38)

Playing a pattern

To start playback

1. Press the PATTERN key (the key will light).
 2. Press the [▲] cursor key until the display indicates "(pattern name)".
 3. Press the PLAY/PAUSE key to play the pattern (the key will light).
- When the pattern ends, playback will return to the beginning of the pattern and will continue to loop.

note

While the pattern plays, you can use the Keyboard function to play along using the step keys, play drum sounds using the drum part keys, or operate the knobs and keys to modify the sound.

By using the various functions of Pattern mode as part of your performance technique, you can create a wide range of expressive variety.

To pause playback

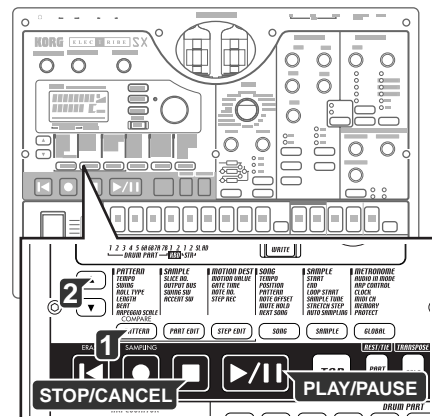
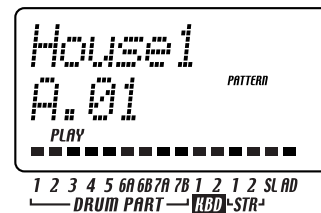
Press the PLAY/PAUSE key (the key will blink).

To resume playback

Press the PLAY/PAUSE key once again (the key will light).

To stop playback

Press the STOP/CANCEL key.



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Selecting a pattern

1. Press the PATTERN key (the key will light).
2. Press the [▲] cursor key until the display indicates "(patter n name)."
3. Turn the dial to select a pattern.

You can use the dial to select from a total of 256 patterns: A.01–A.64, B.01–B.64, C.01–C.64, D.01–D.64.

You can also select patterns while the ESX-1 is playing.

To check which pattern is playing

When the PATTERN key is lit, press the PATTERN key and the display will show "(pattern name)."

To force playback to restart at the beginning of the pattern

During playback, you can press the RESET key to force the pattern to play back from the beginning.

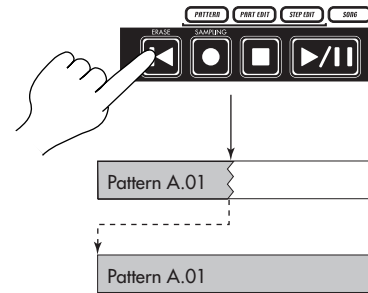
note If you want to perform in synchronization with an external audio source, you can use the TAP key to match the tempo, and then press the RESET key at the beginning of each phrase to synchronize your performance without using MIDI.

About the timing of changing patterns

If you change patterns during playback, the currently-playing pattern will finish playing first, and then the newly selected pattern will begin to play. The name of the pattern waiting to be played next will blink in the display until the change occurs.

! If you change patterns during playback, you may hear noise or unwanted sounds at the transition due to the effect or delay settings, or in some cases the effect sound may drop out.

! If the patterns before and after the change use the same effect but with different settings, the result will sound the same as if you had turned the effect setting knobs.



Setting the playback tempo

TEMPO 20.0...300.0

Using the dial to set the tempo.

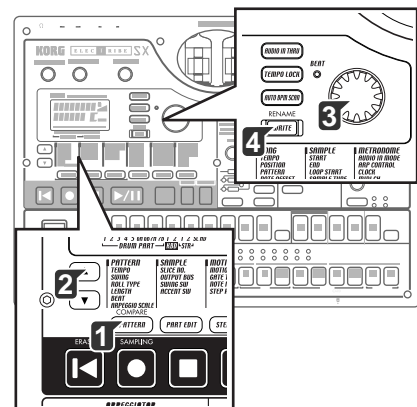
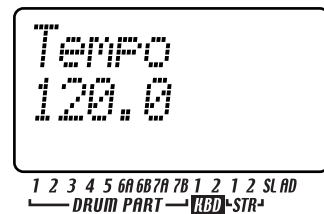
1. Press the PATTERN key (lit).
2. Use the [▲]/[▼] cursor keys until the display indicates "Tempo."
3. Turn the dial to adjust the tempo.

! The tempo of the pattern will return to its original setting if you select another pattern without writing the new tempo.

! If the TEMPO LOCK key is off (dark), and you change patterns, the tempo will change to the tempo stored with the new pattern.

To set the tempo more precisely

By holding down the shift key and turning the dial you can adjust the tempo in units below the decimal point (i.e.: 120.4).



Using the TAP key to set the tempo

While a pattern is playing, press the TAP key twice or more at quarter-note intervals of the desired tempo. The intervals at which you press the key will be detected and the tempo will be set accordingly. You can set the tempo this way even when the ESX-1 is stopped or paused.

Auto BPM Scanning

Detecting the tempo from the input of the AUDIO IN jacks
Here's how you can automatically detect the tempo of an audio signal input to the AUDIO IN jacks, and specify it as the ESX-1's tempo.

1. Press the AUTO BPM SCAN key to begin detection. (The key will light.)

The parameter display will indicate "AutoBPM."

At this time the tempo setting will remain unchanged.

2. When detection is completed, the AUTO BPM SCAN key will blink. The display will show the detected tempo value.

note If automatic detection is unable to determine the tempo, the tempo value display will disappear, and will indicate "—."


3. Press the AUTO BPM SCAN key to finalize the tempo; the detected tempo will be specified as the TEMPO setting.

If you decide not to apply the detected tempo value, press the TAP key or the TEMPO LOCK key. The tempo value will remain at the setting prior to automatic detection. Alternatively, you can cancel the setting by pressing the [▲][▼] cursor keys or a different mode key.

Keeping a constant tempo as you change patterns (TEMPO LOCK)

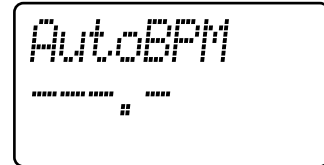
When the TEMPO LOCK key is on (lit), the current tempo will be used for every pattern, regardless of the tempo saved in memory with the pattern. With the TEMPO LOCK key off (dark), the tempo saved with each pattern will be used.

note When the TEMPO LOCK key is on, the tempo will be held even if you stop playback. If you want to return to the tempo that is stored in each pattern, turn the TEMPO LOCK key off (dark), and then re-select the pattern.

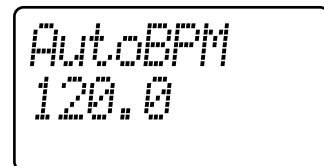
 The state of the TEMPO LOCK key is not saved as part of the pattern data.



Twice or more



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
— DRUM PART — [RBD] + STR +



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
— DRUM PART — [RBD] + STR +

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Playing the sound of a part

What is a Part?

A “part” is the smallest unit within a pattern. Each part contains a sound, a rhythm or phrase pattern, effect on/off settings, and motion sequence data.

For each individual part, you can edit the sound, store a rhythm or phrase pattern, and store motion sequence data. (⇒p.46 “Editing sounds”)

The ESX-1 uses three types of parts, for a total of sixteen parts.

— Drum parts (1–5, 6A-B, 7A-B)

These parts play a sample in “one-shot” mode.

Each part contains a rhythm pattern (note timing), and motion sequence data, etc.

— Keyboard parts (1, 2)

These parts play pitched loops.

Each part contains a phrase pattern (trigger, note number, gate time), and motion sequence data, etc.

— Accent part

This part contains data that specifies points of volume emphasis (accent) for the pattern, and motion sequence data.

— Stretch parts (1, 2)

These parts play stretch samples.

Each part contains a rhythm pattern (note timing), and motion sequence data, etc.

— Slice part

This part plays a slice sample.

It contains a rhythm pattern (note timing), and motion sequence data, etc.

— Audio In part

This part inputs an external audio source.

It contains a rhythm pattern (trigger, gate time), and motion sequence data, etc.

Listening to the sound of a part

You can listen to the sound of each part by pressing the drum part keys, stretch part keys, or slice part key, or by pressing the step keys with the KEYBOARD key turned on.

The sound of the part will differ depending on the pattern.



When you press a drum part key, the keyboard function of the step keys will be cancelled; however, the keyboard function will automatically return to its previous setting when you once again select a keyboard part.

Listening to the sound of a drum part



Press a drum part key 1 through 7B and you will hear the sound assigned to each key.



Drum parts 6A and 6B cannot sound at the same time. The same is true for parts 7A and 7B.

Listening to the sound of a keyboard part (the Keyboard function)

1. Press one of the keyboard part keys 1, 2 (the key will light).
2. Press the KEYBOARD key (the key will light).
3. Use the step keys as a keyboard to play the part. Use the select keys to change the octave. The select LEDs (lower row, red) will light to indicate the pitch range.

-  You cannot turn the KEYBOARD key on/off unless one of the keyboard part keys 1, 2 is selected.
-  Since each keyboard part is a monophonic synthesizer, it cannot sound two or more notes simultaneously (polyphonically).


Selecting a part

Use the part keys to select the part that you want to edit.

Drum part, stretch part, slice part, audio in part

When you press one of these part keys, the assigned sound will play and that part will be selected (the part key will light). For the audio in part, the external audio input will be heard when you press the audio in part key.

When you press a part key, the step keys will light to indicate the trigger locations in the rhythm pattern of that part. During playback, the currently-playing step will also light.

-  When you press a part key to make it sound, it will sound at its accented volume.

To select a part during playback without causing it to sound

Hold down the shift key and press a drum part key.

Keyboard part

When you press a Keyboard part key, the key will light and that part will be selected. With the KEYBOARD key lit, you can play the part using the step keys as a keyboard

The way in which the step keys will light at this time will depend on the status of the KEYBOARD key.

- On (lit): The keys corresponding to each pitch will light successively during playback to indicate the pitch that is sounding at that moment.
- Off (dark): The keys will light at the trigger locations of the phrase pattern for that part.

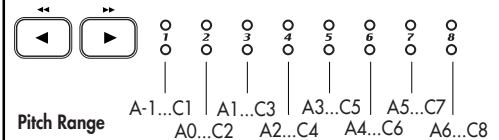
Accent part

When you press an accent part key, the key will light and that part will be selected. At this time, the step keys will light to indicate the accented locations of that accent pattern.

Muting a part

Here's how to mute (temporarily silence) a part.

1. Hold down the PART MUTE key and press the part key that you want to mute. (The PART MUTE key will light.)
2. While you hold down the PART MUTE key, the part status indicator will show the mute status of each part. Unmuted part keys will light, and muted part keys will be dark. You can mute more than one part if desired.
3. To defeat all mute settings, press the SOLO key. To defeat muting for individual parts, press the part key that you want to un-mute.



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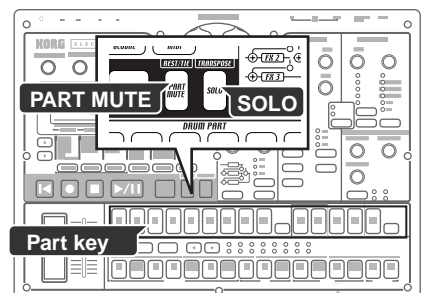
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Soloing a part

1. Hold down the SOLO key and press the part key that you want to solo. You will hear only that part. (The SOLO key and part key will light.)
2. While the SOLO key is lit, you can press another part key to solo that part.
3. If you want to solo two or more parts, hold down the SOLO key and select the parts that you want to solo. Alternatively, hold down the SOLO key (or PART MUTE key) while the SOLO key is already lit and press a part key to add it to the soloed parts.
4. When you press and then release the SOLO key, the Solo function and Mute function will be defeated (the key will go dark).

note By holding down the SHIFT key and pressing a drum part key, you can turn all drum part keys on/off. By holding down the SHIFT key and pressing a non-drum part key, you can turn on/off keys other than the drum parts.

Adding accents to a part

Specifying the accent locations and strength

You can apply an accent (volume emphasis) independently to the drum parts and to the keyboard parts.

If accent is on, notes at the accented location (step) will be emphasized.

1. Press the ACCENT key; the step keys will indicate the accented locations.
2. Each time you press a step key, the accent will be turned on/off for that location, letting you specify the accent pattern.
3. Use the level knob in the Part Common section to adjust the amount of accent. Turning the knob toward the right will produce a greater difference between the accented and un-accented sounds. If you turn the knob all the way to the left, there will be no difference between the accented and un-accented sounds.

! Pressing the accent part key will not produce any sound. Also, when you press a part key to play its sound, the sound will play at the accented level.

By playing back the pattern while you make this adjustment you can hear the results.

! Accent settings will not affect a part whose ACCENT SW is turned off.

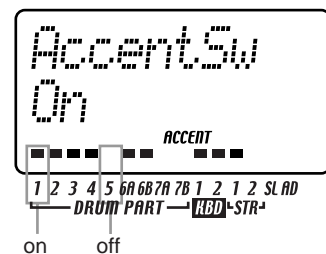
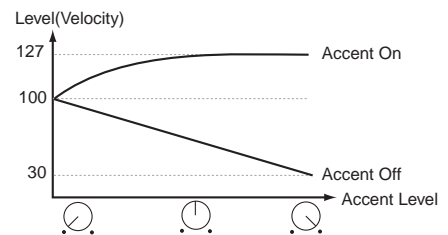
Specifying the parts that will be accented

ACCENT SW On, Off

You can enable / disable the accent function separately for each part.

1. Press the PART EDIT key (it will light).
2. Use the [▲]/[▼] cursor keys until the parameter display shows "Accent Sw." The "■" symbols at the bottom of the screen will show the accent status (enabled/disabled) of each part. Press a part key, and turn the dial to switch the accent function on (lit) or off (dark) for that part.

! When you execute Pattern Clear, the accent switch will be turned on for all parts.



Transposing a phrase (Transpose)


TRANSCOPE -24...24


Use this function to transpose the pitch of keyboard parts 1, 2.

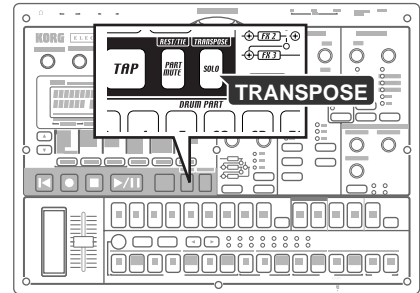
1. While you hold down the TRANSCOPE key, the display will indicate the current transpose setting.
2. Hold down the TRANSCOPE key and turn the dial to transpose the phrases in semitone steps. A setting of ±1 transposes the pitch by one semitone, ±2 by a whole step, ±7 by a fifth, and ±12 by one octave. If transposition is being used, the TRANSCOPE key will blink. When you set the value to "0" the key will go dark.

You can also hold down the TRANSCOPE key and use the step keys and select keys to specify the transpose amount.

If you hold down the TRANSCOPE key and press a step key to transpose, step key 4 will correspond to the normal pitch of "C."

 If you transpose while soloing a part, the key will remain lit (not blinking). It will blink when you defeat the Solo setting.

 The transpose setting is not remembered. It is reset to 0 when you turn on the power.



Adding "swing" to a pattern


Specifying the amount of swing

SWING 50...75

The Swing setting modifies the timing at which certain steps are played. You can use this to transform a straight 16-beat rhythm by giving it a slight shuffle character. You can adjust the amount of swing in a range of 50 to 75 (%), and this will affect the timing of the even-numbered steps. A setting of 50 will produce a straight 16-beat rhythm, and a setting of 66 will produce a shuffle.

The Part Edit mode SWING SW setting lets you enable/disable the Swing setting independently for each part.

1. Press the PATTERN key (it will light).
2. Use the [▲]/[▼] cursor keys to call up "Swing" in the parameter display. Turn the dial to adjust the amount of swing.


 The swing setting is ignored if the beat is set to "8Tri" (♩₃ x12) or "16Tri" (♩₃ x12).

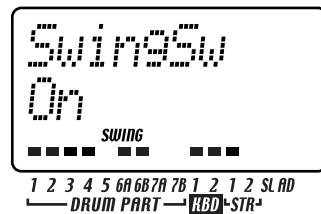
Specifying the parts that will swing

SWING SW On, Off

This lets you enable/disable Swing independently for each part.

1. Press the PART EDIT key (lit).
2. Use the [▲]/[▼] cursor keys to select "SwingSw" in the parameter display.
3. The "■" symbols at the bottom of the screen will show the swing status (enabled/disabled) of each part. Press a part key, and turn the dial to switch Swing on (lit) or off (dark) for that part.

 When you execute Pattern Clear, SWING SW will be turned on for all parts.



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Applying a roll to a part

Selecting a part and turning on the roll effect

ROLL

This switches the Roll (rapid successive strikes) effect on (lit) or off (dark) independently for each part. The interval between notes of the roll will depend on the tempo of the pattern, the roll type, and the amount of swing (≠Setting the roll type”).

1. Press the part key for the part you want to play a roll.
2. Press the ROLL key (it will light). During playback, that part will play a roll.


If the playback is stopped, and you press and hold a part key when the ROLL key is on, that part will roll as long as you continue holding down the key.

Setting the roll type

ROLL TYPE 2, 3, 4

This setting specifies the number of times the sound will be played during one step by one trigger when ROLL is on. If Roll is switched on for a part, the part will sound the specified number of notes in each step.

1. Press the PATTERN key (it will light).
2. Use the [▲]/[▼] cursor keys to select “RollType” in the parameter display.
3. Turn the dial to set the roll type.


 You cannot apply a roll to note-on data from an external MIDI device.

Assigning the output of each part

OUTPUT BUS L/R, 3/4

For each part, you can route the sound to the line out jacks (L/MONO, R) or to the individual out jacks (3, 4).

1. Press the PART EDIT key (it will light).
2. Use the [▲]/[▼] cursor keys to select “OutBus” in the parameter display. The “■” symbols at the bottom of the screen indicate the output destination of each part.
3. Press the part key for the part that you want to set, and turn the dial to select either L/R (lit) or 3/4 (dark).


 When you execute the Clear Pattern operation, OUTPUT BUS will be set to “L/R” for all parts.


Adding the Valve-Force effect to increase the impact of the sound

TUBE GAIN

This adjusts the level at which the output signal from the line out jacks will be passed through the vacuum tubes. Even if you turn down the master control, you can use the TUBE GAIN knob to adjust the amount of tube effect.

This strengthens the effect produced by the vacuum tube.

 Raising the TUBE GAIN knob excessively may damage your external speaker system. Please use caution.




 This has no effect on the sound that is sent from the individual out jacks (3, 4).

Connecting various devices to Audio In

You can connect various audio devices or audio sources to the ESX-1's audio in jack, and use them for performance or sampling.

1. Connect your audio device etc. to the audio in jack (AUDIO IN, ST./MONO). Set the MIC/LINE gain as appropriate for the output level of the device you connected. This jack is a stereo 1/4" phone jack. If necessary, use an adaptor plug that is suitable for your device. To select monaural or stereo input, set the Global mode AUDIO IN MODE parameter (⇒p.83).
2. Use the output level control of your external device and the ESX-1's AUDIO IN LEVEL knob to make adjustments so that the peak icon does not light even when the connected device is producing the highest output level. If the AUDIO IN THRU key is on (lit), you can audition the input sound without having to press the audio (part) key.
3. Select the pattern or song to which you want to match the volume, and press the PLAY/PAUSE key to begin playback.
4. To adjust the volume and balance with the other parts, turn the AUDIO IN THRU key off, then hold down the Audio In part key and turn the Part Common LEVEL knob to adjust the input volume.

note The input sound will be heard while you hold down the Audio In part key. The sound of the audio input part recorded in a pattern or song is not the "sound that was recorded"; it is the sound from the external input source that you will hear starting at the trigger-on points for the duration of the gate time.

-  If you want to press the Audio In key to produce the sound, turn the Audio In Thru key off (unlit).
-  If the AUDIO INPUT LEVEL is excessively high, the sound may be distorted.
-  If you connect a monaural cable, be sure to select monaural "L" as the Audio In Mode; if you connect a stereo cable, be sure to set this to "Stereo" (⇒p.83).

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Using the arpeggiator

Performing with the arpeggiator

To arpeggiate a drum part, Stretch part

1. Select the drum part that you want to play.
2. When you touch the ribbon controller, the selected part will begin playing automatically. The timing of the repeated notes will vary depending on the location you touch. The speed of the repetition will depend on the specified tempo.

note If ARP CONTROL (☞p.83) is set to “Revers,” the slider will vary the timing of the notes.

To play the slice part

1. Select the slice part.
2. The sounds of the slice part will play automatically when you touch the ribbon controller. The waveform slices and speed at which they are heard will change depending on the location you touch. If the sequencer is stopped, the waveform slices corresponding to the playback step location will play.

The speed at which the sounds are heard will depend on the tempo.

note If ARP CONTROL (☞p.83) is set to “Revers,” the slider will vary the timing of the notes.

To play the audio in part

1. Select the audio in part.
2. The sound of the audio in part will play automatically when you touch the ribbon controller. The gate time will vary depending on the location you touch. The speed at which the sound is heard will depend on the tempo.

note If ARP CONTROL (☞p.83) is set to “Revers,” the slider will vary the timing of the notes.

To arpeggiate a keyboard part

1. Select the keyboard part that you want to play.
2. Use the step keys to specify the pitches that you want to arpeggiate. For example if you want to arpeggiate C–E–G, hold down the C key and press the E and G keys.
3. When you touch the ribbon controller, the sound of the selected part will play automatically. The gate time will change depending on where the ribbon is touched. The speed will depend on the tempo. The notes played by the arpeggiator will be retriggered each time you (release and then) touch the ribbon controller. If you hold down the SHIFT key, the arpeggiator will not retrigger when you release and then touch the ribbon controller.
4. Operate the slider to select from among the different notes that make up the scale specified by “ARPEGGIO SCALE.”



note If you want, you can exchange the functions of the ribbon controller and the slider. (☞p.83 “Exchanging the arpeggiator functions”)

Specifying the center note

When using the arpeggiator with a keyboard part, you can specify the note that will correspond to the center of the slider (i.e., the “center note”). This setting is also saved when you save the pattern.

1. Press the Pattern mode key.
2. Select one of the keyboard parts, and turn on the keyboard function.
3. Use the [◀||▶] select keys to specify the pitch range, and press the

step key that you want to be the center note (press only one key).

4. Save the pattern.
-  The position of the slider when you make this setting has no effect on the setting.
-  If ARP CONTROL (p.83) is set to "Revers," the center note will be the note produced by touching the center of the ribbon controller.

