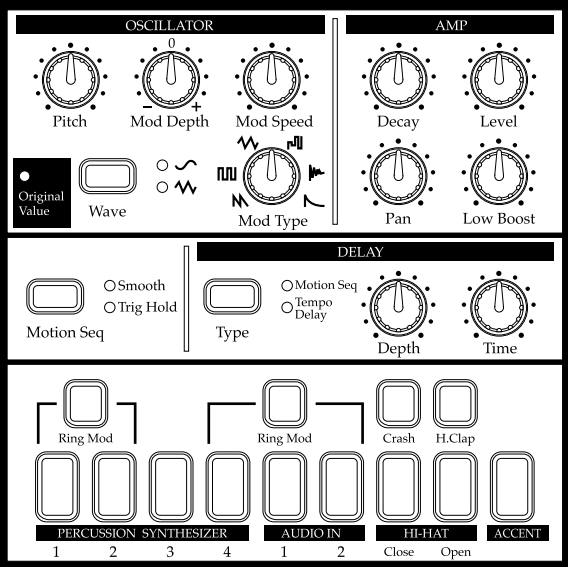
ELECTRIBE R

RHYTHM SYNTHESIZER



ER-1
Owner's Manual

Thank you purchasing the Korg ELECTRIBE·R ER-1. In order to enjoy long and trouble-free use, please read this manual carefully and use the instrument correctly.

KORG

Ⓔ②

To ensure long, trouble-free operation, please read this manual carefully.

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

Power supply ⊕◉⊖

Please connect the designated AC adaptor 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

This product contains a microcomputer. 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 adaptor from the wall outlet. Then contact your nearest Korg dealer or the store where the equipment was purchased.

THE FCC REGULATION WARNING

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/R ER-1.
The Electribe/R ER-1 is a unique and easy-to-use rhythm instrument that uses DSP synthesis technology to help anyone from beginners to hard-core users to produce truly original music.
By using the front panel knobs and keys, you can create analog percussion sounds intuitively, and easily create rhythm patterns using these sounds.
The ER-1 is the ideal tool for the musician, DJ, sound creator, or desktop-music user who is looking for originality in their music.

Main features

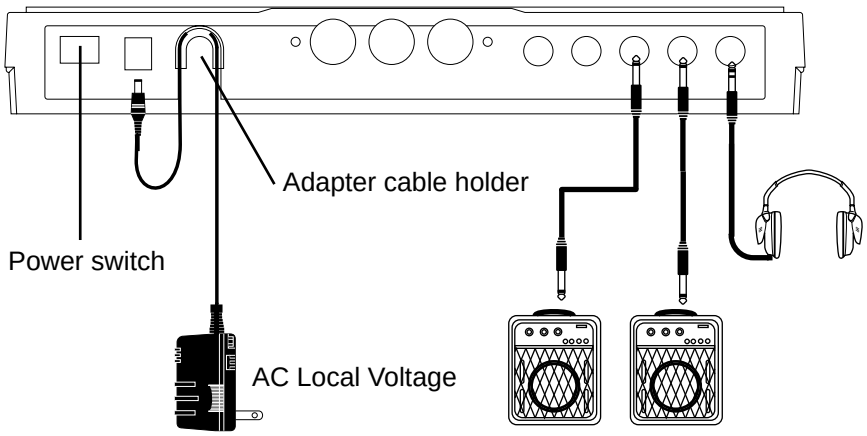
- The ER-1 is a simple, analog-feeling percussion synthesizer with a four-part percussion synthesizer, two audio input parts, four PCM sound parts, and an accent part.
- By combining percussion sound with audio input (external input) rhythms, the ER-1 gives you the expressive possibilities of a completely new type of rhythm machine.
- The Motion Sequence function lets you record and loop knob movements, and these patterns can be recorded independently for each part.
- Sixteen step grid input is featured --- the ideal way to input rhythms. It's also easy to record in realtime.
- You can quickly modify sounds or rhythm patterns to change your performance while you play.
- Sounds you create and up to 256 original rhythm patterns (each up to 64 steps long) can be stored in memory.
- Up to sixteen songs can be created by combining multiple patterns and adding knob movements etc. (event data), and stored in memory.
- Delay and low-boost effects are provided.
- Pattern Set Play lets you register sixty-four patterns in the sixteen step keys, and switch patterns as you perform.
- Tap tempo and MIDI Clock can be used to synchronize the ER-1's performance with an external sequencer or turntable etc.
- The ER-1 can be controlled from an external sequencer or keyboard etc., and used as a MIDI expansion tone generator.
- The MIDI Dump function lets you save data on a computer or external sequencer etc.