Changing the scale of the arpeggiator

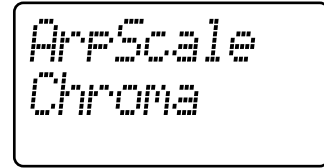
ARPEGGIO SCALE Chroma...Octave

You can change the scale that is being used when you arpeggiate a keyboard part.

1. Press the PATTERN key (it will light).
2. Press the [▼] cursor key to select "ArpScale" in the parameter display.
3. Turn the dial to select the desired scale.

ARPEGGIO SCALE List

No. Display	Scale [Key C]	Scale Name
1. Chroma	C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B, C	Chromatic
2. Ionian	C, D, E, F, G, A, B, C	Ionian
3. Dorian	C, D, Eb, F, G, A, Bb, C	Dorian
4. Phrygi	C, Db, Eb, F, G, Ab, Bb, C	Phrygian
5. Lydian	C, D, E, F#, G, A, B, C	Lydian
6. MixLyd	C, D, E, F, G, A, Bb, C	Mixolydian
7. Aeolia	C, D, Eb, F, G, Ab, Bb, C	Aeolian
8. Locria	C, Db, Eb, F, Gb, Ab, Bb, C	Locrian
9. MBlues	C, Eb, E, G, A, Bb, C	Major Blues
10. mBlues	C, Eb, F, Gb, G, Bb, C	minor Blues
11. Dim	C, D, Eb, F, F#, G#, A, B, C	Diminish
12. ComDim	C, Db, Eb, E, F#, G, A, Bb, C	Combination Diminish
13. MPenta	C, D, E, G, A, C	Major Pentatonic
14. mPenta	C, Eb, F, G, Bb, C	minor Pentatonic
15. Raga1	C, Db, E, F, G, Ab, B, C	Raga Bhairav
16. Raga2	C, Db, E, F#, G, A, B, C	Raga Gamanasrama
17. Raga3	C, Db, Eb, F#, G, Ab, B, C	Raga Todi
18. Spansh	C, Db, Eb, E, F, G, Ab, Bb, C	Spanish Scale
19. Gypsy	C, D, Eb, F#, G, Ab, B, C	Gypsy Scale
20. Arabia	C, D, E, F, Gb, Ab, Bb, C	Arabian Scale
21. Egypt	C, D, F, G, Bb, C	Egyptian Scale
22. Hawaii	C, D, Eb, G, A, C	Hawaiian Scale
23. Pelog	C, Db, Eb, G, Ab, C	Bali Island Pelog
24. Japan	C, Db, F, G, Ab, C	Japanese Miyakobushi
25. Ryukyu	C, E, F, G, B, C	Ryukyu Scale
26. Whole	C, D, E, Gb, Ab, Bb, C	Wholetone
28. m3rd	C, Eb, Gb, A, C	m3rd Interval
27. M3rd	C, E, Ab, C	M3rd Interval
29. 4th	C, F, Bb, C	4th Interval
30. 5th	C, G, C	5th Interval
31. Octave	C, C	Octave Interval



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
 — DRUM PART — TRBD STR+

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Editing sounds

You can choose a sample for each part, and edit the sound of the part using the level and pan knobs and the effect and amp EG keys.

You can even edit while the pattern plays. You can also use an external MIDI device to control the values of the knobs (see p.89 "About MIDI").

If you want to keep the pattern you edited, press the WRITE/RENAME key (see p.74 "Saving a pattern").


 The knobs that are available will depend on the part. (see p.47 "Editing the sound of a part")

If you are unable to edit the sound successfully because a motion sequence is controlling a knob, turn off the motion sequence while you edit. (see p.66 "Motion sequence")


Assigning a sample to a part


SAMPLE Off, 001(♩, ♯)...256(♩, ♯), 001(♩, ♯)...128(♩, ♯)


The ESX-1 contains 384 areas (256 monaural and 128 stereo) into which you can sample your own sounds. You can assign a user sample to the parts of each pattern.


 You cannot assign a sample to the Audio In part or the Accent part.


1. Make sure that the PART EDIT mode key is lit.
2. Press the [▲] cursor key to make the display read "(sample name)." (The SAMPLE icon is lit.)
3. Press the part key to which you want to assign a sample. (The key will light.) The name and number of the sample assigned to that key will appear in the display.
4. For a drum part, a stretch part, or the slice part, turn the dial and press the part key to audition the sounds while you select a sample.
5. For a keyboard part, turn on the Keyboard function, turn the dial, and use the step keys to audition the sounds while you select a sample.


 Select "Off" if you don't want to assign a sample to that part.

 You can assign a stereo sample to drum parts 1 or 3, and assign a stereo stretch sample to stretch part 1. If you assign a stereo sample to any other part, only the left channel of the sound will be heard.

 If you assign a stereo sample to drum part 1 or 3, drum part 2 or 4 will not sound. In this case, the sample number will blink if you choose sample part 2 or 4. The same relationship applies to stretch part 1 and 2.

 If you use a slice sample or a stretch sample in drum part 1~7B or a keyboard part, it will be handled as a conventional sample.

 If the assigned sample has been deleted, the display will indicate "No Sample."


 A slice sample on which you execute Truncate cannot be used by the slice part. If you attempt to do so, the sample number will blink.


Assigning individual slices of a slice sample


SLICE NO. All, 001...128

The individual notes into which a sample is divided by the Slice operation (p.27) can be assigned as one-shot samples to the drum parts or keyboard parts.

1. Make sure that the PART EDIT mode key is lit.
2. Press the [▲] cursor key to make the display read "(sample name)." (The SAMPLE icon is lit).
3. Press the drum or keyboard part key to which you want to assign the sample (the key will light). The display shows the name and number of the sample assigned to that key. Here you can select the slice sample (an "♪" is displayed following the number). Select the slice sample that contains the sound you want to use.
4. For a drum part, turn the dial and press the part key to audition the sounds while you select a sample.
5. For a keyboard part, turn on the Keyboard function, turn the dial, and use the step keys to audition a sound while you select a sample.
6. Use the [▲][▼] cursor keys to make the display read "SliceEdt." Turn the dial to select the sample number. If you select "All," the entire slice sample will be assigned as a one-shot sample. "1"~"128" indicates the number of the step key to which the sliced samples are assigned, and you can choose one of these to select an individual sample. To audition the sound while you make your selection, press the part key (the one you pressed in step 2).

 You cannot select a sample in "SLICE NO" unless you first select a slice sample in PART EDIT mode "SAMPLE."

 In the case of a drum part, the sliced waveform you select here will play in one-shot mode, just like the slice part. In the case of a keyboard part, non-decaying reverse loop playback is used intentionally to make the sound sustain. If you feel that the playback is unnatural, set the AMP EG to "∞" and use EG Time to adjust the decay.


 "SLICE NO" is invalid for the stretch, slice, audio-in, and accent patterns.

Editing the sound of a part

Editing the Part Common parameters

PITCH -63...+63

Specifies the playback pitch. Raising the pitch speeds-up the playback; lower the pitch slows down the playback. The variable pitch range is ±2 octaves, as shown below.

 In some cases, raising the pitch will cause noise. This parameter is invalid for the keyboard parts.

Knob value	Pitch	Pitch exampl (input note C3)
+63	2 octaves	C5
+41, 43...59, 61	:	C#4, D4...A#4, B4
+39	1 octave	C4
+9, 12...33, 36	:	D3, D#3...A#3, B3
+6	Semitone up	C#3
0(center)	±0	C3
-6	Semitone down	B2
-9, -12...-36	:	A#2, A2...C#2
-39	-1 octave	C2
-41, -43...-61	:	B1, A#1...C#1
-63	-2 octaves	C1



EG TIME 0...127

Specifies the EG decay time. The Amp EG setting determines how the volume will decay.

This parameter is valid when the AMP EG is "N" and when the filter EG INT is other than 0.

GLIDE 0...127

"Glide" (also called "portamento") is a function that produces a smooth change in pitch from one note to the next (without re-triggering the note) when the gate time length overlaps the timing of the next note.

For higher settings of this value, the time required to arrive at the next pitch will be longer. If this is set to 0, the target pitch will be reached immediately, but without retriggering; this is useful for simulating legato performance technique on a bass.



This parameter is valid only for the keyboard parts.

The time from when the next note is played until that pitch is reached will synchronize to the tempo of the pattern.



The Glide effect is disabled while the ROLL key is on (lit).

START POINT 0...127

Specifies the point from which the sample assigned to each part will play back. If you turn the knob all the way to the left, the sample will play back from the beginning (i.e., normal playback). If you turn the knob all the way to the right, the sample will play back from the end.

PAN L63..R63

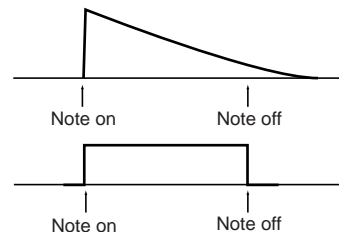
Specifies the stereo position (pan) of the sound. If the knob is in the center position, the sound will be located in the middle. Turning the knob toward the left moves the sound toward the L side; turning it toward the right moves the sound toward the R side.

LEVEL 0...127

Adjusts the output level. Turn the knob toward the right to make the sound louder.

AMP EG N, □

Switches the type of amp EG. Each press of this key switches between an envelope "N" that will decay over the time specified by EG TIME, and a "□" type envelope that will turn the sound off after the time specified by EG TIME.



ROLL

Switches "roll" (repeated strikes) on (lit) or off (dark) for each part. The roll spacing depends on the tempo of the pattern, the Roll Type, and the Swing value. (⇒p.38 "Specifying the Roll Type")

When Roll is on, holding down a part key will play a roll as long as you continue holding the key.

When Roll is on, holding down a step key (when the Keyboard function is on) will play that key as a roll as long as you continue holding the key.

FX SELECT FX1, FX2, FX3

Selects the effect to apply. Press the key repeatedly to cycle through the three available effects.

If FX SEND (effect send) is on, the selected effect will be applied. This setting is ignored for parts assigned to output bus 3/4.

(⇒p.38 "Assigning parts")

FX SEND On, Off

Selects whether the effect will be used. This will alternate on (lit) and off (dark) each time you press the key. The effect you selected for FX SELECT is the one that will be applied. This setting is ignored for parts assigned to output bus 3/4.



REVERSE On, Off
Switches reverse playback for the sample on (lit) or off (dark).

Modulation

These parameters apply time-variant change to the sound, using an LFO or EG.



SPEED 0...127
Adjusts the speed of modulation. If BPM SYNC is on, the speed will synchronize to the tempo. The range is 8/1~1/64.

DEPTH -63...+63
Adjusts the depth of modulation.

TYPE 
Selects the type of modulation.
Settings other than EG will apply cyclic modulation. If you select EG, the effect will be at maximum when the note begins, and will then gradually decrease.
If the modulation type is "", the modulation phase will be not reset when the note is triggered. For other types, the phase will be reset by each trigger.

DEST PITCH, CUTOFF, AMP, PAN
Selects the parameter to which modulation will be applied.
You cannot select "PITCH" for the audio-in part.


BPM SYNC On, Off
Turn this on if you want the modulation cycle to synchronize to the tempo. This will light when synchronized.

-  The sounds of drum parts 6A and 6B can be edited independently, but cannot be played simultaneously.
-  If the sound does not change when you turn the knobs or switch the keys, either those knobs or keys are not valid for this part, or a Motion Sequence (⇨p.68 "Motion Sequence") is running.


Filter

Here you can modify the tone of the waveform generated by the oscillator by distorting or filtering it.


CUTOFF 0...127
Adjusts the cutoff frequency of the filter. The result will depend on the type of filter selected.

-  With some settings, the sound may be distorted, or there may be almost no sound.

EG INT -63...+63
Specifies the depth and direction in which the EG (envelope generator) will change the cutoff frequency. The EG will start the moment the trigger turns on (i.e., the moment you press the step key). If the knob is in the center position, the EG will not affect the sound.

-  If the gate time length of a step extends beyond the beginning of the next step, the EG will not be retriggered when the next step is sounded.

RESONANCE 0...127
Emphasizes the region around the cutoff frequency, adding a distinctive character to the sound. With the resonance raised, you can move the cutoff knob or adjust EG INT or EG TIME to produce the "meow" sound typical of analog synthesizers.

-  Depending on the cutoff frequency or the pitch you play, high settings of resonance may distort the sound.

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TYPE LPF, HPF, BPF, BPF+

Selects the type of filter.

LPF (Low Pass Filter): Cuts the high-frequency region, making the sound more mellow.

HPF (High Pass Filter): Cuts the low-frequency region, making the sound sharper.

BPF (Band Pass Filter): Outputs only the region in the area of the cutoff frequency.

BPF+ (Band Pass Filter Plus): Adds the output of the band pass filter to the original waveform



If the sound does not change when you turn the knobs or switch the keys, either those knobs or keys are not valid for this part, or a Motion Sequence (p.68 "Motion Sequence") is running.




Effects

Using the effects

The ESX-1 contains three separate effect processors. For each pattern, you can use up to any three of the sixteen effect types. The sound of each part can be sent to any one of the effect processors. You can also change the way in which the three effects are connected to each other, and in this way apply more than one effect to a part.

To apply an effect

1. Either begin playback, or if you are editing a keyboard part, turn the KEYBOARD key on (lit) so that you can play the sound.
2. Press a drum or keyboard part key to select the part to which you want to apply an effect.
3. In the edit section / part common area, press the FX SELECT key to select the effect processor that you want to use. Press the FX SEND key (lit) to send the sound of that part to the selected effect processor.
4. In the edit section, press the effect FX CHAIN key to select how the effects will be connected.

-  The function of the knobs will differ depending on the effect type (⇒p.53 "Effect parameters").
-  If you have difficulty editing because a motion sequence is affecting a knob, turn off the motion sequence while you edit (⇒p.68 "Motion sequence").
-  You can turn effects on/off individually for each part. However if two or more parts are being sent to the same effect, you cannot change the effect type or effect parameter values individually for each part.

To edit an effect

1. In the edit section, press the effect EDIT SELECT key to select which effect processor you want to edit.
2. In the edit section, use the effect type selector to select the desired effect type.
3. Use the effect knobs and keys to edit the effect. The original value icon will light to indicate that knob positions and key settings are the same as in the unedited effect.
If you want to save the pattern with the effect edits you made here, press the WRITE/RENAME key (⇒p.74 "Saving a pattern").

- EDIT SELECT
Press this key to select the effect that you want to edit.
- EFFECT TYPE
Use this knob to assign one of the 16 effect types to the currently selected effect processor.
- FX EDIT1
Adjusts the character of the effect. The result will depend on the effect type.
- FX EDIT2
Adjusts the character of the effect. The result will depend on the effect type.
- FX CHAIN
Specifies how the effects are connected. Each time you press this, the connection will change; connections whose indicator is lit will be active.



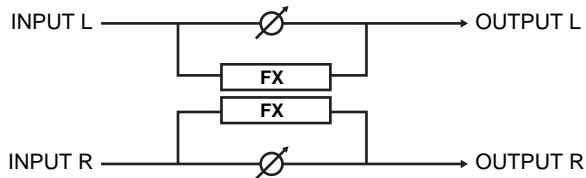
Effect types

The effects of the ESX-1 can be classified into the following three groups.

1. Stereo

This group includes: CHO/FLG, PHASER, RING MOD, COMPRESSOR, DECIMATOR, EQ, LPE, HPF

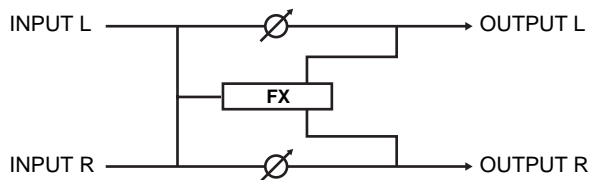
note For some of these effects you can adjust the level of the direct sound.



2. Mono mix

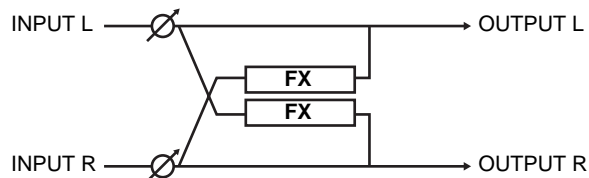
This group includes: REVERB, MOD DELAY, GRAIN SHIFTER, TALKING MOD, PITCH SHIFTER, DISTORTION

note For some of these effects you can adjust the level of the direct sound.



3. Stereo cross

This group includes: BPM SYNC DELAY, SHORT DELAY




Effect parameters

REVERB (Reverb)

This effect simulates the reverberation and spatial character of a hall.

FX EDIT1: Time 0...127
Turning the knob toward the right will lengthen the reverb time.

FX EDIT2: Level 0...127
Turning the knob toward the right will increase the reverb level.

 With long reverb time settings, some input sounds or level values may cause distortion

BPM SYNC DELAY (BPM sync delay)

This is a cross delay synchronized to the BPM.


FX EDIT1: Time 1/64...1/1
Adjusts the delay time synchronized to the BPM, in note value units.


Turning the knob toward the right lengthens the delay time.


You can set this in a range from a 64th note to a whole note.


FX EDIT2: Depth 0...127

Adjusts the depth of the delay and the amount of feedback. Turning the knob toward the right makes the delayed sound louder and also increases the amount of feedback. Panning each part further left or right creates a deeper sense of spaciousness.

 The feedback sound may disappear if you turn the TIME knob or change the BPM while producing sound.

 Depending on the tempo setting, some long delay times may not be available. In this case, the delay time will be halved, and may be halved again if necessary.

 Depending on the tempo setting, some short delay times may not be available. In this case, the delay time will be doubled, and may be doubled again if necessary.

 If you lower the time value too far, the sound may distort (clip).

SHORT DELAY (Short delay)

This is a cross delay with a short delay time. It is not synchronized with the BPM.


FX EDIT1: Time 0...127
Sets the delay time.


Turning the knob toward the right lengthens the delay time. Shortening the delay time can produce a doubling effect, giving the impression that multiple instruments are playing together.

5. Pattern mode

FX EDIT2: Depth 0...127
Adjusts the depth of the delay and the amount of feedback.

Turning the knob toward the right makes the delayed sound louder and also increases the amount of feedback. Panning each part further left or right creates a deeper sense of spaciousness.

 If you increase the depth excessively, the sound may distort for some time settings or input sources.

 If you lower the time value too far, the sound may distort (clip).

MOD DELAY (Modulation delay)

This is a delay that adds a chorus effect by using the LFO to sweep the delay time. This is also a tempo delay in which the delay time automatically synchronizes to the tempo.


FX EDIT1: Time 1/64...1/1
Adjusts the delay time synchronized to the tempo, in note value units.


Turning the knob toward the right lengthens the delay time.


You can set this in a range from a 64th note to a whole note.

FX EDIT2: Depth 0...127
Adjusts the depth of the delay and the amount of feedback.

Turning the knob toward the right makes the delayed sound louder and also increases the amount of feedback.

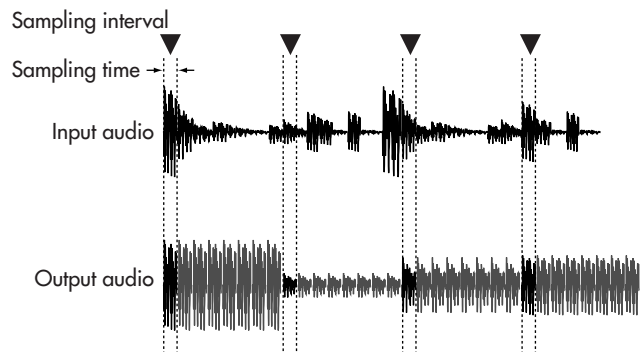
 The feedback sound may disappear if you turn the TIME knob or change the BPM while producing sound.

 Depending on the tempo setting, some long delay times may not be available. In this case, the delay time will be halved, and may be halved again if necessary.

 Depending on the tempo setting, some short delay times may not be available. In this case, the delay time will be doubled, and may be doubled again if necessary.

GRAIN SHIFTER (Grain shifter)

This effect samples an extremely brief portion of the sound at a certain interval, and repeatedly plays back this brief sample. It is effective when applied to a constantly-changing source such as Audio In.



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FX EDIT1: Speed 1... 127


Specifies the sampling interval and the sampling time. The sampling interval is synchronized to the number of steps in the sequencer. When the BPM changes, the length per step will also change, so the sampling interval will change together with this. The following table shows how the sampling interval corresponds with the speed value.

SPEED	Sampling interval (number of steps)
0-1	128
2-5	32
6-9	16
10-13	12
14-21	8
22-25	6
26-33	4
34-37	3
38-41	8/3
42-49	2
50-53	4/3
54-83	1
84-127	9/10 ... 1/10 (in 21 steps)

-  Even if the sampling interval is in the same region, increasing the SPEED value will shorten the sampling time.
-  If the speed is set to a low value and this effect is played back continuously for an extended time, the high-frequency portion of the playback will gradually diminish, causing the tone to become softer.

FX EDIT2: Balance 0... 127

Adjusts the balance of the effect sound and direct sound. Turning the knob toward the right will increase the effect sound and decrease the direct sound.

-  If the speed setting is low, the sampling interval will be long, meaning that if you play the keyboard etc. manually at a moment in which sampling is not being performed, you will not hear any sound.

CHO/FLG (Chorus/flanger)



Chorus and flanger are effects that modulate the pitch of a slightly-delayed sound and add this to the original sound to create a swirling sensation or a sense of spaciousness.

FX EDIT1: Speed 0... 127

Adjusts the speed of the chorus/flanger LFO. Turning the knob toward the right will speed up the LFO.

FX EDIT2: Depth 0... 127

Adjusts the depth of the chorus/flanger effect. Turning the knob toward the right will change the effect from chorus to flanger.

-  If the depth setting is too high, distortion may occur for some input sounds.
-  If you set the speed setting at 0, the LFO will stop at that position (phase). The position (phase) at which the LFO stops is not written into the pattern/song data. In addition, the state (phase) of the LFO is reset when you switch to this effect from a different effect type. This means that a pat-

tern/song for which you selected this effect, set the speed to 0, and wrote the settings into memory may sound differently the next time you select the pattern/song.

PHASER (Phaser)



This effect creates a sense of modulation by cyclically varying the phase of the sound and mixing this phase-shifted sound with the original sound.

FX EDIT1: Speed 0... 127

Adjusts the speed of the phaser LFO. Turning the knob toward the right will speed up the LFO.

FX EDIT2: Depth 0... 127

Adjusts the depth of the phaser. Turning the knob toward the right will give the sound a stronger sense of modulation.