About the data you create on the ER-1

Patterns and songs that you create on the ER-1 by editing will return to their un-edited state if you select a different pattern or song, or turn off the power before performing the Write operation.
If you wish to save an edited pattern, song, or global data, be sure to perform the Write operation.
Even after Writing the edited data, it is still possible to restore all songs and patterns etc. to the factory settings. (Refer to p.44 "Restoring the factory setting data.")

Make connections and play!

Example connections



Preparing to play

Be sure to turn off the power before making connections. Careless operation may damage your speaker system or cause malfunctions.

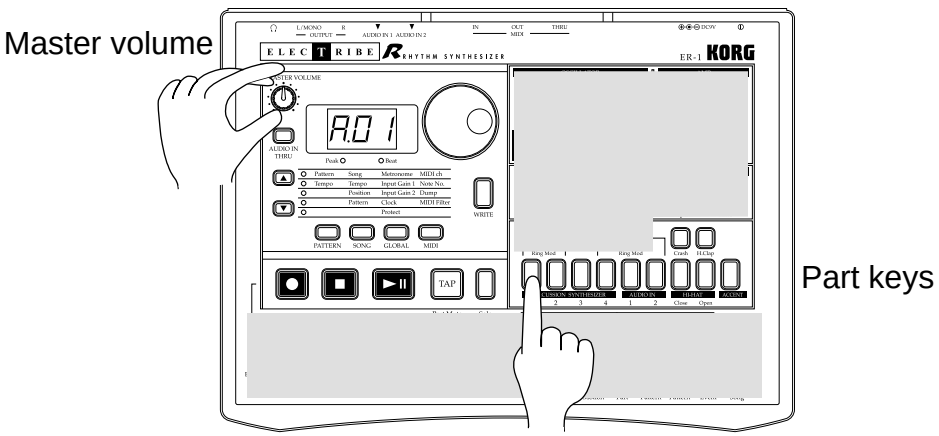
1. Connect the included AC adapter to the DC 9V jack, and plug the adapter into an AC outlet.

As shown in the above diagram, hook the AC adapter cable around the adapter cable holder. When removing the cable from the holder, do not use excessive force.

2. Connect one end of your audio cables to the line out jacks of the ER-1 (L/MONO, R), and connect the other end to your mixer or powered monitor speakers (amplified speakers) etc. If you will be listening in mono, use the L/MONO jack. To take full advantage of the ER-1's sound quality, we recommend that you listen in stereo.

3. If you will be using headphones, connect them to the headphone jack.

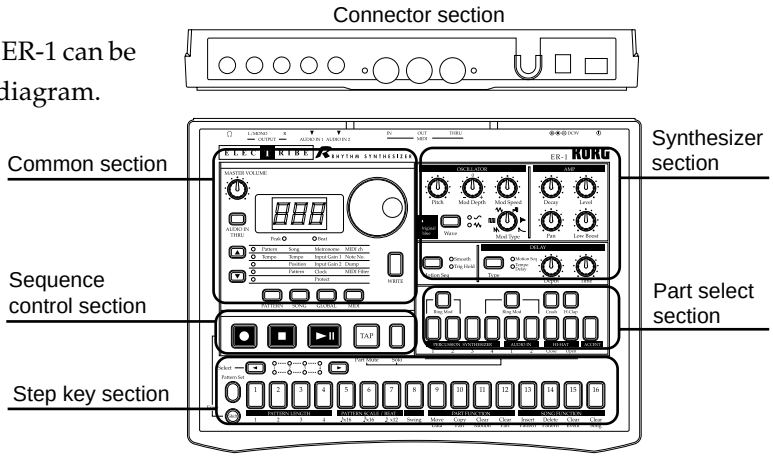
The output from the line out jacks will not be switched off even if headphones are plugged in.



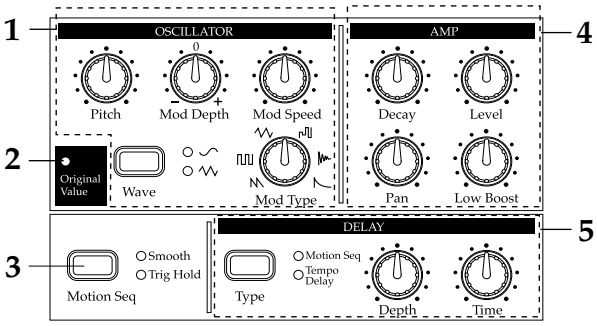
4. When you have finished making connections, turn on the power. Slightly raise the master volume of the ER-1, and strike the part keys (PERCUSSION SYNTHESIZER 1...4) to check whether connections have been made correctly. Use the master volume of the ER-1 and the gain and fader controls of your mixer or powered monitor system to adjust the volume to an appropriate level.