-  If the depth setting is too high, distortion may occur for some input sounds.
-  If you set the speed setting at 0, the LFO will stop at that position (phase). The position (phase) at which the LFO stops is not written into the pattern/song data. In addition, the state (phase) of the LFO is reset when you switch to this effect from a different effect type. This means that a pattern/song for which you selected this effect, set the speed to 0, and wrote the settings into memory may sound differently the next time you select the pattern/song.

RING MOD (Ring modulator)

This effect modulates the sound to give it a metallic character or turn it into a special-effect.

FX EDIT1: OSCFreq. 0... 127

Specifies the frequency used to apply modulation. Turning the knob toward the right raises the frequency.

FX EDIT2: Balance 0... 127

Adjusts the balance between the effect sound and direct sound. Turning the knob toward the right increases the effect sound and decreases the direct sound.

TALKING MOD (Talking modulator)

This effect adds vowel formants to the input sound.

FX EDIT1: Formant 0... 127

Specifies the formant. As you turn the knob clockwise from 0 to 127, the formant will change smoothly between [a]-[e]-[i]-[o]-[u].

FX EDIT2: Offset -63...+63

Specifies the pitch of the formant frequency.

PITCH SHIFTER (Pitch shifter)

This effect modifies the pitch.

FX EDIT1: Pitch -2400...+2400

Specifies the amount of pitch change in units of cents. When the knob is in the center position, the pitch of the input sound will not be changed. Turning the knob toward the left will lower the pitch, and toward the right will raise the pitch. The range is ± 2 octaves.

FX EDIT2: Balance 0... 127

Adjusts the balance between the effect sound and direct sound. Turning the knob toward the right increases the effect sound and decreases the direct sound.

COMPRESSOR (Compressor)

A compressor boosts low-level sounds and reduces high-level sounds, decreasing variations in volume and making the sound more consistent. This compressor automatically detects the levels of the L and R input signals, and responds to the louder of the two.

FX EDIT1: Sens 0... 127

(Sensitivity)
Adjusts the sensitivity of the compressor.

FX EDIT2: Attack 0... 127

Adjusts the speed at which the compressor begins to apply. Turning the knob toward the right will slow down the attack.

DISTORTION (Distortion)

This effect drastically boosts the level to create distortion, producing a richer overtone structure.

FX EDIT1: Gain 0... 127

Adjusts the degree of distortion. Turning the knob toward the right will produce more intense distortion.

FX EDIT2: Level 0... 127

Adjusts the output level. Turning the knob toward the right will increase the output level.

DECIMATOR (Decimator)

This effect decreases the sampling frequency and bit depth to give the sound a rougher character typical of inexpensive samplers.


FX EDIT1: Freq. 0... 127

(Sampling frequency)
Turning the knob toward the right will produce a “lo-fi” sound characteristic of a lower sampling frequency, and turning it toward the left will produce a “hi-fi” sound characteristic of a higher sampling frequency.

FX EDIT2: Bit 0... 127

(Sample bit depth)
Turning the knob toward the right will produce a “lo-fi”

sound characteristic of a lower bit depth, and turning it toward the left will produce a “hi-fi” sound characteristic of a higher bit depth.

 If the input volume is very low, there may be no audio output at all.

EQ (Equalizer)


This equalizer boosts/cuts the low and high-frequency regions of the sound.

FX EDIT1: LowGain -63...+63

The volume of the low-frequency region will be cut when the knob is turned toward the left, flat when the knob is in the center position, and boosted when the knob is turned toward the right.

FX EDIT2: HighGain -63...+63

The volume of the high-frequency region will be cut when the knob is turned toward the left, flat when the knob is in the center position, and boosted when the knob is turned toward the right.

 For some input sounds, high gain settings may cause distortion.

LPF (Low Pass Filter)


This is a low pass filter with resonance.

FX EDIT1: Cutoff 0... 127

Adjusts the cutoff frequency of the low pass filter. Turning the knob toward the right will raise the cutoff frequency.

FX EDIT2: Resonance 0... 127

Boosts the region of the cutoff frequency, giving the sound a distinctive character. Turning the knob toward the right will increase the resonance.

 High resonance settings may cause distortion depending on the cutoff frequency and the input sound.

HPF (High Pass Filter)


This is a high pass filter with resonance.

FX EDIT1: Cutoff 0... 127

Adjusts the cutoff frequency of the high pass filter. Turning the knob toward the right will raise the cutoff frequency.

FX EDIT2: Resonance 0... 127

Boosts the region of the cutoff frequency, giving the sound a distinctive character. Turning the knob toward the right will increase the resonance.

 High resonance settings may cause distortion depending on the cutoff frequency and the input sound.

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Recording a phrase

You can specify a synth sound or rhythm sound for each part, and record a phrase pattern for it.

note If you want to erase the rhythm and phrase data of each part before you create a pattern, refer to “Erasing the sequence data of a part” (p.66).

Realtime recording

This method lets you use the drum pads or the Keyboard function to record a new rhythm or phrase while you listening to the pattern.

Step recording

This method lets you use the step keys to create a sequence pattern with pattern playback stopped. You can create a pattern by inputting the pitch and note length for each step, one at a time.

Recording a phrase during playback (Realtime Recording)

You can record a rhythm pattern (using the drum part keys) or a keyboard part phrase (using the step keys with the Keyboard function) by pressing the keys at the timing at which you want the sound to play.

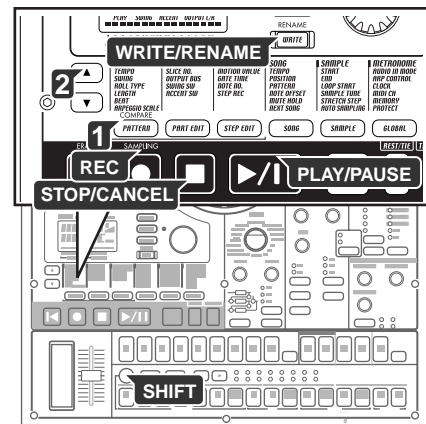
! The Keyboard function of the step keys is defeated when you press a drum, slice, stretch, or audio-in part key. However when you once again select a keyboard part, the Keyboard function will be restored to its prior setting.

note You can also sound the metronome while you record. (p.83 “Setting the metronome”)

To record a drum part

1. Press the PATTERN key (it will light).
2. Press the [▲] cursor key until the display reads “(patter n name).” Turn the dial to select the pattern you want to record.
3. Press the REC key to enter record-ready mode. The REC key will light and the PLAY/PAUSE key will blink.
4. Recording will start when you press the PLAY/PAUSE key. The PLAY/PAUSE key will light.
5. Press the drum keys at the desired timing. The step keys will light to indicate the steps you recorded.
If you want to switch parts without recording a note, hold down the SHIFT key and press a part key.
6. The pattern will play back repeatedly. You can continue adding notes while the REC key is lit.
7. When you have finished recording, press the STOP/CANCEL key. The REC key and PLAY/PAUSE key will go dark.
Alternatively, you can press the REC key instead of pressing the STOP/CANCEL key; only the REC key will go dark, and recording will end but playback will continue.
8. If you want to name and save the pattern you finished recording, hold down the SHIFT key and press the Write key (p.74 “Saving a pattern”).

! The sounds played back while recording the slice part are the waveform slices that correspond to the step locations. If there is no waveform for that step, no sound will be heard.



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To record a keyboard part

1. Press the PATTERN key (it will light).
2. Press the [▲] cursor key until the display reads "(patter n name)". Turn the dial to select the pattern you want to record.
3. Select a keyboard part 1–5, and turn the KEYBOARD key on (lit).
4. Press the REC key to enter record-ready mode. The REC key will light and the PLAY/PAUSE key will blink.
5. Press the PLAY/PAUSE key to start the pattern. The PLAY/PAUSE key will light.
6. Use the step keys as a keyboard to record the phrase, pressing the appropriate key to enter the desired pitch at the desired time.
7. The pattern will play back repeatedly. You can continue recording while the REC key is lit.

Recording will stop when you press the STOP/CANCEL key, and the REC key and PLAY/PAUSE key will go dark. Alternatively, you can press the REC key instead of pressing the STOP/CANCEL key to stop recording but continue playback. The REC key will go dark, and the PLAY/PAUSE key will remain lit.

8. If you want to name and save the completed pattern, hold down the SHIFT key and press the Write key (⇨p.74 "Saving a pattern").

To record the audio-in part

1. Press the PATTERN key (the key will light).
2. Press the [▲] cursor key to make the display read "(patter n name)". Turn the dial to select the pattern you want to record.
3. Press the REC key to enter record-ready mode. The REC key will light, and the PLAY/PAUSE key will blink.
4. Press the PLAY/PAUSE key to start the pattern. The PLAY/PAUSE key will light.
5. Press the audio-in part key at the timing that you want the external source to be input, to record these timings.
6. The pattern will play repeatedly. You can continue recording more layers as long as REC is lit.

Press the STOP/CANCEL key to stop recording. The REC key and PLAY/PAUSE key will go dark. Alternatively, you can press the REC key (rather than the STOP/CANCEL key) to defeat recording mode while continuing to play back. The REC key will go dark and the PLAY/PAUSE key will be lit.

7. If you want to name and save the pattern you created, hold down the SHIFT key and press the WRITE/RENAME key (⇨p.74 "Saving a pattern").

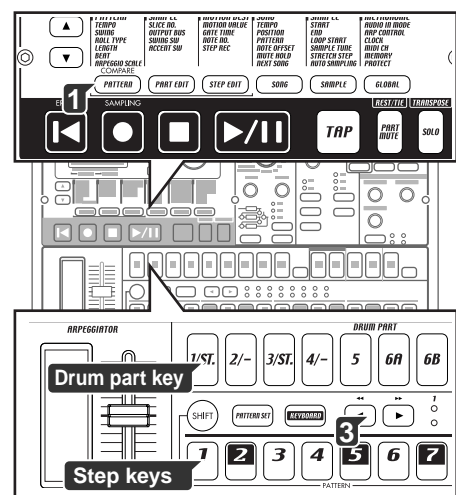
To record during playback

If a musical idea strikes you while a pattern is playing, you can start recording immediately, without having to stop playback.

1. Start the pattern playing.
2. Press the REC key (it will light).
3. If you want to record a drum part, press the drum part key for that part at the desired timing.

If you want to record a keyboard part, press the keyboard part key for the part you want to record, and with the KEYBOARD key turned on, play the step keys as a keyboard to enter the desired pitch at the desired time.

4. When you have finished recording, press the REC key (the key will go dark).
5. If you want to save the pattern, press the Write key (⇨p.74 "Saving a pattern").



To erase unwanted triggers during playback (Erase)

While playing back, you can hold down the SHIFT key, and press and hold the RESET/ERASE key to erase triggers that occur during that time for the selected part (whose key is lit).

Step recording

The step recording procedure will differ depending on whether you are creating a keyboard part phrase or a drum part rhythm.

- When you press a drum part key, the Keyboard function of the step keys will be defeated, but the Keyboard function will return to its previous setting when you select a keyboard part once again.

To record a rhythm for a drum part, slice part, stretch part, accent part

- Press the PATTERN key (it will light).
Press the [▲] cursor key several times until the display reads "(pattern name)". Turn the dial to select the pattern you want to record.
- Press the drum part key of the part you want to record. (The key will light.)
- Use the select keys to select which area of the pattern you want to edit. The lower line of LEDs will indicate the area in which you will be editing. For example, if the pattern to be edited has a length of "2" and you wish to edit the second half of the pattern, you would use the select keys to advance the red led to the "2" position.
- The step keys will light to indicate the rhythm of the selected pattern. You can press the step keys to change the rhythm of the pattern. Each time you press a step key, it will alternate between on (lit) and off (dark). You can make these changes even during playback.

- Drum parts 6A and 6B, and 7A and 7B, cannot be played simultaneously. If both 'A' and 'B' are triggered simultaneously, only 'B' (i.e., 6B or 7B) will sound.

To record a phrase for a keyboard part

- If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
- Press the PATTERN key (it will light).
Press the [▲] cursor key until the display reads "(pattern name)". Turn the dial to select the pattern that you want to record.
- Press the keyboard part key of the part you want to record. (The key will light.)
- Turn the KEYBOARD key on (lit).
- Press the STEP EDIT key, and then press the [▼] cursor key until the display reads "Step Rec." The display will show the target step.
- Turn the dial to select the target step at which you want to begin recording.
- Press the REC key to enter record-ready mode.
At this time, playback will not start even if you press the PLAY key.
- Use the step keys to input the pitches of the phrase one by one. When you input a pitch, the target step (the step to be edited) will automatically advance to the next step.
- Recording will end when you input the last step or press the STOP/CANCEL key. (The REC key will go dark.)

To input a rest or tie

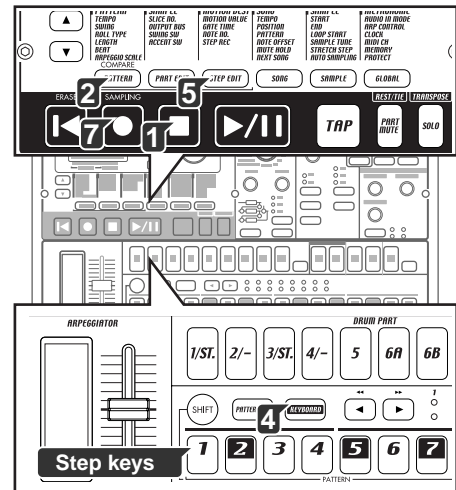
Press the REST/TIE key to input a rest.

To enter a tie, hold down the step key and press the REST/TIE key.

To move the target step

First select the step that you want to edit. This step is called the "target step."

While recording, you can turn the dial to move the target step forward or backward one step at a time. You can also move between steps by holding down the SHIFT key and using the select keys.



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Editing pattern sequence data

Here's how to edit patterns that you have recorded or patterns that are saved in memory.



If you want to keep the changes you make to a pattern, you must perform the Write/Rename operation before you select another pattern or turn off the power.

Editing a phrase pattern (Note Edit)

When using Step Recording, the trigger and note number are recorded simultaneously, but the gate time cannot be set in detail. If you want to be more precise, you can readjust the trigger or note number, and adjust the gate time. A phrase pattern for a keyboard part consists of the following three items of data. You can adjust each of these three items for each step.

Trigger: whether the part will sound at this step

Note number: the pitch that will be sounded

Gate time: the duration that will be sounded

Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Trigger	On	On		On	On	On				On	On		On	
Note number	C2	G2		F2	D2	D2				A1	E2		A2	
Gate time (duration of the sound)	1.25	2.00		0.5	0.5	4.00				1.50	2.00		1.00	

Beat : 16

Selecting the step you want to edit

STEP REC 1.01...8.16

1. Press the STEP REC key (it will light).
Press the [▼] cursor key until the parameter display reads "Step Rec." The value display will show the target step.
2. Turn the dial to select the target step.
If the KEYBOARD key is off at this time, the step key that corresponds to the target step will blink.



If the pattern length is 2 or greater, you can hold down the SHIFT key and turn the dial to advance by one unit of length.

As an alternative to using the dial, you can also select the target step in the following ways.

— Hold down the SHIFT key and press a select key to move forward or backward one step at a time.

— When the KEYBOARD key is off, you can press a step key to select the step that corresponds to that key.



If the pattern length is 2 or greater, you can use the select keys to switch the select LEDs (red) and move the target step in units of one length.




The maximum number of steps will depend on the length, beat, and last step setting.



When the KEYBOARD key is on, the step keys will not indicate the target step.

Editing the trigger locations (the location of the notes)


1. Press the PATTERN key or PART EDIT key (it will light).
2. Press the keyboard part key that you want to edit. (The key will light.)
3. Turn the KEYBOARD key off (dark).
4. The step keys will indicate the trigger locations for the phrase pattern of the part you selected.
5. Press a step key to change the trigger setting for the corresponding location. Each time you press a step key, the trigger will be switched alternately on (lit) or off (dark).


 When the display indicates "Motvalue," "GateTime," "NoteNo.," or "Step Rec," pressing a step key will not change the trigger on/off setting.

Editing the note number (pitch)

NOTE NO. C-1...G9

1. Press the STEP EDIT key (it will light).
2. Use the [▲][▼] cursor keys to select "NoteNo" in the display.
3. Press the keyboard part key that you want to edit. (The key will light.)
4. Turn the KEYBOARD key off (dark).
5. The step keys will indicate the trigger locations for the phrase pattern of the part you selected.
6. Press the step key for the location whose note number you want to edit (the key will blink).
7. Turn the dial to change the note number for that step. Alternatively, you can turn the KEYBOARD key on, and press a step key to specify the desired note number. If you then want to specify a different target step for editing, turn the KEYBOARD key off temporarily.


 While the display indicates "Note No.," pressing the step keys will not switch triggers on/off.


 Even if you edit the note number of a step whose trigger is off, it will not sound until you turn the trigger on.


Editing the gate time

GATE TIME 0.25...128.0

1. Press the STEP EDIT key (it will light).
2. Use the [▲][▼] cursor keys to select "GateTime" in the display.
3. Press the keyboard part key that you want to edit. (The key will light.)
4. Turn the KEYBOARD key off (dark).
5. The step keys will indicate the trigger locations for the phrase pattern of the part you selected.
6. Press the step key for the location whose gate time you want to edit (the key will blink).
7. Turn the dial to change the gate time for that step. The value shown in the display is the gate time length in units of a step. For example, a gate time setting of "1.0" means that the gate time will be exactly as long as one step.

 If the gate time length extends into the timing of the next note, the next note will be played legato; the oscillator, EG, and modulation will not be retriggered.

 While the display indicates the gate time, pressing the step keys will not switch triggers on/off.

 Even if you edit the gate time of a step whose trigger is off, it will not sound until you turn the trigger on.

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Specifying the length and time signature of a pattern

Here's how the Length, Beat (time signature), and Last Step are related. On the ESX-1, the total number of measures (or bars) in a pattern is called the "length." The number of steps (or beats) in one of these measures is designated by the "last step." The type of note that is counted as a step is called the "beat." If you select "8Tri" or "16Tri" as the beat, the last step will automatically be set to 12, meaning that step keys 13-16 will have no function. If you select "16" or "32" as the beat, the last step will be automatically set to 16. You can set any step in a pattern to be the last step.

To check the length and beat

With the pattern stopped, hold down the SHIFT key. The upper line of select LEDs (green) will indicate the current pattern length in measures, and the lower line of select LEDs (red) will indicate the beat setting.

The following diagram shows how the step keys, notes and maximum number of steps are related.

BEAT	Correspondence of step keys to notes
16 (♩x16) 1 2 3 4 ○ ○ ○ ○ ○ ○ ○ ○	
32 (♩x16) 1 2 3 4 ○ ○ ○ ○ ○ ○ ○ ○	
8Tri (♩ ₃ x12) 1 2 3 4 ○ ○ ○ ○ ○ ○ ○ ○	
16Tri (♩ ₃ x12) 1 2 3 4 ○ ○ ○ ○ ○ ○ ○ ○	

beat display	Note value of each step key	Pattern length (number of steps)							
		=1	=2	=3	=4	=5	=6	=7	=8
16 (♩ × 16)	16th note	16	32	48	64	80	96	112	128
32 (♩ × 16)	32nd note	16	32	48	64	80	96	112	128
8Tri (♩ ₃ × 12)	8th note triplet	12	24	36	48	60	72	84	96
16Tri (♩ ₃ × 12)	16th note triplet	12	24	36	48	60	72	84	96

Setting the length

LENGTH 1...8

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Press the PATTERN key (it will light).
3. Use the [▲]/[▼] cursor keys to select "length" in the parameter display.
4. Turn the dial to specify the length of the pattern in measures.
5. If you want to keep the pattern you edited, press the WRITE/RENAME key. (p.74 "Saving a pattern")

Setting the beat

BEAT 16, 32, 8Tri, 16Tri

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Press the PATTERN key (it will light).
3. Use the [▲]/[▼] cursor keys to select "beat" in the parameter display.
4. Turn the dial to set the beat.
5. If you want to keep the pattern you edited, press the WRITE/RENAME key. (☞p.74 "Saving a pattern")

Setting the last step

You can set the "Last Step" if you need to create a pattern of an irregular time signature. For example if you want to create a pattern that contains eleven beats per measure, set Last Step to 11, so that each length of the pattern will be 11 steps.

Normally, Last Step will be 16 (it will be 16 if you have selected a 16th note or 32nd note beat), but will be 12 if you selected a beat that contains triplets, or yet a different value if you have specified an irregular time signature as described above. The step keys that fall after the Last Step will do nothing.

LAST STEP 1...16

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Press the PATTERN key (it will light).
3. Hold down the SHIFT key and press step key 1. The key will blink, and the parameter display will read "LastStep."
4. Turn the dial to set the Last Step, and press step key 1 (key 1 will go dark).

If you decide to cancel without setting the Last Step, press the STOP/CANCEL key.

5. If you want to keep the pattern you edited, press the WRITE/RENAME key. (☞p.74 "Saving a pattern")



If you change the beat, Last Step will be reset to 16 or 12.



Last Step is a function that is unique to the ESX-1; if you are playing the ESX-1 in synchronization with an external sequencer or a different model of the Electribe series, regions where you have used an irregular time signature will not be synchronized.



If you specify a Last Step that is shorter than the original number of steps, the note data that existed beyond the last step will be masked, and will not play back. If you change the Last Step back to its previous setting, this note data will be unmasked, and will play as before.

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Moving data within a pattern

MOVE DATA MOVE, REPEAT, RANDOM

Use this function to move phrase pattern or motion sequence data in units of one step.



You cannot use this function to the slice part.

To move data

MOVE (-7.15...+7.15)*

*The amount by which you can move steps will depend on the Length and on the Last Step setting.

Here's how to change the location at which the pattern begins.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the SHIFT key and press step key 2 (MOVE DATA).
3. Verify that the display indicates "Move," and press step key 2 once again.
4. The selected part key will blink. Press the part or motion sequence keys whose data you want to move at the same time, so that these keys are blinking. You can hear the sound of a part each time you press its part key.
5. Turn the dial to set the number of steps and the direction (positive or negative) in which you want to move the data. To set the value of the digit (length) before the decimal point, hold down the SHIFT key and turn the dial.
6. Press the blinking step key 2 to execute the Move Data operation. (Key 2 will go dark.)
To cancel without executing, press the STOP/CANCEL key.

To copy data repeatedly

REPEAT 0.01...7.15*

*The maximum number of repeats will depend on the Length and the Last Step.

This operation lets you copy the specified number of steps from the beginning of the pattern to the end of the pattern for the specified number of times.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the SHIFT key and press step key 2 (MOVE DATA).
3. The display indicates "Move"; turn the dial to change this to "Repeat," and then press step key 2 once again.
4. The selected part key will blink. Press the part or motion sequence keys whose data you want to copy at the same time, so that these keys are blinking. You can hear the sound of a part each time you press its part key.
5. Turn the dial to set the number of times that the data will be copied.
6. Press the blinking step key 2 to execute the Repeat Data operation. (Key 2 will go dark.)
To cancel without executing, press the STOP/CANCEL key.

To move data randomly

RANDOM

This operation lets you randomly rearrange the pattern data. When you execute this, the existing steps and note data (only in the case of keyboard parts) will be randomly rearranged to other steps.

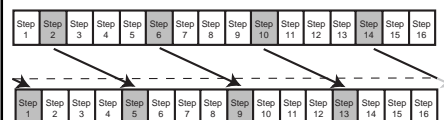
1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the SHIFT key and press step key 2 (MOVE DATA).
3. The display indicates "Move"; turn the dial to change this to "Random," and then press step key 2 once again.

Move Data affects the valid steps of the selected part. The valid steps are determined by the Beat Length and Last Step of each pattern.

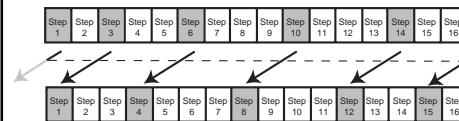
Data that is moved beyond the ending step of a pattern will be "wrapped around" to the first step. For example if you edit a 64-step pattern by setting "Move Data" to "+5", the data of steps 60 through 64 will be wrapped around to steps 1 through 5.

Likewise, if you move data beyond the first step, it will be wrapped around to the last step.B

With a setting of 3
The data of each step will be moved three steps toward the end of the pattern.
Example: 2 → 5, 6 → 9, 10 → 13, 14 → 1



With a setting of -2
The data of each step will be moved two steps toward the beginning of the pattern.
Example: 1 → 15, 3 → 1, 6 → 4, 10 → 8, 14 → 12



4. The selected part key will blink. Press the part or motion sequence keys whose data you want to move at the same time, so that these keys are blinking. You can hear the sound of a part each time you press its part key.
5. Press the blinking step key 2 to execute the Random Data operation. (Key 2 will go dark.)
To cancel without executing, press the STOP/CANCEL key.

Copying a part

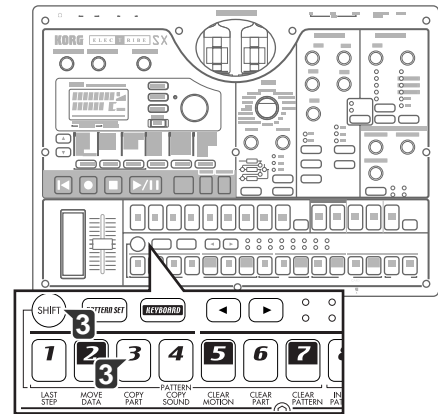
COPY PART

Here's how you can copy the selected part (with its sound settings and sequence data, including motion sequence) to another part.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Press a part key to select a destination (copy-destination) for the part being copied (the key will light).
3. Hold down the SHIFT key and press step key 3 (Copy Part). (Key 4 will blink.) The copy-destination part key will begin blinking.
4. Use the dial to select the pattern number of the part to be copied (copy-source).
5. Press a part key to select the copy-source part. (The copy-source key will blink, and the copy-destination key will go dark.) You can hear the sound of the copy-source by pressing its part key. (Keyboard parts will sound at C4.)
6. Press step key 3 once again to execute the Copy Part operation. If you decide to cancel, press the STOP/CANCEL key.



When you copy between parts, only the trigger data is copied. If the copy operation would result in there being more than 24 motion sequences, the motion sequences will not be copied.



Copying only the sound of a part

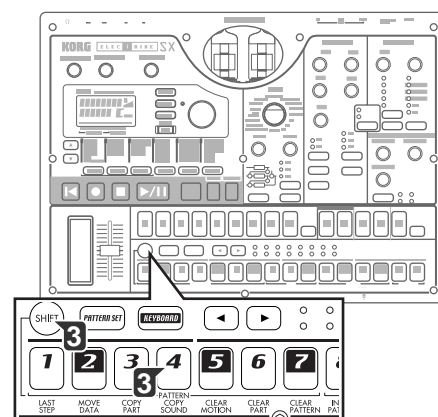
COPY SOUND

Here's how you can copy only the sound settings of another part to the selected part. Step data and motion sequence data will not be copied.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Press a part key to select a destination (copy-destination) for the part being copied (the key will light).
3. Hold down the SHIFT key and press step key 4 (COPY SOUND). (Key 4 will blink.) The copy-destination part key will begin blinking.
4. Use the dial to select the pattern number of the part to be copied (copy-source). You can press the SHIFT key to view the pattern name of the copy-destination.
5. Press a part key to select the copy-source part. (The copy-source key will blink, and the copy-destination key will go dark.) You can hear the sound of the copy-source by pressing its part key. (Keyboard parts will sound at C4.)
6. Press step key 4 once again to execute the Copy Sound operation. If you decide to cancel, press the STOP/CANCEL key.



You cannot copy sound data between a keyboard part and a drum part.



Erasing the sequence data of a part

To erase sequence data from the selected part, you can use the sixteen step keys to turn each trigger on/off independently, or use one of the following two operations.

To erase all of a part's performance data

CLEAR PART

This operation erases the rhythm or phrase pattern (trigger, note number, gate time) and motion sequence data at once.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the SHIFT key and press step key 6 (CLEAR PART). (Key 6 will blink.)
3. Press the part key whose data you want to erase. You may select more than one part at this time. The selected part keys will blink. You can press a part key to hear its sound. (Keyboard parts will sound at C4.)
4. Press step key 6 once again to execute the Clear operation. If you decide to cancel, press the STOP/CANCEL key.



When you execute this Clear Part operation on a keyboard part, all steps of the phrase pattern will be set to a pitch of C4 and a gate time of "0.75".



Executing the Clear Part operation will not clear the sound settings.

To erase trigger data while recording or playing back

ERASE

1. Press the part key to select the part where you will be erasing data.
2. During playback or recording, hold down the SHIFT key, and press and hold the RESET/ERASE key to erase the data that plays back during that time.



For a keyboard part, this erases only the trigger data; the note number and gate time for each step will remain.

Erasing all data from a pattern

CLEAR PATTERN

This operation erases all of the data from the currently selected pattern. The sound settings of each part, the sequence data (including motion sequences), tempo, length, and beat will all be initialized.

1. If the ESX-1 is playing back, press the STOP/CANCEL key to stop playback.
2. Select the pattern that you want to erase (see p.36: Selecting a pattern).
3. Hold down the SHIFT key and press step key 7 (CLEAR PATTERN). (Key 7 will blink.) At this time, you can press the SHIFT key to see the name of the pattern.
4. Press step key 7 once again to execute the Clear operation. If you decide to cancel, press the STOP/CANCEL key.

Comparing the currently-edited pattern with the saved pattern (COMPARE)

This function lets you compare the original pattern with the currently-edited pattern before you save it.

1. Hold down the SHIFT key and press the PATTERN key. The PATTERN key will blink, and the ESX-1 will be in Compare mode.
2. Press the PLAY/PAUSE key to play the original unedited pattern.
3. Press the PATTERN key. It will stop blinking, and you will return to the pattern you were editing.

1**2****3****4****5****6****7****8**

Motion sequence

What is a motion sequence?

The ESX-1 has a Motion Sequence function that lets you record and playback realtime changes made to the knobs and keys (⇄ “Recording a motion sequence”).

There are two types of motion sequence; one type for effects and one type for each of the parts.

The knobs and keys that can be recorded using a motion sequence are listed below. You can record a total of twenty-four effect and part motion sequences in each pattern.

Effects (FX1, FX2, FX3)

FX EDIT1, FX EDIT2

Drum parts (1–7B), Stretch parts(1, 2), Slice part

The Part Common parameters Pitch(PITCH), EGTime(EG TIME), Pan(PAN), Level(LEVEL), Start(START POINT), AmpEG(AMP EG), Roll(ROLL), Revers(REVERSE), FxSend(FX SEND), FxSel(FX SELECT); the Modulation parameters ModSpd(SPEED), ModDpt(DEPTH), ModBPM(BPM SYNC), ModTyp(TYPE), ModDst(DEST); the Filter parameters Cutoff(CUTOFF), EGInt(EG INT), Reso(RESONANCE), FltTyp(TYPE)

Keyboard parts (1,2)

The Part Common parameters Glide(GLIDE), EGTime(EG TIME), Pan(PAN), Level(LEVEL), Start(START POINT), AmpEG(AMP EG), Roll(ROLL), Revers(REVERSE), FxSend(FX SEND), FxSel(FX SELECT); the Modulation parameters ModSpd(SPEED), ModDpt(DEPTH), ModBPM(BPM SYNC), ModTyp(TYPE), ModDst(DEST); the Keyboard Oscillator parameter OSC EDIT 1, OSC EDIT 2; and the Filter parameters Cutoff(CUTOFF), EGInt(EG INT), Reso(RESONANCE), FltTyp(TYPE)

Audio in part

The Part Common parameters EGTime(EG TIME), Pan(PAN), Level(LEVEL), AmpEG(AMP EG), Roll(ROLL), FxSend(FX SEND), FxSel(FX SELECT); the Modulation parameters ModSpd(SPEED), ModDpt(DEPTH), ModBPM(BPM SYNC), ModTyp(TYPE), ModDst(DEST); and the Filter parameters Cutoff(CUTOFF), EGInt(EG INT), Reso(RESONANCE), FltTyp(TYPE)

Accent parts

The Part Common parameter LEVEL

Recording a motion sequence

Here's how to record a motion sequence (knob or key movements) for a part or effect.

To record a motion sequence for a part, select the desired part, and then turn on the motion sequence key of the part common section to select either SMOOTH or TRIG HOLD.

To record a motion sequence for an effect, turn on the motion sequence key of the effect section.

In the following example we will record a motion sequence for the pitch of a drum part.

! If you re-record a knob for which a motion sequence has already been recorded, the previous data will be erased.

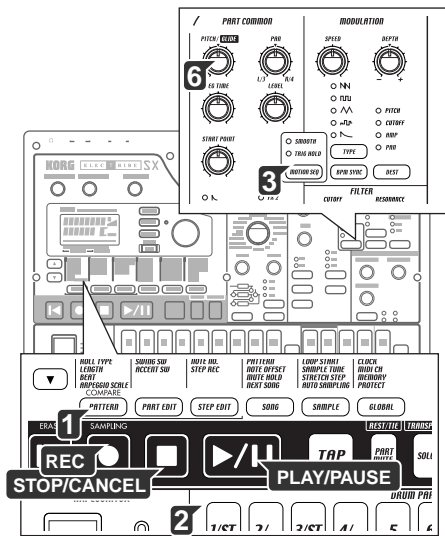
1. In Pattern mode, select the pattern that you want to edit.
2. Press a drum part key to select the part that you want to edit.
3. Press the motion sequence key to select either SMOOTH or TRIG HOLD.
4. Press the REC key to enter record-ready mode. The REC key will light and the PLAY/PAUSE key will blink.
5. Press the PLAY/PAUSE key to start the pattern. The REC key and PLAY/PAUSE key will light.
6. Move the pitch knob as desired until the pattern completes one cycle.
7. When the pattern has played for exactly one cycle after you began moving the knob, the REC key will automatically go dark and the pattern will resume playing back, allowing you to hear the motion sequence that you recorded.

! After recording a motion sequence, you can edit it by pressing the STEP EDIT key and using MOTION DEST. and MOTION VALUE. (p.70 "Editing motion sequence data")

! If you press the STOP/CANCEL key to stop playback and then save the pattern as described in "Saving a pattern," the motion sequence data you recorded will be saved together with the pattern.

! You can record a maximum of twenty-four motion sequences in each pattern.

! TRIG HOLD is the only motion sequence available for the accent part.



Playing a motion sequence

You can play back a motion sequence in one of the two modes described below. The playback mode can be selected independently for each part.

Effect motion sequences will always play back using the SMOOTH mode of a part motion sequence. Motion sequences for an accent part will always play back using the TRIG HOLD mode.

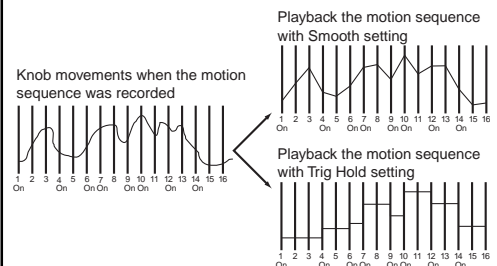
! AMP EG, ROLL, REVERSE, FX SELECT, FX SEND, MOD TYPE, MOD DEST, BPM SYNC, and FILTER TYPE motion sequences will always play back using TRIG HOLD even if SMOOTH is selected.

MOTION SEQ

SMOOTH: Knob movements will be played back smoothly, you will here the effect of the knob being turned even as a single note is sustained.

TRIG HOLD (trigger hold): Each new note being triggered will "hold" the motion sequence knob value as it was when the note was first triggered.


! If the motion sequence LED is dark (off), this setting does nothing.



Checking motion sequence data

Here's how you can check and see what type of motion sequence data has been recorded. Hold down the shift key and press the motion sequence key of the part common section, and the step keys will light to indicate the motion sequence data that has been recorded. The display will indicate "FreeMot" and the number of remaining motion sequences that you can still record.

If a motion sequence is recorded for	The following key will light
Part Common section knobs	Step keys 1 and 2
Filter section	Step key 3
Part Common section keys	Step key 4
Effect 1 motion sequence (Fx Edit 1 data)	Step key 5
Effect 1 motion sequence (Fx Edit 2 data)	Step key 6
Effect 2 motion sequence (Fx Edit 1 data)	Step key 7
Effect 2 motion sequence (Fx Edit 2 data)	Step key 8
Effect 3 motion sequence (Fx Edit 1 data)	Step key 9
Effect 3 motion sequence (Fx Edit 2 data)	Step key 10
Modulation knobs	Step key 11
Modulation keys	Step key 12

 You cannot check the motion sequence data during playback or recording, or while playing a pattern set.

Editing motion sequence data

Here's how you can edit motion sequence data for each part or effect. You can edit the data for each single step.

Selecting the motion sequence that you want to edit

MOTION DEST ***

1. Select the part containing the motion sequence data that you want to edit.
2. Press the step edit key (the key will light).
3. Press the [▲] cursor key to until the display reads "MotDest."
4. Turn the dial to select a parameter for which a motion sequence has already been recorded for the currently selected part.

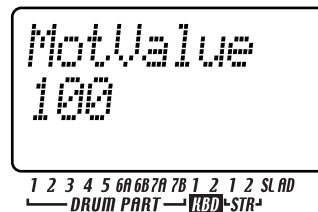
If you want to select a parameter for which a motion sequence has not yet been recorded for the currently selected part, hold down the shift key while you turn the dial.

note When selecting "MotDest," you can hold down the shift key and use the dial to select a parameter for which a motion sequence has not yet been recorded, and then use MOTION VALUE to edit the values.

Editing motion sequence parameter values

MOTION VALUE ***






1. Press a part key to select the part that you want to edit.
2. Press the step edit key (the key will light).
3. Use the [▲]/[▼] cursor to select "MotValue" in the display
4. The display will alternately show the name of the parameter you selected in "Selecting the motion sequence that you want to edit" (see above) and the value of that parameter.
5. Press a step key to select the step that you want to edit. If the pattern has a length of two measures or greater, use the [◀][▶] keys to display the desired step.



- Turn the dial to edit the parameter value at that step. If you select "Disabl," the motion sequence value will not be updated at that step.

MOTION DEST	MOTION VALUE
Fx1Ed1(FX1 EDIT1)	Disabl, 0...127 (depends on FX TYPE)
Fx1Ed2(FX1 EDIT2)	Disabl, 0...127 (depends on FX TYPE)
Fx2Ed1(FX2 EDIT1)	Disabl, 0...127 (depends on FX TYPE)
Fx2Ed2(FX2 EDIT2)	Disabl, 0...127 (depends on FX TYPE)
Fx3Ed1(FX3 EDIT1)	Disabl, 0...127 (depends on FX TYPE)
Fx3Ed2(FX3 EDIT2)	Disabl, 0...127 (depends on FX TYPE)
Pitch/Glide(PITCH/GLIDE*)	Disabl, -63...+63 /Disabl, 0...127
EGTime(EG TIME)	Disabl, 0...127
Pan(PAN)	Disabl, L63...R63
Level(LEVEL)	Disabl, 0...127
SttPoint(START POINT)	Disabl, 0...127
AmpEG(AMP EG)	Disabl, Off, On
Roll(ROLL)	Disabl, Off, On
Revers(REVERSE)	Disabl, 0...127
FxSend(FX SEND)	Disabl, Off, On
FxSel(FX SELECT)	Disabl, Fx1, Fx2, Fx3
ModSpd(SPEED)	Disabl, 0...127
ModDpt(DEPTH)	Disabl, 0...127
ModTyp(TYPE)	Disab, Saw, Squ, Tri, SH, Env
ModDst(DST)	Disabl, Pitch, Amp, Pan, Cutoff
ModBPM(BPM SYNC)	Disabl, Off, On
Cutoff(CUTOFF)	Disabl, 0...127
Eglnt(EG INT)	Disabl, -63...+63
Reso(RESONANCE)	Disabl, 0...127
FitTyp(TYPE)	Disabl, LPF, HPF, BPF, BPF+

* Keyboard part ONLY


-  The motion sequence you edit will return to the state prior to editing if you switch to another pattern before you write the data. If you want to keep the edited motion sequence, execute the Write operation (see p.74 "Saving a pattern").
-  You cannot use the step keys to turn steps on/off while editing a motion sequence.
-  Depending on the part, some parameters cannot be selected.
-  The REC key will not function while you are editing a motion sequence.
-  **note** When selecting "MotDest," you can hold down the shift key and use the dial to select a parameter for which a motion sequence has not yet been recorded, and then use MOTION VALUE to edit the values.

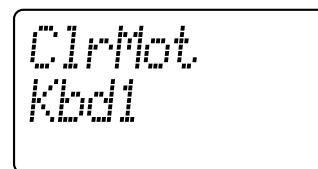
Erasing a motion sequence for a part or effect

CLEAR MOTION

Here's how to erase all motion sequence data for a part or effect in a single operation.

- If the pattern is playing, press the STOP/CANCEL key to stop playback.
 - Hold down the shift key, and press step key 5 (CLEAR MOTION). (Key 5 will blink.)
 - Press the motion sequence key of the part (drum, keyboard, accent) or effect whose motion sequence data you want to erase. (You may select more than one.) The selected key(s) will blink.
 - Press step key 5 once again to execute the Clear operation.
- If you decide to cancel, press the STOP/CANCEL key.

-  This will erase all motion sequences for the selected part or effect.



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SL AD
 └── DRUM PART ─┘ **REC** STR+



Pattern Set

What is Pattern Set?

Pattern Set is a function that lets you assign your favorite patterns to each of the sixteen step keys, and select these patterns by pressing the appropriate key. This gives you an easy way to switch between favorite patterns while performing. There are eight Pattern Groups, and each one can hold sixteen of your favorite patterns. You can also use the Chain Play function with Pattern Set to play your favorite patterns as a loop.

You can assign any pattern you choose to the pattern set (see p.73 "Assigning a pattern in the pattern set").



You cannot use Pattern Set in Song mode.

If you switch patterns during playback, the change will occur at the end of the currently-playing pattern (see p.34 "About the timing at which patterns will change").

Performing with a Pattern Set

When you use Pattern Set Play, operations such as the timing at which patterns change, tempo adjustments, and Reset & Play will function in the same way as in Pattern Play mode.

1. Press the PLAY/PAUSE key to begin playback.
2. By holding down the Pattern Set key and pressing a step key, you can select the pattern that is assigned to that step key.

By holding down the Pattern Set key and using the [◀][▶] select keys, you can switch to a different pattern set group. One of the lower row of select LEDs will light (red) to indicate the current pattern set group.

By holding down the shift key and pressing the Pattern Set key, you can "hold" the Pattern Set function (the key will blink). To defeat the "held" state, press the Pattern Set key once again (the key will go dark).



You cannot use Pattern Set while recording. Pattern Set will be defeated when you enter record (or record-ready) mode.



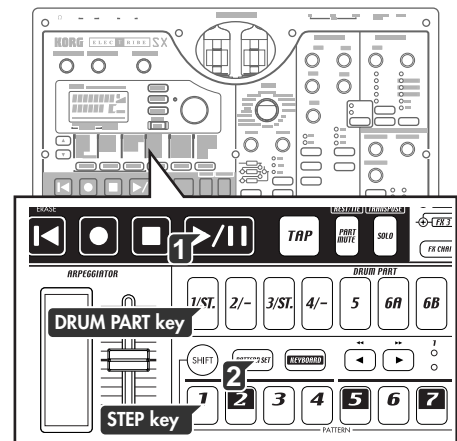
While the Pattern Set key is blinking, the step keys are used to control the Pattern Set function; this means that the Keyboard function will not be available.

Using Chain Play with Pattern Set

This function lets you select the starting and ending pattern of the pattern set, and play these patterns as a loop. With the Pattern Set function in the "hold" state, press two step keys to specify a starting pattern and an ending pattern.

For example if patterns are assigned to the step keys as shown in the following table, you would use the procedure described below to loop the playback in the order of patterns A01, A20, B03, B04, and A51. (A01 is step key 1 and A51 is step key 5 of group 1.)

Step key	1	2	3	4	5	14	15	16
Select LED								
1	A.01	A.20	B.03	B.04	A.51	A.20	B.43	B.61
2	C.21	C.23	C.56	C.64	C.28	C.21	A.07	A.08
3	B.01	B.02	B.04	B.62	A.01	A.05	A.45	A.64
4	D.01	D.02	D.03	D.04	D.05	D.07	D.08	D.09
5	A.01	A.20	B.03	B.04	A.51	A.20	B.43	B.61
6	C.21	C.23	C.56	C.64	C.28	C.21	A.07	A.08
7	B.01	B.02	B.04	B.62	A.01	A.05	A.45	A.64
8	D.01	D.02	D.03	D.04	D.05	D.07	D.08	D.09



1. Press step key 1 of group 1 (select LED 1 lit).
2. Continue holding down step key 1, and press step key 5. Step keys 1 through 5 will be selected for chain play, and will all light.