2. Front and rear panel

The controls and other parts of the ER-1 can be broadly grouped as shown in the diagram.



Synthesizer section



1. OSCILLATOR

Here you can control the waveform and the pitch.

- **Wave**: Select the basic waveform.
- **Pitch**: Specify the basic pitch.
- **Mod Type** (modulation type): Select the type of pitch modulation.
- **Mod Depth** (modulation depth): Specify the depth of pitch modulation.
- **Mod Speed** (modulation speed): Specify the speed of pitch modulation.

2. Original Value LED

This will light when the knob or control you are currently moving reaches the value of the original saved sound of the pattern.

3. Motion Seq (motion sequence)

This allows you to record knob movements. Each time you press this key, the setting will alternate between Off (dark), **Smooth**, and **Trig Hold**.

4. AMP

Here you can control the volume and panning..

- **Decay**: Specify the decay speed. For an audio part, this sets the gate time.
- **Pan**: Specify the stereo location of the sound.
- **Level**: Adjust the level. For the accent part, this adjusts the accent level.
- **Low Boost**: This emphasizes the low frequencies.

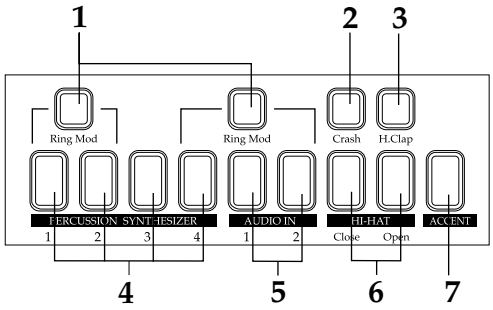
Depending on the settings of Level and other parameters, raising the Low Boost may damage your speakers or headphones etc., so please use appropriate caution.

5. DELAY

Here you can control the delay effect.

- **Depth** (delay depth): Adjust the volume of the delay.
- **Time** (delay time): Adjust the delay time.
- **Type**: Select the type of delay. Each time you press this key, the setting will alternate between Normal (dark), **Motion Seq**, and **Tempo Delay**.

Part Select section



1. Ring Mod (ring modulation key)
This key switches modulation between parts (ring modulation) on/off.

2. Crash (crash part key)
This key selects the cymbal part. When you press this key, the crash cymbal will sound.

3. H.Clap (handclap part key)
This key selects the handclap part. When you press this key, the handclap will sound.

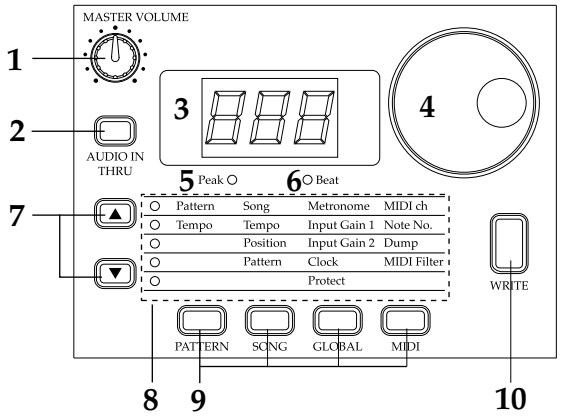
4. PERCUSSION SYNTHESIZER 1...4 (percussion synthesizer part keys)
These keys select the percussion synthesizer parts. When you press one of these keys, a percussion synthesizer part will sound.

5. AUDIO IN 1, 2 (audio in part keys)
These keys select the audio in parts. When you press one of these keys, an external audio input will be heard.

6. HI-HAT [Close, Open] (hi-hat part key)
This key selects the hi-hat part. When you press this key, the hi-hat will sound.

7. ACCENT (accent part key)
This key selects the accent part.

Common section



1. MASTER VOLUME
This knob adjusts the volume that is output from the line out jacks and the headphone jacks.

2. AUDIO IN THRU
This key allows the external audio input to be output directly from the line out jacks and the headphone jack.
When this key is on, settings of the audio input part other than pan and level will be ignored.