While chain play is playing back, you can press the RESET/ERASE key to play the currently-playing pattern from its beginning.

To stop chain play, either re-select Pattern Set, or defeat "hold" for the Pattern Set function

Assigning a pattern to a Pattern Set

1. With playback stopped, hold down the Pattern Set key and press the step key to which you want to assign a pattern.
2. While holding down the Pattern Set key, use the dial to select the pattern number that you want to assign. To complete the assignment, release the Pattern Set key.
3. Continuing to hold down the Pattern Set key, press the Write key (the Write key will blink).
4. The display will ask "PtSetWr?" Use the dial to select "Yes" and press the Write key to save the data. If you decide to cancel, select "No" or press the STOP/CANCEL key.



You will be unable to write if the Global mode Memory Protect setting (p.83 "Protecting the data in memory") is on. In this case, turn off the Global mode Memory Protect setting before you write.



Never turn off the power while data is being written. The data may be lost if you do so.

1

2

3

4

5

6

7

8

Saving a pattern

If you want to keep a pattern that you edited or created, you must perform the Write/Rename operation explained below. When you perform the Write/Rename operation, the "Copying data within a pattern" operation will be performed automatically depending on the length of the pattern.

If you decide not to save a pattern you create

Simply switch patterns without performing the Write/Rename operation.

Saving by overwriting an existing pattern




1. Press the WRITE/RENAME key.

The parameter display will indicate "WriteTo," and the value display will indicate "(the save-destination pattern number)." At this time you can press the SHIFT key to change the display from "(the save-destination pattern number)" to the corresponding "(six characters of the pattern name)."

To overwrite onto a different pattern

Use the dial to change the pattern number to the desired save-destination. Be sure to select a pattern number that does not contain important data you want to keep.

2. Press the WRITE/RENAME key to begin saving. The WRITE/RENAME key will light while the data is being saved, and will go dark when the operation is completed. If you decide to cancel, press the STOP/CANCEL key. When the data has been saved, the save-destination pattern number will be selected.



-  Be aware that when you write a pattern in this way, the pattern data in the save-destination will be overwritten.
-  You will not be able to write if the Global mode Memory Protect setting (p.83 "Protecting the data in memory") is on. In this case, turn off the Global mode Memory Protect setting before you write. When shipped from the factory, memory protect is turned on.
-  Never turn off the power while data is being written into memory (i.e., while the Write/Rename key is lit). Doing so may destroy the data.

Saving a pattern under a different name

1. Hold down the shift key and press the WRITE/RENAME key. (The key will blink.) The parameter display will indicate "Rename," and the value display will show "(six characters of the pattern name)".
2. Assign the name for the pattern that you want to save.

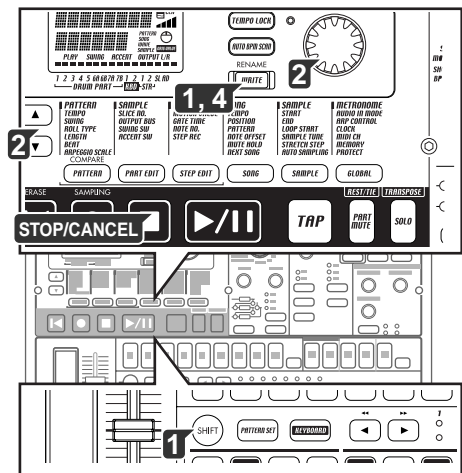
Use the [▲]/[▼] cursor keys to move the cursor to left or right in the parameter display, and turn the dial to edit the parameter name. You can assign a name of up to eight characters to the pattern. When you have finished assigning the name, press the WRITE/RENAME key.

3. Select the save-destination pattern number. The parameter display will indicate "WriteTo," and the value display will indicate "(save-destination pattern number)."
4. Press the WRITE/RENAME key to begin saving the data. The WRITE/RENAME key will light while the data is being saved, and will go dark when saving is complete. If you decide to cancel, press the STOP/CANCEL key. When saving is complete, the save-destination pattern number will be selected.

-  If you saved while playing back, the playing pattern will not change.
-  If you had initiated the saving process while a pattern was playing back, and you then canceled the save operation, playback will not stop when you press the STOP/CANCEL key. Playback will stop if you press the STOP/CANCEL key once again after canceling.

Copying a pattern

You can use the Write operation to copy a pattern to a different pattern number than the currently selected program.



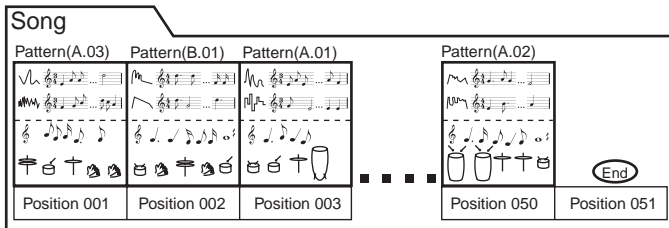
6. Song mode

What is a Song?

A song is a series of patterns arranged in a particular order for playback. On the ESX-1, you can create and store up to 64 songs. In each song, you can arrange patterns in a series up to 256 positions long, and also record rhythms, phrases, and movements of the sound editing knobs.

What is Position?

On the ESX-1, "position" refers to a particular place in the order of patterns that are recorded/played within a song; this is the unit by which you will edit a song.



Each sound can be used in a song. You must use Pattern
mode to edit.

1

2

3

4

5

6

7

8

Playing a song

1. Press the SONG key. The SONG key will light.
2. Press the [▲] cursor key until the display reads "(song name)."
3. Turn the dial to select a song (S01–S64).
4. Press the PLAY/PAUSE key to play back the song (the key will light).
When the song ends, playback will stop automatically (the key will go dark).

To pause playback

Press the PLAY/PAUSE key (the key will blink).

To resume playback


Press the PLAY/PAUSE key once again (the key will light).

To stop playback

Press the STOP/CANCEL key.

Fast-forwarding or rewinding the playback


While a song is playing, you can use the select keys to fast-forward or rewind. Press the [▶] select key to fast-forward, or the [◀] select key to rewind.

 If the KEYBOARD key is on, hold down the SHIFT key and press a select key.

Selecting a song

SONG S.01...S.64

Press the [▲] cursor until the display reads "(song name)." Turn the dial to select one of the sixty-four songs S01 through S64.

 You can change the song during playback.

Switching songs

You cannot switch the song during playback; however, you can pre-select the song number. When you select a song number during playback, that number will blink in the display.

When the currently-playing song ends, playback will stop automatically, and the number will remain lit. The newly-selected song will begin playing when you press the PLAY/PAUSE key.

To play back from the beginning of the position or song

If you press the RESET key while a song is playing, the song will play back from the beginning of the pattern that is assigned to the currently-playing position.

If you want to play back from the beginning of the song, stop or pause the song; then press the RESET key and play back again.

To continue playing another a song

([p.80](#) "Playing back songs in succession")

Setting the playback tempo

TEMPO 20.0...300.00

Using the dial to set the tempo

Use the [▲]/[▼] cursor keys to select "Tempo" in the display. Turn the dial to adjust the tempo. If you want to make tempo adjustments in units below the decimal point, hold down the shift key while you turn the dial.

Using the tap tempo key to set the tempo

While a song is playing, press the tap key twice or more at the desired tempo. The interval at which you press the key will be detected, and converted into the tempo. You can use this method to set the tempo even when the ESX-1 is paused or stopped.

Locking the tempo of a song

Turn the TEMPO LOCK key on if you want to play back the song at the tempo specified by the song.

If the TEMPO LOCK key is off, the tempo will switch to the value specified by the pattern each time the position changes during song playback. However even if the position changes, the tempo will be maintained if the pattern is the same.



If you use the tap tempo to change the tempo, the tempo set in the song will be changed. If you change the tempo with the tap tempo while the song is playing, the tempo of the song will be changed to the tap tempo. If you want to keep the tempo of the song, you must use the song tempo.



If you use Event Recording to record tempo events, the tempo data will also be updated by those events. (⇒ p.81 "Event recording")



You can use the tap key to set the tempo of the song. The tempo of the song is set to the tap tempo.



You can save the tempo of the song independently for each song. If you want to save the tempo, you must set the tempo of the song to the tap tempo.



The GLOBAL mode of the ESX-1 is set to AUTO, and the ESX-1 is set to the tap tempo of the song. The tempo of the song will be changed to the tap tempo.

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Creating a song

You can create a song by arranging patterns in the desired order.



When creating a song, you can specify the order of patterns. You can specify the order of patterns by using the dial or the select keys. You can specify the order of patterns by using the dial or the select keys.

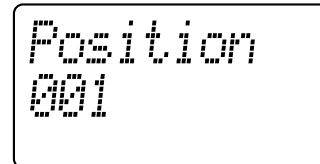
Specifying a pattern for each position

POSITION 001...256

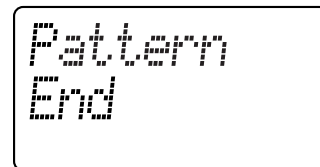
PATTERN A.01...D.64, End

Here's how to specify a pattern for each position. Make sure that the Keyboard function key is off (dark).

1. Use the [▲]/[▼] cursor keys to select "Position" in the display. Notice that the display indicates "001."
2. Press the [▼] cursor key until the display reads "Pattern."
3. Use the dial to select the pattern that you want to assign to position "001."
4. Press the select [▶] key to advance to the next position. The display will indicate "End."
5. Use the dial to select a pattern. The pattern you select here will be the pattern for position "002."
6. When you select a pattern for position "002," the next position will be "End." Continue steps 4 and 5 to input as many patterns as you need.



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SLAD
 └─ DRUM PART ─┘ [RECALL] STR



1 2 3 4 5 6A 6B 7A 7B 1 2 1 2 SLAD
 └─ DRUM PART ─┘ [RECALL] STR

To play back the completed song from the beginning

Press the PLAY/PAUSE key, and then press the STOP/CANCEL key. Alternatively, use the [▲]/[▼] cursor keys to select "Position" in the display and use the dial or the select keys to set the position to "001," and then press the PLAY/PAUSE key.

Transposing the pitch of a Pattern for a specific Position

NOTE OFFSET -24...+24

This lets you offset the pitch of the keyboard parts played by the pattern at a particular position of the song.



When creating a song, you can specify the pitch of the keyboard parts played by the pattern at a particular position of the song. You can specify the pitch of the keyboard parts played by the pattern at a particular position of the song.

1. If the song is playing, press the STOP/CANCEL key to stop play-back.
2. Use the [▲]/[▼] cursor keys to select "Position" in the display
3. Use the dial or the select keys to select the position where you want to offset the pitch.
4. Use the [▲]/[▼] cursor keys to make the display read "NoteOfs."
5. Use the dial to specify the pitch. A setting of ± 1 offsets the pitch (note) by a semitone, ± 2 by a whole step, ± 7 by a fifth, and ± 12 by one octave.


When the display reads "NoteOfs," you can select a new position by using the select keys to move the position backward or forward, step by step.



If you want to use the [◀] or [▶] select keys, stand the KEYBOARD key.

Editing a song

You can edit a song by inserting or deleting patterns. Knob movements and your own performance can also be added to a song.

 If you edit a song that you edited, you must perform the same operation with the song and the pattern that you edited.

Inserting a pattern

INSERT PATTERN

This operation lets you insert a pattern at the desired position. Subsequent patterns will move toward the end of the song.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the shift key and press step key 8 (INSERT PATTERN). (Key 8 will blink.)
3. Use the dial to select the position at which you want to insert a pattern. For example if you want to insert a pattern at position 3, make the display read "003."
4. Press step key 8 once again to insert one pattern at that position (the key will go dark). If you decide to cancel the operation, press the STOP/CANCEL key.

The pattern that will be inserted will be identical to the pattern (including the note offset setting) that was previously assigned to that position. Now you can change the pattern and note number as necessary. All data following the inserted pattern will be moved one position toward the end of the song.


Deleting a pattern

DELETE PATTERN

This operation lets you delete the pattern from a position. Subsequent patterns will move toward the front of the song.

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the shift key and press step key 9 (DELETE PATTERN). (Key 9 will blink.)
3. Use the dial to select the position whose pattern you want to delete. For example if you want to delete the pattern at position 5, make the display read "005."
4. Press step key 9 once again to delete that pattern (the key will go dark).

If you decide to cancel the operation, press the STOP/CANCEL key. All data following the deleted pattern will be moved one position toward the beginning of the song.

 When you delete a pattern, you must perform the same operation with the song and the pattern that you deleted.

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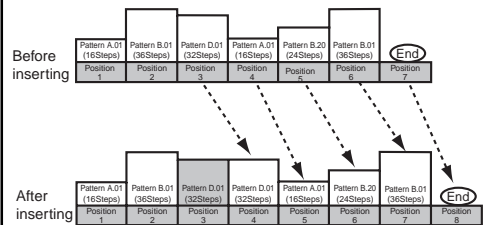
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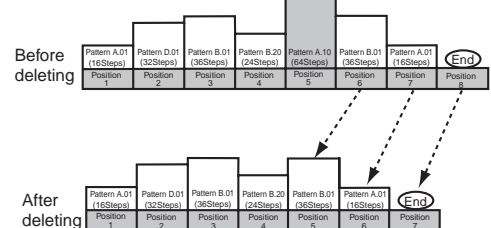
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Insert a new pattern at position 3



Delete the pattern at position 5



Erasing data from a song

CLEAR SONG

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Hold down the shift key and press step key 10 (CLEAR SONG). (Key 11 will blink.)
3. Press step key 10 once again to erase the data from the song. If you decide to cancel, press the STOP/CANCEL key.

If you erase song data by accident

Turn the dial to re-select that song without saving it, and you will revert to the data that was previously saved.



Changing the pattern in a specific position

1. If the ESX-1 is playing, press the STOP/CANCEL key to stop playback.
2. Use the [▲]/[▼] cursor keys to select "Position" in the display.
3. Use the dial to select the position whose pattern you want to change.
4. Press the [▼] cursor key until the display reads "Pattern."
5. Use the dial to select the pattern that you want to assign to that position. If you want to listen to the selected pattern to hear whether it is the one you want, press the Pattern mode key to enter Pattern mode, and play it. To return to Song mode, press the STOP/CANCEL key to stop playback and then press the Song mode key.

Maintaining the part mute settings even when the pattern changes

This function applies the current part mute settings to the entire song.

MUTE HOLD Off, On

1. Press the [▼] cursor key until the parameter display reads "MuteHold."
 2. Turn the dial to make the desired setting.
- Off: The part mute settings specified within each pattern will be applied as the position within the song changes during playback. However if you change the position but the pattern is still the same, the part mute settings will be maintained.
- On: The part mute status will not change even if the position moves to a different pattern. However at the beginning of the song the part mute status will be as specified by the pattern selected for position 1.

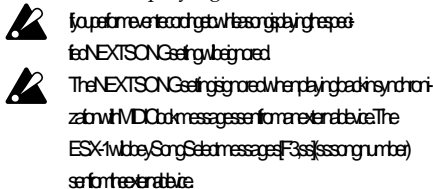
(=p.81 "Event recording")

Playing back songs in succession

NEXT SONG Off, S.01...S.64

When one song finishes playing, this function immediately continues playback with the next specified song.

1. Press the [▼] cursor key until the parameter display reads "NextSong."
2. Turn the dial to select which song will play back following the current song. If you select Off, playback will stop when the current song finishes playing.



Event recording

Recording song event data

In addition to letting you arrange patterns to create a song, the ESX-1's Song mode also lets you record your realtime performances using the drum pad keys, the keyboard function, the arpeggiator, and knob operations.

Recording your Song mode performance and operations in this way is referred to as Event Recording.

Event Recording can record the following six types of data (event data).

- Your performance on the drum, stretch, slice, and audio in part keys
- Your performance using the Keyboard function
- Your performance using the arpeggiator
- Your knob movements and key operations (only for the selected part)
- Solo and mute operations for the parts
- Tempo

To record using Event Recording

When using Event Recording, you can record repeatedly over the same region, and layer more of the above-listed data on each "pass" of recording. Event Recording will replace (overwrite) only the previously-existing data that is the same type of event as the newly recorded data. Existing events of other types will remain.

1. Select the song on which you want to use Event Recording.
2. Use the [▲]/[▼] cursor keys to select "Position" in the display.
3. Use the dial or the select keys to move to the position where you want to start recording.
4. Press the REC key, and then press the PLAY/PAUSE key to start Event Recording.
5. Operate the step keys or knobs etc. to record your performance.
6. Press the STOP/CANCEL key to stop Event Recording.



Information recorded in song mode is overwritten by the event data recorded in the next recording.



Knob movements recorded in Song mode using Event Recording are played back in a way equivalent to the SMOOTH mode of a mixer sequence (not TRIG-HOLD mode).



If you do not save the data recorded by Event Recording, you cannot re-record it.



Event data may not be recorded if you view the song.

If you operate an event-recorded knob during playback, event data of that knob will be cancelled until playback arrives at the next position.

To erase event data from a song

You can erase event data from a song by holding down the SHIFT key and pressing and holding the RESET/ERASE key for the region that you want to erase. All event data in that region will be erased from the song.

To check the event data in a song

When you hold down the SHIFT key and press the MOTION SEQ key of the part common section, step keys 15 and 16 will light if event data is recorded in the song, and the display will indicate "SongEvtnt" to show the number of events recorded in the currently selected song.



You cannot delete event data during playback.

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Saving a song

If you want to keep the song data that you have created, you must perform this Write/Rename operation. If you don't want to keep the song you created, simply switch songs without performing Write/Rename.

 **Be aware** when you save a song that previously you created in the event

To simply save the song



1. Press the WRITE/RENAME key.
The parameter display will indicate "WriteTo," and the value display will indicate "(the save-destination song number)."
At this time you can press the SHIFT key to change the display from "(the save-destination song number)" to the corresponding "(six characters of the Song name)."


To overwrite onto a different song

- Use the dial to change the song number to the desired save-destination. Be sure to select a song number that does not contain important data you want to keep.
2. Press the WRITE/RENAME key to begin saving. The WRITE/RENAME key will light while the data is being saved, and will go dark when the operation is completed. If you decide to cancel, press the STOP/CANCEL key.
When the data has been saved, the save-destination song number will be selected.

To rename and save the song

1. Hold down the shift key and press the WRITE/RENAME key once (the key will blink). The parameter display will indicate "Rename," and the value display will show "(six characters of the song name)"
2. Assign a name to the song. Use the [▲]/[▼] cursor keys to move the cursor in the value display to the left or right, and turn the dial to edit the character. You can assign a name of up to eight characters to a song, however only six at a time are visible during naming. When you have finished, press the WRITE/RENAME key.
3. Select the song number where you want to save the song. The parameter display will indicate "WriteTo," and the value display will show "(the save-destination song number)." If you now press the shift key, the "(save destination song number)" will change to show "(six characters of the song name)." Turn the dial to select the song number where you want to store the song, and make sure that you will not be overwriting an important song that you want to keep.
4. Press the WRITE/RENAME key once again to begin saving the data. The key will light while the data is being saved, and will go dark when saving is completed. If you decide to cancel, press the STOP/CANCEL key.


 **WriteTo** of the Memory Pool is required in
the dial to save a Turn Global Memory Pool
song to the user's memory ( Memory)

 **Be aware** if you write to the memory, use
the WRITE/RENAME key. Do not use the dial



7. Global mode

In Global mode you can set parameters such as metronome settings, overall tuning, memory protect, etc. To enter Global mode, press the GLOBAL key. To exit Global mode, press a different mode key.

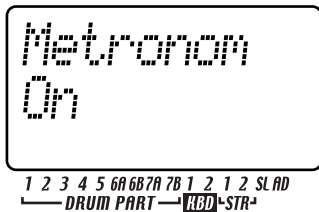
 If you turn off the power without writing the settings you make in Global mode, your changes will be discarded. If you want to keep the changes you made, perform the Write operation (see p.84 "Saving your Global mode settings").

Setting the metronome

These controls allow you to specify how the metronome will operate. The metronome is convenient when you are using realtime recording to create patterns.

The metronome will sound at quarter-note intervals. Except for when you have selected the "On→3/4" setting, the sound of metronome is output from line out jacks L/R and from the headphone jack, mixed with the sound of the ESX-1's playback and audio input.


1. Press the [▲] key until the parameter display reads "Metronom."



2. Turn the dial to make the desired metronome setting.

METRONOME [Off, Rec0, Rec1, Rec2, On, On→3/4]

- Off The metronome will not sound.
- Rec0 The metronome will sound only during recording (when REC and PLAY/CANCEL keys are lit)
- Rec1 When you start recording, there will be a one-measure count before recording actually begins. The metronome will sound only during recording.
- Rec2 When you start recording, there will be a two-measure count before recording actually begins. The metronome will sound only during recording.
- On The metronome will sound during playback or recording. There will be no count before recording begins.
- On→3/4 During playback or recording, the metronome will be output from individual out jacks 3/4. (The metronome will not be output from the line out L/R jacks or the headphone jack.) There will be no count before recording begins.


 You cannot write the metronome setting. When the power is turned on, it will always be "Off."

Setting the input jack to mono/stereo

AUDIO IN MODE L/Mono, Stereo

This specifies whether the sound that is input to the audio in jack will be monaural (left channel only) or stereo. Select "L/Mono" if you are using a monaural source such as a mic. Select "Stereo" if you are using a stereo source such as a CD player.

1. Use the [▲]/[▼] cursor keys to make the display read "AudioIn."
2. Turn the dial to select "L/Mono" or "Stereo."

 Even if Audio In Mode is set to stereo, sampling will record the mixed sound of the left and right input channels if the Sampling Mode (see p.21 "Sampling") is monaural. If you set Audio In Mode to stereo, use a stereo 1/4" phone plug to make connections.

Exchanging the arpeggiator functions

This setting switch the functions of the arpeggiator slider and ribbon controller.

1. Use the [▼]/[▲] cursor keys to make the display reads "ArpCntrl."
2. Turn the dial to select "Normal" or "Revers"

ARP CONTROL Normal, Revers

- Normal Slider: Pitch control (keyboard parts)
Ribbon: Gate time (keyboard, audio in parts) / Resolution (drum, slice, stretch parts) + Note-on
- Revers Slider: Gate time (keyboard, audio in parts) / Resolution (drum, slice, stretch parts)
Ribbon: Pitch control (keyboard parts) + Note-on


Protecting the data in memory

This setting lets you protect the Pattern mode and Song mode data.

Use the [▲]/[▼] cursor keys to select "Protect" in the parameter display. Turn the dial to select Off or On.

PROTECT Off, On

- On The WRITE/RENAME key will be disabled, and it will be impossible to rewrite data or receive MIDI data dumps.
- Off Edited data can be saved, and data dumps can be received.

 With the factory settings this is turned On. The memory protect setting applies to Pattern mode, Part Edit mode, Step Edit mode, and Song mode. However, you can write your settings in Global mode regardless of the memory protect setting.

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Saving your Global mode settings

Here's how to save the settings you made in Global mode. If you want to keep the changes you made, you must execute the Write operation described below. The settings you save will take effect each time you turn on the power. If you don't want to keep the changes you made, simply turn off the power without executing Write.

1. Press the Global mode key.
2. Press the WRITE/RENAME key once (the key will blink). The display will ask "GloblWr?" Use the dial to select "Yes," and press the WRITE/RENAME key once again to begin saving the data. While the data is being saved, the WRITE/RENAME key will light, and will go dark when saving is completed. If you decide to cancel, select "No" or press the STOP/CANCEL key.

-  You can write Global mode settings regardless of the Memory Protect setting (see above).
-  Never turn off the power while data is being saved to memory (i.e., while the WRITE/RENAME key is lit). Doing so can destroy the data.

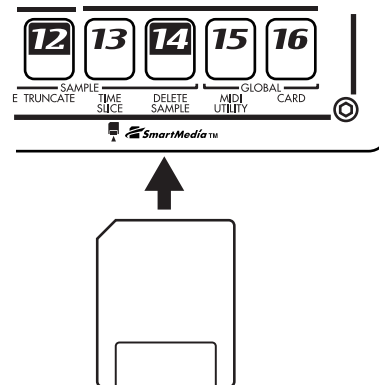
Using SmartMedia™


You can use a SmartMedia card to save or load the ESX-1's internal data.

The ESX-1 uses 3V (3.3V) SmartMedia in a range of 4 MB–128 MB capacity.

Make sure that the SmartMedia card is oriented in the correct direction, and insert it all the way into the SmartMedia slot.

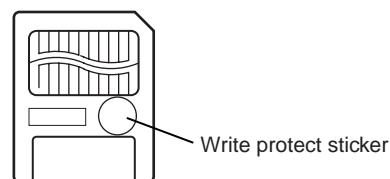
* SmartMedia™ is a registered trademark of Toshiba Corporation.



-  Never remove the card or turn off the power while the SmartMedia card is being accessed (while the card indicator is lit). Doing so may damage the card.

About cards

The ESX-1 supports 3.3V SmartMedia (or SmartMedia with ID) in a range of 4–128 MB capacities. Never use any other type of SmartMedia; the ESX-1 may stop operating if you do. If you affix a write protect label (the round silver label) to the SmartMedia, it will not be possible to write or erase the data on that card. If you want to save data by writing it to SmartMedia, you must remove the write protect label.




Handling precautions

- Do not bend the card, or subject it to strong impact or high temperature.
- Do not touch the electrical contacts of the card. Static charges may damage the card. When you are finished using a card, store it in its special anti-static case.

Formatting SmartMedia

Here's how to format a SmartMedia card so that it can be used by the ESX-1.

 Formatting will erase the entire contents of the SmartMedia.


1. Insert the SmartMedia into the SmartMedia slot.
2. Press the GLOBAL key (it will light).
3. Hold down the SHIFT key and press step key 16 (CARD). (Key 16 will blink.) The parameter display will read "CardMenu."
4. Turn the dial to make the value display read "Format," and press step key 16.



5. The parameter display will ask "Sure?" Turn the dial until the value display reads "Yes," and then press key 16 to execute formatting. If you decide to cancel, press the STOP/CANCEL key.

note While the card is being formatted, the step keys will indicate the state of progress.

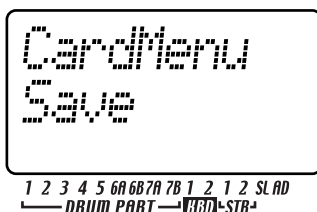
6. When formatting is complete, or if you selected "No" and pressed key 16, you will return to the display prior to formatting. (Key 16 will go dark.)

 SmartMedia that was formatted on a device other than the ESX-1 may not be recognized correctly. In this case, re-format it on the ESX-1.

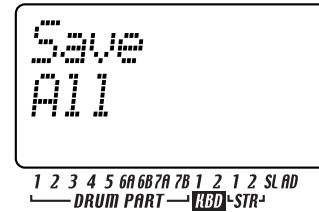
Saving data to SmartMedia (Save All)

Here's how to save all of the ESX-1's data (pattern data, song data, global data, and sample data) to SmartMedia.

1. Insert the SmartMedia into the SmartMedia slot.
2. Press the GLOBAL key. (It will light.)
3. Hold down the Shift key and press step key 16 (CARD) (key 16 will blink). The parameter display will indicate "CardMenu."
4. The value display will indicate "Load." Turn the dial until this indicates "Save," and press key 16.




5. The parameter display will indicate "Save" and the value display will indicate "All" Press key 16.





note If you select "PSG" here, only the pattern, song, and global data will be saved.


6. Assign a name to the file that you are going to save. The parameter display will indicate "Rename," and the value display will show the current data name. Use the [▲]/[▼] cursor keys to move the cursor left/right in the value display, and turn the dial to edit the character. When you are finished, press key 16.

The parameter display will ask "Sure?" and the value display will read "No." Turn the dial to change this to "Yes" and press key 16 to execute the Save operation. While the data is being saved, the step keys will indicate the state of progress. If you decide to cancel, press the STOP/CANCEL key.

 If an identically-named user file exists, the parameter display will indicate "OverWrt?" and the value display will indicate "No." If you use the dial to select "Yes" and press key 16 to overwrite, the data originally on the SmartMedia will be lost. If you did not input a name, the file will be named "NO_NAME."

 You cannot save data on SmartMedia if a write-protect label is affixed to it. Remove the write protect label from the SmartMedia before you execute the Save operation.

 Never turn off the power or remove the SmartMedia while saving or formatting. Doing so may render the SmartMedia unusable.

 You will need approximately 2 megabytes of space to save one file. You cannot save data to a SmartMedia card that has less free space than this.

Loading all data from SmartMedia into the ESX-1

Here's how to load ESX-1 pattern data, song data, global data, and sample data from SmartMedia.

1. Insert the SmartMedia card into the SmartMedia slot.
2. Press the GLOBAL key. (It will light.)
3. Hold down the Shift key and press step key 16 (CARD) (key 16 will blink). The parameter display will indicate "CardMenu."
4. The value display will indicate "Load." Press key 16.



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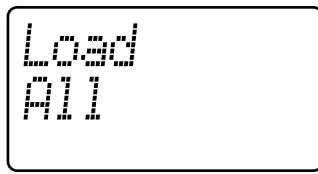
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- The parameter display will indicate "Load" and the value display will indicate "All" Press key 16.



note If you select "PSG" here, only the pattern, song, and global data will be loaded.

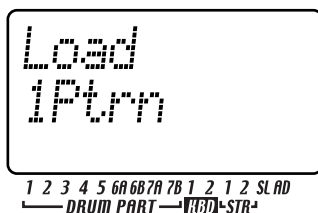
- Select the file that you want to load. The value display will indicate "LdFile," and the parameter display will show "(six characters of the filename)." Turn the dial to select the desired file, and press key 16.
- The parameter display will ask "Sure?" and the value display will read "No." Turn the dial to change this to "Yes," and press key 16 to execute the Load operation. While the data is being loaded, the step keys will indicate the state of progress. When loading is completed, the ESX-1 will enter Pattern mode with A01 selected.

If you decide to cancel, press the STOP/CANCEL key.

! With the factory settings, memory protect is turned on, so you will not be able to execute this operation. Turn memory protect off before you execute the Load operation (see p.84 "Saving your Global mode settings").

Loading a single pattern from SmartMedia (Load Pattern)

- Insert the SmartMedia card into the SmartMedia slot.
- Press the GLOBAL key. (It will light.)
- Hold down the Shift key and press step key 16 (CARD) (key 16 will blink). The parameter display will indicate "CardMenu."
- The value display will indicate "Load." Press key 16.
- The parameter display will indicate "Load" and the value display will indicate "All." Turn the dial to select "1Ptrn" and then press key 16.



- Select the file (the filename you specified for Save All) that contains the pattern you want to load. The value display will indicate "LdFile" and the parameter display will show "(six characters of the filename)." Turn the dial to select the desired file, and then press key 16.

note You can use files that were saved by the ES-1 (an earlier model in this series). When you select an ES-1 file, the display will indicate "(ES1)." However since some of the parameters are not compatible, the sound may be different.

- Select the pattern that you want to load. The parameter display will indicate "Load" and the value display will show the "(pattern number)" (you can hold down the shift key to display the pattern name instead). Turn the dial to select the desired pattern, and press key 16 to load it.

When loading is completed, you will return to Pattern mode (key 16 will go dark, and the PATTERN key will light).

If you decide to cancel, press the STOP/CANCEL key.

! Be aware that this procedure does not save (write) the pattern into internal memory.

! With the factory settings, memory protect is turned on, so you will not be able to save data. Turn memory protect off before you execute the Write operation (see p.84 "Saving your Global mode settings").

! Loading a pattern does not load the samples used by the pattern.

Saving just a single sample on SmartMedia

Here's how to save ESX-1 sample data on SmartMedia.

- Insert the SmartMedia into the SmartMedia slot.
- Press the GLOBAL key (the key will light).
- Hold down the SHIFT key and press step key 16 (CARD). (Key 16 will blink.) The parameter display will show "CardMenu."
- The value display will show "Load." Use the dial to make it read "Save," and press key 16. The parameter display will show "Save."
- The value display will show "All." Use the dial to make it read "Sample," and press key 16.
- Select the sample that you want to save. The parameter display will show "SelSmpl," and the value display will show "(sample number within the ESX-1's memory)." (At this time you can press the SHIFT key to see the name of the sample.) Turn the dial to select the number you want to save. Then press key 16.





- Assign a name to the sample. Use the [▲]/[▼] cursor keys to move the cursor to left or right, and turn the dial to select characters.

- Press key 16 to execute the Save operation. While the sample is being saved, the step keys will indicate the state of progress.

When saving is complete, the display will return to its state prior to the Save operation. (Key 16 will go dark.)

If you decide to cancel, press the STOP/CANCEL key.

! You cannot save if a write-protect label is affixed to the SmartMedia. Remove the write-protect label from the SmartMedia before you save data on it.

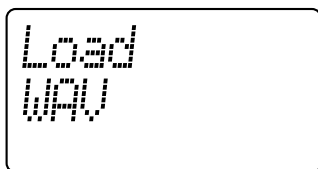
-  Never turn off the power or remove the SmartMedia while saving or formatting. Doing so may render the SmartMedia unusable.
-  You cannot save data on SmartMedia that has little remaining capacity.

Loading just a single sample from SmartMedia

You can load individual samples from a file that was saved by an ESX-1 or ES-1, as well as loading WAVE or AIFF files.

Loading a WAV or AIFF file

1. Insert the SmartMedia into the SmartMedia slot.
2. Press the GLOBAL key (the key will light).
3. Hold down the SHIFT key and press step key 16 (CARD). (Key 16 will blink.) The parameter display will show "CardMenu."
4. Make sure that the value display shows "Load," and press key 16. The parameter display will show "Load."
5. The value display will show "All." Turn the dial to select the file format shown in the value display; either "WAV" or "AIFF." Then press key 16.



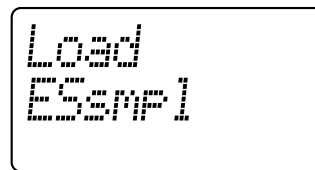
6. Select the sample that you want to load. The value display will show "Load," and the parameter display will show the "(sample name)" for samples that match the file format you selected in step 6. Turn the dial to select a sample. At this time you can press the PLAY/PAUSE key to play the selected sample. When you have selected a sample, press key 16.
7. Select the load-destination sample number. The parameter display will show "LoadTo," and the value display will show "(sample number in the ESX-1's internal memory)." (You can press the SHIFT key to see the name of the sample.) Turn the dial to select the load-destination number. Already-used sample numbers have an asterisk "*" at the right of the sample number. Press key 16 to execute the Load operation. During loading, the step keys show the state of progress.

Loading from an ES (ESX-1 or ES-1) file

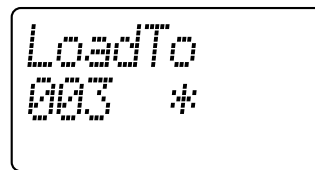
1. Insert the SmartMedia into the SmartMedia slot.
2. Press the GLOBAL key (the key will light).
3. Hold down the SHIFT key and press step key 16 (CARD). (Key 16 will blink.) The parameter display will show "CardMenu."
4. Make sure that the value display shows "Load," and press key 16. The parameter display will show "Load."

7. Global mode




5. The value display will show "All." Turn the dial to select "ESsmpl," and press key 16.



6. Select the file from which you want to load. The parameter display will show "LdFile," and the parameter display will show the "(ESX-1 or ES-1 file names)" existing on the SmartMedia. Turn the dial to select a user file, and then press key 16.
7. Select the sample that you want to load. The value display will show "Load," and the parameter display will show the "(sample name)" for samples inside the user file you selected in step 6. Turn the dial to select a sample. At this time you can press the PLAY/PAUSE key to play the selected sample. When you have selected a sample, press key 16.
8. Select the load-destination sample number. The parameter display will show "LoadTo," and the value display will show "(sample number in the ESX-1's internal memory)." Turn the dial to select the load-destination number. At this time, you can press the SHIFT key to switch the display to the sample name. Already-used sample numbers have an asterisk "*" at the right of the sample number.




9. Press key 16 to execute the Load operation. During loading, the step keys show the state of progress. When loading is completed, you will return to Pattern mode. (Key 16 will go dark, and the Pattern mode key will light.) If you decide to cancel midway through the procedure, use the mode keys to switch to a mode other than Global mode (e.g., Pattern mode).

-  This operation will overwrite the internal memory; use caution, and make sure that you are not overwriting important data you want to keep
-  With the factory settings, memory protect is turned on, so it will not be possible to load samples. Turn memory protect off before you execute the Load operation. (→p.83 "Memory Protect")
-  If the sample you are attempting to load exceeds the remaining free space in memory, a message of "MemFull" will appear, and you will be unable to execute the Load operation. Delete unneeded samples to increase the amount of free space, and try the Load operation once again.



Deleting an ESX-1 file from SmartMedia (Delete File)

Here's how a user file containing ESX-1 pattern data, song data, and global can be deleted from a SmartMedia card.

 Once a file has been deleted, it cannot be read again.

1. Insert the SmartMedia card into the SmartMedia slot.
2. Press the GLOBAL key. (It will light.)
3. Hold down the Shift key and press step key 16 (CARD) (key 16 will blink). The parameter display will indicate "CardMenu."
4. The value display will indicate "Load." Turn the dial to select "Delete" and then press key 16.
5. Select the user file that you want to delete. Select ES files, and then press key 16.
6. The parameter display will ask "Sure?" and the value display will read "No." Turn the dial to change this to "Yes" and press key 16 to execute the Delete operation. While the file is being deleted, the step keys will indicate the state of progress.

Deleting a WAVE or AIFF file from SmartMedia

Here's how to delete a WAVE or AIFF file from SmartMedia.

1. Insert the SmartMedia into the SmartMedia slot.
2. Press the GLOBAL key. (The key will light.)
3. Hold down the SHIFT key and press step key 16 (CARD). (Key 16 will blink.) The parameter display will show "CardMenu."
4. The value display will show "Load." Turn the dial to make this read "Delete," and then press key 16.
5. Select the type of file that you want to delete. Select WAVE or AIFF files, and then press key 16.
6. Select the file that you want to delete. The parameter display will show "(file name)." Turn the dial to select a file, and press key 16.
7. The parameter display will show "Sure?" Turn the dial to make the value display read "Yes," and then press key 16 to execute the Delete operation. While the file is being deleted, the step keys will show the progress of execution.

About WAV/AIFF file formats

When the ESX-1 saves/loads data, it references the following chunks.

WAV files (Import/Export)

The Format chunk, Sample chunk, and Data chunk are used.

Format chunk ('fmt')

The ESX-1 can handle Wave file formats with the following Format chunk settings.

Format: standard PCM format

Channel: 1 (Mono) / 2 (Stereo)

BitsPerSample: 8/16 bit

8-bit data is expanded into 16-bit data by adding zeros

to the lower 8 bits.

Sampling Rate: 11,025~96,000 (Hz)

In cases other than 44,100 Hz, the Tune parameter of the sample will be adjusted during loading so that the playback pitch is correct.

Sample chunk ('smp1')

When importing a WAV file created by other hardware or software, the ESX-1 will import only the Loop data, and will apply this to its own Loop Start parameter.

When exporting data, the Sample chunk will be written according to the loop settings specified within the ESX-1.

When importing

The first loop set in List Of Sample Loops will be loaded. When Loop data is loaded, the ESX-1's End parameter will be overwritten by the Loop End specified within the Sample chunk.

When exporting

If a loop is specified for a sample on the ESX-1, a Sample chunk will be created when the wave is created.

The following parameters are specified.

Manufacturer: 0x42

Product: 0x71

SamplePeriod: specifies the sampling frequency of the sample

MIDI Unity Note: 0x3C

Num Sample Loops: 1

List of Sample Loops: one loop, according to the ESX-1's LoopStart and EndPoint settings

Data chunk ('data')

This is the wave sample data itself.

AIFF files (Import only)

The Common chunk and SoundData chunk are recognized.

Common chunk ('COMM')

Channel: 1 (Mono) / 2 (Stereo)

BitsPerSample: 8/16 bit

8-bit data is expanded into 16-bit data by adding zeros to the lower 8 bits.

Sampling Rate: 11,025~96,000 (Hz)


In cases other than 44,100 Hz, the Tune parameter of the sample will be adjusted during loading so that the playback pitch is correct.

SoundData chunk ('SSND')

This is the AIFF sample data itself. Offset and block size are ignored. (Block-Aligning Sound Data is not supported.)

About MIDI

In this mode you can set the MIDI channel and clock.

 If you want to save the settings you make in Global mode, you must perform the Write operation (see p.84 "Saving your Global mode settings").

About MIDI channels

Just as a television set receives only the program that is being broadcast on the channel to which it is set, a MIDI device receives only the data that is being transmitted on the channel it is set to receive. The Global mode MIDI Ch setting lets you set the ESX-1's transmit/receive channel independently for each keyboard part 1, 2 and collectively for all drum parts together.

ceive program changes and exclusive data ("Global MIDI channel").

Part	Channel
keyboard part 1(global)	1
keyboard parts 2	2
Drum parts (1-7B)	
Stretch parts(1, 2)	10
Slice part, Audio in part	

Using the ESX-1 as a sound module

Use a MIDI cable to connect the MIDI OUT connector of your MIDI keyboard etc. to the ESX-1's MIDI IN connector.

1. Press the Global key (it will light).
2. Use the [▲]/[▼] cursor keys to select "MIDI ch" in the display
3. Press the ESX-1's keyboard part 1 Part key, and then turn the dial to set the MIDI channel for part 1 to match the channel being transmitted by the connected MIDI keyboard or other device. (see "Setting the MIDI channel of each part")
4. When you play the connected MIDI keyboard etc., you will hear keyboard part 1.

If you connect a multi-track MIDI sequencer to the ESX-1 you will need to set the MIDI channel for keyboard parts 1, 2 and for the drum parts (see "Setting the MIDI channel of each part"). Set each part to the MIDI channel of the sequencer track you want that part to play, and start your external sequencer to hear the sounds.

Setting the MIDI channel of each part

MIDI ch 1...16

Here you can set the MIDI channel for each keyboard part and for the drum parts. The same MIDI channel is used for transmission and reception. The factory settings are as follows.

1. Press the Global key (it will light).
2. Use the [▲]/[▼] cursor keys to change the display to read "MIDI ch."
3. Press the part key for which you want to change the MIDI channel (the key will light). To change the MIDI channel for the drum parts, press any of the 13 part keys (all of the drum part keys will light).
4. Turn the dial to select the channel.
The MIDI channel for keyboard part 1 that you specify here will also be used to transmit and re-



MIDI Utility

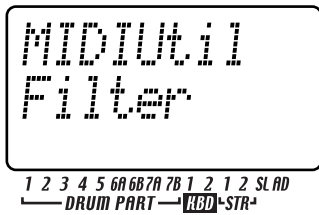
Here you can make MIDI filter settings, assign drum note numbers, assign control change numbers, and transmit/receive MIDI data.

Making MIDI filter settings

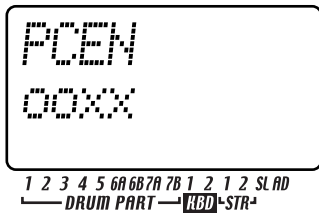
MIDI FILTER

You can select which MIDI messages the ESX-1 will receive and transmit.

1. Press the Global key.
2. Hold down the shift key and press step key 15 (MIDI UTILITY) (key 15 will blink). The parameter display will indicate "MIDI Util."
3. Make sure that the value display indicates "Filter," and press key 15.



4. The parameter display will read "PCEN."



The characters "PCEN" correspond to four types of message whose status is indicated by an "O" or "X" in the value display. If you want a category of message to be transmitted/received, set its status to "O." If you don't want that category of message to be transmitted/received, set its status to "X." Turn the dial to select "O" or "X" for each category of message.

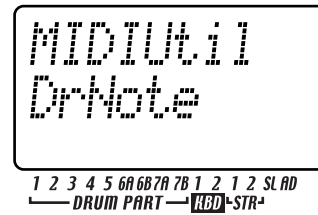
- P: Program change, bank select, and song select transmission/reception.
 - C: Control change transmission/reception.
 - E: Exclusive data transmission/reception. However while the MIDI Dump page is displayed, this data can always be received regardless of this setting.
 - N: Note message transmission/reception.
5. When you have finished making settings, press the 15 key to return to Global mode. (Key 15 will go dark and the Global mode key will light.) If you decide to cancel, press the STOP/CANCEL key or press a mode key.

Assigning the drum note numbers

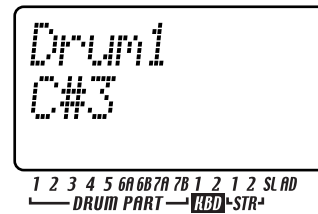
DRUM NOTE NO. C-1...G9

You can assign a MIDI note number (as a note name) for each drum part. If you assign the same note number for two or more parts, those parts will sound simultaneously when controlled from an external MIDI device.

1. Press the Global key.
2. Hold down the shift key and press step key 15 (MIDI UTILITY) (key 15 will blink). The parameter display will indicate "MIDI Util."
3. The value display will indicate "Filter." Turn the dial to change this to "DrNote," and press key 15.




4. Press the drum part key whose note number you want to assign.
5. The parameter display will show the name of the selected drum part, and the value display will indicate the corresponding number.




Turn the dial to select the desired note number. For each drum part that you want to assign, repeat the steps of selecting the drum part and then selecting a note number.

6. When you have finished making settings, press key 15 to return to Global mode. (Key 15 will go dark and the Global key will light.) If you decide to cancel, press the STOP/CANCEL key or press a mode key. With the factory settings, the drum note numbers are assigned as follows.

Part	Note
Drum1	C2
Drum2	D2
Drum3	E2
Drum4	F2
Drum5	G2
Drum6A	F#2
Drum6B	A#2
Drum7A	C#3
Drum7B	D#3
Stretch1	A-1
Stretch2	A#-1
Slice	B-1
Audio in	C0

 The correspondence between note names and note numbers may differ for devices of different manufacturers. Please check this correspondence for the device you are connecting.

7. Global mode

 Each drum part knob can be edited using NRPN MIDI messages.

About note-on/note-off

When you press a drum part key, a note-on message of the note number assigned to each drum part key will be transmitted on the specified MIDI channel.

When you use the Keyboard function to play the step keys, a note-on message [9n, kk, vv] (n: channel, kk: note number, vv: velocity) of the note number assigned to each step key and a velocity value corresponding to the strength with which you pressed the key will be transmitted.

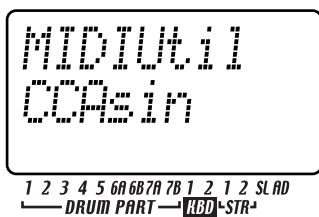
On the ESX-1, the vv:velocity value is adjusted by the level of each accent part. When you release a key, a note-off message [8n, kk, vv] will be transmitted. However, very few devices receive note-off velocity data, and the ESX-1 does not transmit it. When the ESX-1 receives note-on/off messages on the MIDI channel assigned for a part, that part will be sounded.

If the ESX-1's MIDI filter "N" setting is set to "x," note-on/off messages will not be transmitted or received. (p.90 "Making MIDI filter settings")

Assigning a MIDI Control Change Number to a knob

#CC ASSIGN CC#00...31,32...127
You can specify the MIDI control change number assigned to each knob.

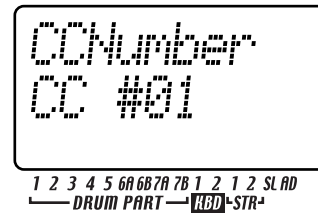
1. Press the Global key.
2. Hold down the SHIFT key and press step key 15 (MIDI UTILITY). (Key 15 will blink.) The parameter display will indicate "MIDIUtil."
3. Turn the dial to change the value display to "CCAsin," and press key 15.




4. The parameter display will read "CCAssign," and the value display will show "(the name of the corresponding knob)." Turn the dial to select the knob whose assignment you want to change, and press key 15.



5. The parameter display will read "CCNumber," and the value display will show "(a control change number)." Turn the knob to select the desired control change number and press key 15.



6. Press step key 15 and the display will ask "Continue?" If you want to make settings for another knob, use the dial to select "Yes" and press step key 15. Then repeat steps 4 and 5. If you are finished making settings, use the dial to select "No" and press step key 15 to return to Global mode. If you decide to cancel, press the STOP/CANCEL key or press any mode key.
-  Support for control change numbers will be different for each manufacturer. Refer to the manual of the device you want to connect.

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Transmitting sound settings and other data

Song, pattern, global, and MIDI settings can be transmitted from the ESX-1 as MIDI exclusive data and stored on an external device.

Transmitting/receiving a data dump

Data dumps are transmitted and received on the MIDI channel specified by the Global mode MIDI Ch setting. Data dumps can be transmitted manually as described below, and are also transmitted in response to a Data Dump Request message of the appropriate type.

MIDI DUMP PtBnkA...D, AllSng, Global

Transmitting

Here's how to transmit an ESX-1 system exclusive data dump (pattern, song, or global mode settings) from MIDI OUT to a connected MIDI data filer or computer.


1. Connect the ESX-1's MIDI OUT connector to the MIDI IN connector of an external MIDI device that is able to receive the MIDI data dump (e.g., another ESX-1, a MIDI data filer, or a personal computer that is running a MIDI data management program).
2. Set your external MIDI device and the ESX-1 to the same MIDI channel. If you are transmitting to a MIDI data filer, you do not normally need to set the MIDI channel to match.
3. Press the Global key (the key will light).
4. Hold down the shift key and press step key 15 (MIDI UTILITY) (key 15 will light). The parameter display will indicate "MIDIUtil."
5. The value display will indicate "Filter." Turn the dial to change this to "Dump," and press key 15.
6. The parameter display will indicate "MIDI Dump." The value display will read "(data to be transmitted)." Turn the dial to select the data that you want to transmit.

PtBnkA: pattern bank A data (A01...64)
 PtBnkB: pattern bank B data (B01...64)
 PtBnkC: pattern bank C data (C01...64)
 PtBnkD: pattern bank D data (D01...64)
 AllSng: all song data
 Global: global data


7. Press key 15 once again to transmit the data. If you decide to cancel before you have begun transmission, press the STOP/CANCEL key.


Receiving


Here's how to receive an ESX-1 system exclusive data dump from an external MIDI data filer or computer connected to the ESX-1's MIDI IN connector.

-  If the Global mode Protect setting is "On," MIDI data dump reception is disabled except when you are in Global mode.

1. Connect the MIDI OUT connector of the external MIDI device that will transmit the data dump (another ESX-1, a MIDI data filer, or a personal computer that is running a MIDI data management program) to the MIDI IN connector of the ESX-1.
2. Set your external MIDI device and the ESX-1 to the same MIDI channel (the keyboard part 1 setting on the ESX-1). If you are transmitting data from a data filer, use the same channel setting as when you saved the data.
3. Press the Global key (the key will light).
4. Hold down the shift key and press step key 15 (MIDI UTILITY) (key 15 will light). The parameter display will indicate "MIDIUtil."
5. The value display will indicate "Filter." Turn the dial to change this to "Dump," and then press key 15.
6. The parameter display will indicate "MIDI Dump." Operate the external device to make it transmit the data dump to the ESX-1.

 For details on data dumps, refer to the ESX-1's MIDI implementation. If you wish to obtain the MIDI implementation, please contact Korg distributor.

 Do not touch the ESX-1's keys while a data dump is being executed. While you are using the Dump function, the ESX-1 can transmit or receive system exclusive data even if the MIDI FILTER parameter "E" is set to "x."

 When the ESX-1 receives a data dump, it will take up to ten seconds for the data to be written into memory (the Write/Rename key will light). Never turn off the ESX-1's power while this is occurring. Doing so may destroy the data. Also, new MIDI data cannot be received during this time. When receiving two or more data dumps into the ESX-1, you must allow an appropriate interval of time between each data dump.

Switching patterns

When you switch patterns, the ESX-1 will transmit a program change message [Cn, pp] (and Bank Select [Bn, 00, mm] (control change #00), [Bn, 20, bb] (control change #32) (mm: bank number upper byte, bb: bank number lower byte). If the ESX-1 receives a program change message on the appropriate MIDI channel, it will switch patterns within the same group (e.g., from A01 to A02). If the ESX-1 receives a bank select message, it will switch groups (e.g., from A01 to C01) so that patterns of another group can be selected. The MIDI mode MIDI Filter setting determines whether the ESX-1 will transmit and receive program changes.

Bank select MSB	LSB	Program change	Pattern number
00	00	0-127	A01-B64
00	01	0-127	C01-D64

Setting the pitch bend range

When the ESX-1 receives a pitch bend message [En, vv, vv] (vv, vv: lower and upper bytes of the value, together expressing a range of 16384 steps with 8192 [vv,vv=00H, 40H]), pitch bend will be applied to the keyboard part receiving on that channel.


To set the pitch bend range

- BEND RANGE -12...12
1. Press the GLOBAL key (the key will light).
 2. Hold down the SHIFT key and press step key 15 (MIDI UTILITY) (key 15 will blink). The parameter display will indicate "MIDIUtil."
 3. Turn the dial to make the value display indicate "BndRng," and press key 15.
 4. The parameter display will indicate "BndRng," and the value display will indicate the pitch bend width.
 5. Turn the dial to select the pitch bend range. +/-1 is a semitone, +/-2 is a whole tone, +/-7 is a fifth, and +/-12 is an octave.
For some sounds, you may be unable to bend the pitch upward by the full amount specified here.
 6. When you have finished making the setting, press key 15 to return to Global mode (key 15 will go dark and the GLOBAL key will light).
If you decide to cancel mid-way through this procedure, press the STOP/CANCEL key or any mode key.

Synchronizing playback with an external MIDI device

You can synchronize the tempo of the ESX-1 to the tempo of an external MIDI device that is able to send or receive MIDI clock data.

For details on synchronization settings on your external MIDI device, refer to the manual for that device.

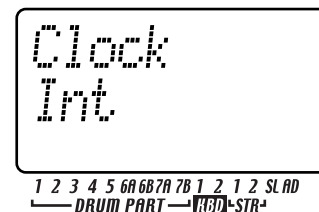
 We recommend that you use the ESX-1 as the master.

CLOCK Int, Ext, Auto


- Int: The ESX-1 will be the master; the external MIDI device will synchronize to it.
- Ext: The external MIDI device will be the master; the ESX-1 will synchronize to it.
- Auto: If MIDI clock messages are being received from a connected external MIDI device, the ESX-1 will automatically operate with the "Ext" setting. Otherwise it will operate with the "Int" setting.

To use the ESX-1 as the master, and synchronize an external MIDI device to it

1. Use a MIDI cable to connect the ESX-1's MIDI OUT connector to the MIDI IN connector of your external MIDI device (e.g., sequencer or sound module).
2. Press the Global key (it will light).
3. Press the [▲] cursor key to change the display to read "Clock."
4. Turn the dial to select "Int" (internal clock).



5. Make settings on your external MIDI device (slave) so that it will receive MIDI clock messages.
6. When you start playback on the ESX-1, the external MIDI device will operate in synchronization with it.

 When you use RESET/PLAY to play back from the beginning of the pattern, only the MIDI Start message will be transmitted.

To use the external MIDI device as the master, and synchronize the ESX-1 to it

1. Use a MIDI cable to connect the ESX-1's MIDI IN connector to the MIDI OUT connector of your external MIDI device (e.g., sequencer or synthesizer).
2. Press the Global key (it will light).
3. Press the [▲] cursor key to change the display to read "Clock."
4. Turn the dial to select "Ext" (external clock).

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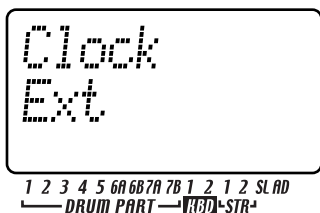
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5. Make settings on your external MIDI device (master) so that it will transmit MIDI clock messages.
6. Return to Pattern mode or Song mode.
7. When you start the sequencer of your external MIDI device, the ESX-1 will playback in synchronization with it.

If MIDI clock messages are being received at the MIDI IN connector, you can press the ESX-1's PLAY/PAUSE key to make it start playing in synchronization to the tempo of your external MIDI device.

 If the ESX-1's MIDI Clock setting is "Ext" or "Auto" and it is synchronized to an external MIDI clock, it will follow the tempo of the external sequencer; you will be unable to adjust the tempo on the ESX-1.

If the ESX-1 receives a MIDI Start message while synchronized to MIDI clock, it will begin playing from the beginning of the currently-playing pattern (in the case of a song, the beginning of the pattern that was playing when the Start message was received).


Playing back in sync with other Electribe models

You can enjoy even greater possibilities by playing the ESX-1 in sync with other models in the Electribe series such as the Electribe-MX (EMX-1), Electribe-S (ES-1) or Electribe-M (EM-1).

To make the ES-1 play in synchronization to the tempo of the ESX-1

Use a MIDI cable to connect the ESX-1's MIDI OUT connector to the ES-1's MIDI IN connector. Use audio cables to connect the ES-1's line output jacks to your mixer or powered monitor system (amplified speakers).

1. Press the Global key (it will light).
2. Press the [▲] cursor key to change the display to read "Clock."
3. Turn the dial of each device to set the ESX-1 to "Int" and the ES-1 to "Ext."
4. Press the ESX-1's PLAY/PAUSE key to start the pattern or song (the PLAY/PAUSE key will light). The ES-1 will play in sync with the ESX-1's tempo.

 If the MIDI channel of one of the ESX-1's parts matches the ES-1's MIDI channel, the ES-1 may sound in unison with the ESX-1. If this occurs, change the MIDI channel settings so that they do not conflict.

To make the ESX-1 and ES-1 play back the identically-numbered pattern in synchronization

1. Press the Global key (it will light).
2. Press the [▲] key to change the display to read "Clock."
3. Set the ESX-1 to "Int" (master) and the ES-1 to "Ext" (slave).
4. Set the ESX-1's keyboard part 1 and the ES-1 to the same MIDI channel.
For example, set both to "01".
5. Set the ESX-1's MIDI Filter parameter "P" to "O".
Set the ESX-1's MIDI Filter parameter "N" to "X".

About the MIDI messages used for synchronization

The MIDI messages used for synchronization (Realtime Messages) are Timing Clock [F8], Start [FA], Continue [FB], and Stop [FC].

Only one master device (e.g., sequencer) in the connected system can transmit these messages; the remaining slaved devices (sequencers) will receive these messages.

Timing Clock

The slave device calculates its own tempo according to the Timing Clock messages it receives from the master device. Twenty-four Timing Clock messages are transmitted during each quarter note.

If you set the ESX-1's MIDI mode CLOCK setting to "Auto," it will act as a slave (it will receive Realtime Messages). However if the ESX-1 is not receiving any Timing Clock messages, it will operate according to its own internal clock even with the "Auto" setting.

Start

The Start message tells the slave device when to begin playing. A Start message is transmitted when you press the PLAY/PAUSE key. When a slave device receives the Start message, it will begin playing from the beginning in synchronization with the incoming Timing Clock messages.

Continue, Stop

If you press the START/PAUSE key on the master device while it is paused, the master device will transmit a Continue message. When a slave device receives the Continue message, it will resume playback from the location at which it is currently stopped. If you press the STOP key during playback, the master will transmit a Stop message. When a slave device receives the Stop message, it will stop playback.



About synchronization in Song mode

In Song mode, the ESX-1 will also transmit Song Select and Song Position Pointer messages.

Song Select

When you switch songs, a Song Select message [F3, ss] (ss: song number) will be transmitted. On the ESX-1 you can select 64 songs. If the ESX-1 receives a Song Select message when in Song mode, it will switch songs.

You can use the Global mode MIDI Filter settings to enable/disable transmission and reception of Song Select messages.

Song Position Pointer

If you change the song position of the master device (clock set to "Int") while the song is stopped, it will transmit a Song Position Pointer message [F2, pp, pp] (pp, pp: lower and upper bytes of the value; pp: the number of MIDI beats from the beginning (number of timing clocks / 6)).

The Song Position Pointer message indicates the location at which the sequencer is currently stopped. If the slave (clock set to "Ext" or "Auto") receives a Song Position Pointer message in Song mode, it will change its own current location (i.e., the location at which its currently selected song is stopped) to the same location as the master.

On the ESX-1 however, the length will differ for each pattern, so the master and slave will not necessarily be located at the same position.

If you change the position on the master device to make it transmit a Song Position Pointer message, and then press its START/PAUSE key, a Continue message (or a Start message if the position is 001) will be transmitted, and the song will begin playing.

If a slave receives a Continue message, it will begin playback (in synchronization to the incoming Timing Clock) from the position indicated by the Song Position Pointer message it received. This lets you playback in synchronization from the desired location in the song, just as when playing back in synchronization from the beginning.



Song Position Pointer messages are not transmitted when you use the dial or the select keys to fast-forward or rewind during playback.



Be aware that if you perform such operations during synchronized playback, synchronization will be lost. Also, the playback location will not change if a Song Position Pointer message is received during playback.

Editing sounds

By using MIDI exclusive data dumps you can edit all patterns or one pattern at a time. You can also use NRPN messages to edit the knobs that are valid for each part.

Editing via NRPN

NRPN (Non-Registered Parameter Number) messages are a type of message that can be freely used by any manufacturer to control the assigned parameter number. On the ESX-1, you can use control change messages to edit keyboard part parameters or effect section parameters, but NRPN messages are assigned to the drum parts.

To edit a drum part parameter, use NRPN (LSB) [Bn, 62, rr] and NRPN (MSB) [Bn, 63, mm] (control change #98 and 99) (rr, mm: lower and upper bytes of the parameter number) to select the desired parameter. Then use data entry (MSB) [Bn, 06, mm] and data entry (LSB) [Bn, 26, vv] (control change #6 and 38) (mm, vv: upper and lower bytes of the value, together expressing a range of 16,384 steps) to set the value.

About system exclusive messages

Since the way in which system exclusive messages are used is left completely up to the manufacturer, these messages are used mainly to transmit or receive sound parameters or editing data that is specific to a particular device. The ESX-1's system exclusive message format is [F0, 42, 3n, 71, ff, ... F7].

F0: exclusive status
42: Korg ID
3n: [n=0~F] global MIDI channel 1~16
71: the ESX-1's model ID
ff: function ID (type of message)
...
F7: end of exclusive



Some USB-MIDI interfaces are unable to transmit or receive the ESX-1's MIDI exclusive messages.

Universal system exclusive messages

There is a special category of system exclusive message whose uses are publicly defined. These are called Universal System Exclusive messages.

The ESX-1 implements the following Universal System Exclusive messages.

—Inquiry Message Request [F0, 7E, nn, 06, 01, F7]

—Inquiry Message [F7, 7E, nn, 06, 02, (9 bytes), F7]

When the ESX-1 receives an Inquiry Message Request, it will respond by transmitting an Inquiry Message with the meaning of 'I am a Korg ESX-1 with system version ...'



If you wish to obtain the "MIDI Implementation" which includes information on the MIDI Exclusive format, please contact Korg distributor.

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8. Appendix

Troubleshooting

Nothing appears in the display when I press the POWER switch

- [] Is the AC/AC power supply connected?
- [] Is the AC/AC power supply plugged into the wall?

No sound

- [] Are your amp, mixer, or headphones connected to the correct jacks? (Can you play patterns? If so, the connections are OK.)
- [] Are you amp and/or mixer turned on, and set correctly?
- [] Is the ESX-1's master volume knob turned up?

Sound does not stop

- [] If for some reason the sound will not stop, you can switch between Pattern mode and Song mode to stop the sound.
- [] If a note is "stuck" when you are playing the ESX-1 via MIDI, hold down the SHIFT key and press the STOP/CANCEL key to perform a MIDI Reset.
- [] When playing a pattern, the selected pattern will continue repeating. When you have finished listening to it, press the STOP/CANCEL key. (p.35)

The sound or operation is not the way I edited it

- [] Did you execute the Write operation after editing? (p.34, 74, 83, 84) After editing, you must execute the Write operation before switching songs or patterns, or before turning the power off.

Can't control the ESX-1 via MIDI

- [] Is the MIDI cable connected correctly?

— When playing the ESX-1 from an external device

- [] Is the ESX-1 set to receive MIDI data on the channel that the external device is transmitting? (p.90)
- [] Is the Global mode MIDI Channel parameter set to the channel you want to use? (p.90)
- [] Are the Global mode MIDI Filter settings appropriate? (p.91)

— When playing an external device from the ESX-1

- [] Is the ESX-1 set to transmit MIDI data on the channel that the external device is receiving? (p.90)
- [] Are the Global mode MIDI Filter settings appropriate? (p.91)

Can't write a pattern or song

- [] The Global mode Memory Protect setting may be turned "On." (p.85)

Pressing the step keys doesn't play the specified sound

- [] Did you perform the Write operation after editing the sound of the part?
- [] Is the Keyboard switch turned on?
- [] Is a motion sequencer operating? (p.68)

Can't use SmartMedia™

- [] Could the SmartMedia™ have been formatted on a device other than the ESX-1?
 - If the SmartMedia™ was formatted on a computer or digital camera, you must format it on the ESX-1 before use. (p.87)
- [] Is the SmartMedia™ inserted correctly?
 - Turn off the power and re-insert the SmartMedia™ correctly. (p.84)

Sound is distorted

- [] Is the TUBE GAIN knob set to the minimum position?

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Error messages

If an error message is displayed, you can clear it by pressing the STOP/CANCEL key.

CardBrk

The SmartMedia is damaged.

- Make a backup of the files that are on the SmartMedia card. On the ESX-1, Write/Delete operations for files on the damaged SmartMedia will be disabled. If the same error occurs even after you execute Format on the card, please replace the SmartMedia.

Card Fmt

The SmartMedia™ could not be read.

- Use your computer or other device to back up the data on the SmartMedia™ card. Then format the SmartMedia™ on the ESX-1, rewrite the desired files to it, and access it once again from the ESX-1.

CardFull

There is insufficient free space in the ESX-1 or on SmartMedia™.

- If you want to save data, you must delete unneeded files from the SmartMedia™ card to create sufficient free space. Then write or save the data. The SmartMedia™ must have a minimum of approximately 2 MB of free space in order to save ESX-1 data.

EventOvr

You have exceeded the maximum number of events that can be recorded in a song.

- Delete unneeded song event data.

FileDelt

An error occurred while deleting a file from SmartMedia.

- Try the operation once again.

FileLoad

An error occurred while loading a file from SmartMedia™.

- Try the operation once again.

FileName

When saving to SmartMedia, an identically-named folder already exists.

- Either use your computer to delete the folder from the SmartMedia, or change the filename on the ESX-1 and save it again.

FileSave

An error occurred while saving to SmartMedia™.

- Try the operation once again.

Mem Full

Memory was not sufficient when you attempted to load a sample from SmartMedia or copy a sample inside the ESX-1.

- Delete unneeded files to increase the amount of free space.

MotSqFul

The motion sequence cannot be recorded.

- On the ESX-1, you can record a maximum of 24 motion sequences for each pattern.
Use CLEAR MOTION (⇒p.69) to delete unneeded motion sequences, and then input your data once again.

NoFiles

The SmartMedia™ does not contain any files that the ESX-1 can recognize.

- The ESX-1 can load only .EMX files.

Protect

You attempted to write the data into memory when the data protect setting was turned on.

- In Global mode, turn memory protect off.
If the write protect label is affixed to the SmartMedia™, remove it.

SongEvnt

While writing a song to a different-numbered song, you exceeded the maximum number of events that can be recorded.

- Delete unneeded event data to free up more memory space.

Write

The data could not be written.

- Try the writing operation once again.

Initializing the user data


This operation will erase all patterns and song data.

When you initialize the user data, all the patterns, songs, and samples you created will be erased. If you want keep the data you created, save your data on SmartMedia before you initialize.

1. While holding down the SOLO key and WRITE/RENAME key, turn on the power.
2. The display will indicate "ALL Init," and the PLAY/PAUSE key will blink.
3. To execute the Initialize operation, press the blinking PLAY/PAUSE key. To cancel without initializing, press the STOP/CANCEL key.

It will take about 30 seconds for initialization to be completed.

When loading is completed, the ESX-1 will be restored to its initial state, and after several seconds the display will indicate pattern number "A.01" and enter Pattern mode.

 Never turn off the power while the ESX-1 is being initialized.

Specifications

Number of parts:	16 parts 2 keyboard parts, 9 drum parts, 1 drum accent part, 1 stretch part, 1 slice part, 1 audio in part, 1 accent part
Sample capacity:	384 (256 monaural, 128 stereo) or a maximum of 285 seconds (monaural)
Sampling frequency:	44.1 kHz
Memory capacity:	256 patterns, 64 songs
Effects:	Three processors x 16 types
Sequences:	Maximum of 128 steps per part.
Motion sequences:	Total of 24 freely assignable sequences totaling
Song:	Maximum of 256 patterns per song. Maximum 20,000 events for event recording.
Connectors**:	
PHONES	Phone jack: stereo Maximum output level: 16 mW/33-ohms or more / TUBE GAIN = min Output impedance: 33 ohms
OUTPUT (L/MONO, R)	Phone jacks: mono x 2 Maximum output level: 0 dBu or more / TUBE GAIN = min Output impedance: 220-ohm (110-ohm at MONO) Load impedance: 10 k-ohms or more
INDV.OUT (3, 4)	Phone jacks: mono x 2 Maximum output level: +7 dBu or more Output impedance: 220-ohm Load impedance: 10 k-ohms or more
INPUT (AUDIO IN)	Phone jack: stereo (unbalanced) Input impedance: 10 k-ohms (at LINE) / 910-ohm (at MIC) Maximum input level (at LINE): -20dBu / AUDIO IN LEVEL = max (at MIC): -52 dBu / AUDIO IN LEVEL = max Source impedance: 600 ohms
MIDI (IN, OUT, THRU)	5-pin DIN
SmartMedia™:	4-128 MB, 3V (3.3V)
Vacuum tube:	12AX7/ECC83 x 2
Power supply:	AC9V (included AC/AC power supply)
Power consumption:	23 W
Dimensions:	358 (W) x 256 (D) x 62 (H) mm (including the rubber feet)
Weight:	3.1 kg

** Analog specifications such as output levels are measured at the point where the vacuum tubes have stabilized after power-on. These values may change due to variations in the environmental temperature.

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Patrn name list

All Patterns and All Songs —©2003 KORG Inc. All rights reserved.

No.	Name	Programmer	Tempo	Length
A01	House1	KEMMEI	120	8
A02	House2	KEMMEI	128	8
A03	House3	KEMMEI	120	8
A04	House4	KEMMEI	125	8
A05	House5	KEMMEI	122	8
A06	House6	KEMMEI	126	4
A07	House7	KEMMEI	130	8
A08	House8	KEMMEI	127	8
A09	House9	KEMMEI	126	8
A10	House10	Tomoki Hirata	128	8
A11	House11	Oliver Munyak	125	8
A12	House12	KEMMEI	130	8
A13	House13	Doug Beck	130	8
A14	Garage1	Oliver Munyak	126	8
A15	Garage2	Tomoki Hirata	128	8
A16	Garage3	KEMMEI	125	4
A17	Garage4	Tomoki Hirata	132	4
A18	R&B1	Michael Scherchen	120	8
A19	R&B2	Michael Scherchen	100	4
A20	R&B3	Michael Scherchen	100	4
A21	R&B4	Michael Scherchen	106	8
A22	R&B5	Michael Scherchen	110	8
A23	R&B6	Michael Scherchen	89	4
A24	R&B7	Michael Scherchen	109	4
A25	R&B8	Michael Scherchen	106	8
A26	R&B9	Michael Scherchen	92	4
A27	R&B10	Cory Tyson	85	8
A28	R&B11	Cory Tyson	86	4
A29	R&B12	Ian Fisher	80	4
A30	R&B13	Ian Fisher	106	8
A31	R&B14	Ian Fisher	104	8
A32	R&B15	Ian Fisher	102	8
A33	R&B16	Doug Beck	100	8
A34	HipHop1	Ian Fisher	105	8
A35	HipHop2	Ian Fisher	98	8
A36	HipHop3	Ian Fisher	93	8
A37	HipHop4	Cory Tyson	99	4
A38	HipHop5	Ian Fisher	97	4
A39	HipHop6	Ian Fisher	112	8
A40	HipHop7	Michael Scherchen	106	8
A41	HipHop8	Michael Scherchen	106	4
A42	HipHop9	Cory Tyson	88	8
A43	HipHop10	Cory Tyson	85	4
A44	DeepHs1	Oliver Munyak	124	8
A45	DeepHs2	Oliver Munyak	119	8
A46	DeepHs3	Oliver Munyak	127	4
A47	DeepHs4	Oliver Munyak	126	4
A48	DeepHs5	Oliver Munyak	126	8
A49	DeepHs6	KEMMEI	128	8
A50	HardHs1	KORG	129	8
A51	HardHs2	Tomoki Hirata	129	8
A52	HardHs3	Doug Beck	135	8
A53	HardHs4	Doug Beck	137	8
A54	2Step	Tomoki Hirata	135	8
A55	Breaks1	KORG	137	8
A56	Breaks2	KORG	134	8
A57	BigBeat1	KEMMEI	169	8
A58	BigBeat2	KEMMEI	120	8
A59	BigBeat3	KEMMEI	118	8
A60	BigBeat4	KEMMEI	125	8
A61	BigBeat5	KEMMEI	120	4
A62	BigBeat6	KEMMEI	120	8
A63	BigBeat7	KEMMEI	126	4
A64	BigBeat8	KEMMEI	141	4

No.	Name	Programmer	Tempo	Length
B01	BigBeat9	KEMMEI	133	8
B02	D&B1	KORG	171	8
B03	D&B2	KORG	173	8
B04	D&B3	KORG	173	8
B05	D&B4	KORG	173	8
B06	D&B5	KORG	174	8
B07	D&B6	KORG	173	8
B08	D&B7	KORG	174	8
B09	D&B8	Oliver Munyak	173	8
B10	Jungle	KORG	170	8
B11	Danceh1	Cory Tyson	100	4
B12	Danceh2	Cory Tyson	94	2
B13	Danceh3	Cory Tyson	52	4
B14	Danceh4	Cory Tyson	98	4
B15	Danceh5	Ian Fisher	92	8
B16	Reggae1	Cory Tyson	79	4
B17	Reggae2	Ian Fisher	70	8
B18	FJazz1	KEMMEI	92	4
B19	FJazz2	KEMMEI	97	8
B20	FJazz3	KEMMEI	120	8
B21	FJazz4	KEMMEI	100	8
B22	FJazz5	KEMMEI	118	8
B23	FJazz6	KEMMEI	115	4
B24	FJazz7	KEMMEI	120	8
B25	FJazz8	KEMMEI	153	4
B26	FJazz9	KEMMEI	116	4
B27	FJazz10	Oliver Munyak	117	8
B28	FJazz11	Oliver Munyak	117	8
B29	FJazz12	KORG	120	8
B30	Electro1	Oliver Munyak	124	8
B31	Electro2	Tomoki Hirata	114	8
B32	Electro3	KEMMEI	120	4
B33	Electro4	KEMMEI	120	8
B34	Techno1	Oliver Munyak	130	8
B35	Techno2	KORG	130	8
B36	Techno3	KORG	135	8
B37	Techno4	KORG	134	8
B38	Techno5	Doug Beck	140	8
B39	Techno6	KEMMEI	130	8
B40	Techno7	KEMMEI	135	8
B41	Minimal1	KORG	143	8
B42	Minimal2	KORG	142	8
B43	Minimal3	KORG	147	8
B44	Trance1	KORG	140	8
B45	Trance2	KORG	137	8
B46	Trance3	KEMMEI	140	8
B47	Trance4	KEMMEI	132	4
B48	Trance5	Doug Beck	132	8
B49	IDM1	KORG	94	8
B50	IDM2	KEMMEI	120	8
B51	IDM3	KEMMEI	96	4
B52	IDM4	KEMMEI	126	4
B53	IDM5	KEMMEI	135	8
B54	IDM6	KEMMEI	120	8
B55	BreakBt1	KORG	113	8
B56	BreakBt2	KEMMEI	95	8
B57	BreakBt3	KORG	89	8
B58	DownTmp1	Tomoki Hirata	78	8
B59	DownTmp2	Ian Fisher	62	4
B60	DownTmp3	Tomoki Hirata	73	4
B61	DownTmp4	Tomoki Hirata	89	4
B62	DownTmp5	Tomoki Hirata	84	4
B63	Calypso	Cory Tyson	118	4
B64	Zouk	Cory Tyson	111	8

Sample name list

No.	Name
0	BD-1
1	BD-2
2	BD-3
3	BD-4
4	BD-5
5	BD-6
6	BD-7
7	BD-8
8	BD-9
9	BD-10
10	BD-11
11	BD-12
12	BD-13
13	BD-14
14	BD-15
15	BD-16
16	BD-17
17	BD-18
18	BD-19
19	BD-20
20	BD-21
21	SD-1
22	SD-2
23	SD-3
24	SD-4
25	SD-5
26	SD-6
27	SD-7
28	SD-8
29	SD-9
30	SD-10
31	SD-11
32	SD-12
33	SD-13
34	SD-14
35	SD-15
36	SD-16
37	SD-17
38	SD-18
39	SD-19
40	SD-20
41	SD-21
42	SD-22
43	SD-23
44	SD-24
45	Rim-1
46	Rim-2
47	Rim-3
48	Clap-1
49	Clap-2
50	Clap-3
51	Clap-4
52	Clap-5
53	Clap-6
54	HH-1C
55	HH-1O
56	HH-2C
57	HH-2O
58	HH-3C
59	HH-3O
60	HH-4C
61	HH-4O
62	HH-5C
63	HH-5O

No.	Name
64	HH-6C
65	HH-6O
66	HH-7C
67	HH-7O
68	Ride-1
69	Ride-2
70	Ride-3
71	Ride-4
72	Ride-5
73	Crash-1
74	Crash-2
75	SplasCym
76	Tom-1
77	Tom-2
78	Tom-3
79	Tom-4
80	BongoHi
81	BongoLo
82	CongaSyn
83	CongaHi
84	CongaLo1
85	CongaLo2
86	Timbales
87	Claves
88	CowbelSy
89	Agogo
90	Triangle
91	Tambouri
92	JunkPerc
93	Shaker
94	Guiro
95	SynPerc
96	WBI-DDD
97	Djembe
98	Udu
99	Zap
100	Scratch1
101	Scratch2
102	SFX-1
103	SFX-2
104	SFX-3
105	SFX-4
106	SFX-5
107	Voice-1
108	Voice-2
109	Voice-3
110	Voice-4
111	Voice-5
112	Voice-6
113	Voice-7
114	Voice-8
115	Voice-9
116	Voice-10
117	Voice-11
118	Voice-12
119	Voice-13
120	Voice-14
121	Voice-15
122	Voice-16
123	Voice-17
124	Voice-18
125	Voice-19
126	Voice-20
127	Voice-21

No.	Name
128	Voice-22
129	Voice-23
130	Clav
131	M1-Organ
132	Flute
133	Trumpet
134	Strings
135	Pizzicat
136	F.Guitar
137	MuteGtr
138	Ac.Bass
139	FingerBs
140	M1PickBs
141	SlapBass
142	Saw
143	BoostSaw
144	Square
145	Triangle
146	SinKick
147	SynSin
148	OctBass
149	NuBass
150	RingBass
151	5thStab
152	UniSaw
153	Lore
154	EPChord
155	OrgGliss
156	PowerChd
157	StrHit-1
158	StrHit-2
159	SynHit-1
160	SynHit-2
161	SynHit-3
162	SynHit-4
163	SynHit-5
164	SynHit-6
165	DrumLP-1
166	DrumLP-2
167	DrumLP-3
168	DrumLP-4
169	DrumLP-5
170	CongaLP
171	LatinLP
172	TablaLP1
173	TablaLP2
174	IndiaLP
175	PercLP-1
176	PercLP-2
177	PercLP-3
178	PercLP-4
179	PercLP-5
180	PercLP-6
181	PercLP-7
182	PianoLP
183	EPLP
184	EPPhrase
185	ClavLP-1
186	ClavLP-2
187	OrgPhras
188	OrganLP
189	SynLP-1
190	SynLP-2
191	GtrLP-1

No.	Name
192	GtrLP-2
193	GtrLP-3
194	GtrLP-4
195	BassLP

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Knob/Sw - MIDI List

PART	MIDI CH(INITIAL)	PARAMETER	CC(INITIAL)	NRPN	MOTION SEQ	SONG EVENT
KEYBOARD1, 2	1(GLOBAL)=CH1 2=CH2	SAMPLE		NRPN	X	X
		SLICE NO.		NRPN	X	X
		START POINT	CC#18		O	O
		REVERSE	CC#19		O	O
		GLIDE	CC#5		O	O
		FILTER TYPE	CC#83		O	O
		FILTER CUTOFF	CC#74		O	O
		FILTER RESONANCE	CC#71		O	O
		FILTER EG INT	CC#79		O	O
		LEVEL	CC#7		O	O
		PAN	CC#10		O	O
		EG TIME	CC#75		O	O
		AMP EG	CC#86		O	O
		ROLL	CC#85		O	O
		FX SEND	CC#91		O	O
		FX SELECT	CC#81		O	O
		MOD TYPE	CC#87		O	O
		MOD DEPTH	CC#90		O	O
		MOD SPEED	CC#89		O	O
		MOD DEST	CC#88		O	O
MOD BPM SYNC	CC#82		O	O		
PART MOTION SEQ SW	CC#80		-	O		
DRUM1-7B STRETCH1, 2 SLICE AUDIO IN (*NOT AUDIO IN) (**NOT STRETCH1, 2 SLICE)	ALL=CH10	SAMPLE*		NRPN	X	X
		PITCH*		NRPN	O	O
		LEVEL		NRPN	O	O
		PAN		NRPN	O	O
		EG TIME		NRPN	O	O
		AMP EG		NRPN	O	O
		ROLL		NRPN	O	O
		FX SEND		NRPN	O	O
		FX SELECT		NRPN	O	O
		MOD TYPE		NRPN	O	O
		MOD DEPTH		NRPN	O	O
		MOD SPEED		NRPN	O	O
		MOD DEST		NRPN	O	O
		MOD BPM SYNC		NRPN	O	O
		SLICE NO.**		NRPN	X	X
		START POINT*		NRPN	O	O
		REVERSE*		NRPN	O	O
PART MOTION SEQ SW		NRPN	-	O		
ACCENT	GLOBAL(KBD1)=CH1	LEVEL		NRPN	O	O
		PART MOTION SEQ SW		NRPN	-	O
FX1	GLOBAL(KBD1)=CH1	FX TYPE	CC#12		X	O
		FX EDIT1	CC#92		O	O
		FX EDIT2	CC#93		O	O
		FX MOTION SEQ SW	CC#20		-	O
FX2	GLOBAL(KBD1)=CH1	FX TYPE	CC#13		X	O
		FX EDIT1	CC#94		O	O
		FX EDIT2	CC#95		O	O
		FX MOTION SEQ SW	CC#21		-	O
FX3	GLOBAL(KBD1)=CH1	FX TYPE	CC#24		X	O
		FX EDIT1	CC#25		O	O
		FX EDIT2	CC#26		O	O
		FX MOTION SEQ SW	CC#22		-	O
COMMON	GLOBAL(KBD1)=CH1	TEMPO			X	O
		SWING		NRPN	X	X
		ROLL TYPE		NRPN	X	X
		BEAT			X	X
		LENGTH			X	X
		LAST STEP			X	X
		FX CHAIN	CC#23		X	O
		MUTE STATUS		NRPN	X	O
		ACCENT STATUS			X	X
		SWING STATUS			X	X
OUTPUT BUS STATUS			X	X		

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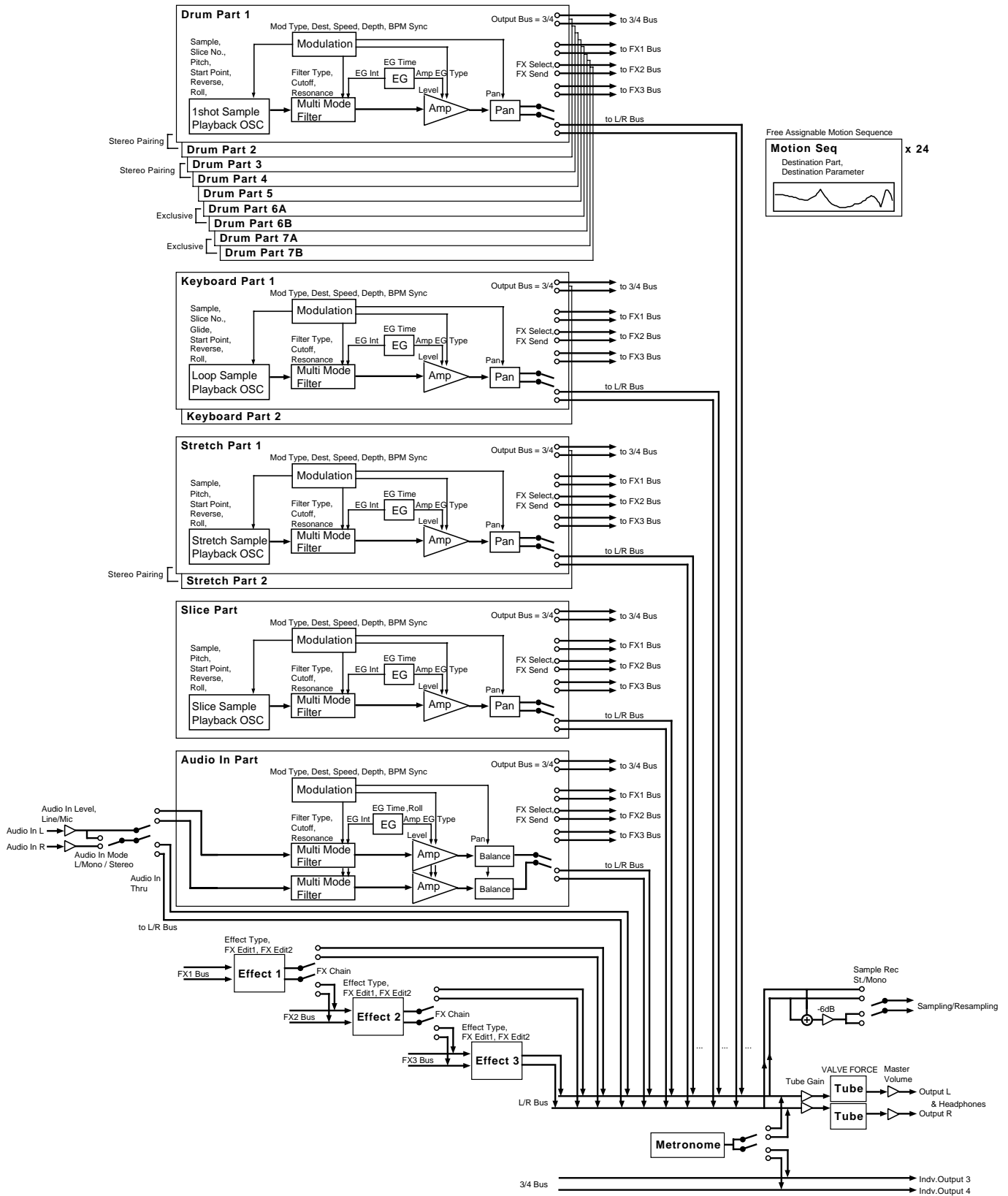
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Block diagram



Function ...		Transmitted	Recognized	Remarks
Basic channel	Default Changed	1 – 16 1 – 16	1 – 16 1 – 16	Memorized
Mode	Default Messages Altered	×	3 ×	
Note number :	True voice	0– 127	0– 127 0– 127	
Velocity	Note ON Note OFF	○ 9n, v=30– 127 ○ 64	○ 9n, v=1– 127	Transmitted velocity is specified by Accent level *N *N
After Touch	Polyphonic Channel	× ×	× ×	
Pitch Bender		×	○	*C
Control Change	0,32 98, 99 8 121 35 0–95	○ ○ ○ × ○ ○	○ ○ ○ ○ ○ ○	Bank Select(MSB, LSB) *P NRPN(LSB, MSB) *C Data Entry(MSB) *C Reset All Controllers Data Entry(MSB) *C Panel Control(Knob, SW) *3*C
Program Change :	True#	○ 0 – 127 *****	○ 0 – 127 0 – 127	Transmitted/received in Pattern mode *P
System Exclusive		○	○	Can always be transmitted/received in the MIDI Dump page *2 *E
System Common	: Song Pos : Song Sel : Tune	○ ○ 0 – 63 ×	○ ○ 0 – 63 ×	Transmitted/received in Song mode *1 *P
System Realtime	: Clock : Commands	○ ○	○ ○	*1 *1
Aux Messages	: Local ON/OFF : All Notes OFF : Active Sense : Reset	× × ○ ×	× ○ ○ ×	
Notes	*P, *C, *E, *N: Sent and received when MIDI mode MIDI Filter (P, C, E, N) respectively are set to "O" *1: Sent but not received when Global mode Clock is "Int." When set to "Ext,"received but not sent. *2: In addition to Korg exclusive messages, also responds to Inquiry messages. *3: Contorol Change Nummbar is specified by MIDI mode "#CC ASSIGN."			

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

○ : Yes
× : No

Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.

IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

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