3. Display
This shows the value of the currently selected parameter, and various messages.

4. Dial
Use this to modify the value shown in the display.

5. Peak LED
This indicates the peak level for the input signal from the audio in jacks. Adjust the output level of your external device so that the LED lights only at the maximum level.

6. Beat LED
This will blink at quarter-note intervals to indicate the tempo.

7. [▲][▼] (cursor keys)
In each mode, use these keys to select parameters from the matrix shown in the display.

8. Matrix
The parameters that will appear in the display are listed here for each mode. Use the cursor keys to make the desired parameter select LED light.

9. Mode keys

Use these keys to move to the desired mode: Pattern, Song, Global, or MIDI.During playback you can move to Global mode, but not to MIDI mode.

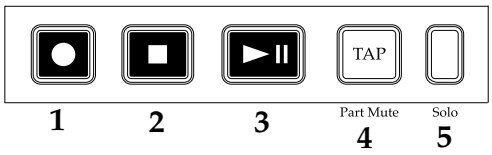
10. WRITE key

Use this key when you wish to save settings that you modified in Pattern, Song, Global, or MIDI mode, or to save Pattern Set data.

Sequence Control section

1. Rec key

Use this key to record rhythms and movements of the knobs etc. If you press this key during recording, recording will end, and playback will continue.



2. Stop/Cancel key

This key stops playback of a pattern or song, or cancels an operation.

3. Play/Pause key

This key begins/pauses playback of a pattern or song.

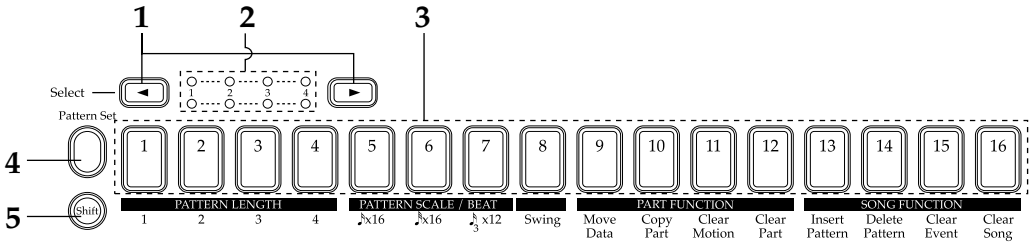
4. TAP/Part Mute key

Use this key to enter a tap tempo. During playback, you can hold down this key and press a Part key to mute the specified part.

5. Solo key

During playback, you can hold down this key and press one or more Part keys to playback the specified part(s).

Step Key section



1. Select key

By pressing these keys to turn the Select LEDs on or off, you can use the sixteen step keys as up to 64 step keys.In Song mode, these keys function as rewind and fast-forward keys. When the Pattern Set function is on, they are used to switch Pattern Set groups.

2. Select LEDs

The upper row of LEDs (green) indicates the location (length 1...4) within the pattern of the currently-playing rhythm pattern.

The lower row of LEDs (red) indicates the location (length 1...4) of the rhythm pattern indicated by the step keys. When the Pattern Set key is on, these LEDs indicate the pattern set group.

3. Step keys 1...16

Use these keys to modify and audition the rhythm pattern of each part. When the Pattern Set function is on, use these keys to select patterns that have previously been asigned to these keys.

4. Pattern Set key

By holding down this key and pressing one of the step keys, you can switch to the pattern that you registered for that key.

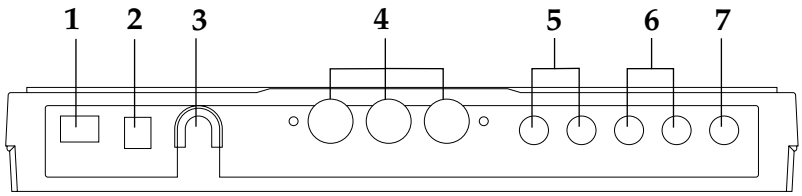
5. Shift key

This key is used in conjunction with other keys. When held down, it gives an additional function to another key.

Shift + Play/Pause key: Playback from the beginning of the pattern.
Shift + Rec key: During playback, erase triggers from the pattern.
Shift + Part keys: Select a part without sounding it.
Shift + Step keys: Execute the function shown below each step key.
Shift + dial: If the Shift key is held down as you rotate the dial, the value in the display will change in steps of ten.
Shift + pattern set key: The Pattern Set function will be held (maintained).

For other Shift key combinations, refer to the explanation of each parameter.

Connector section



1. Power switch

This switch turns the power on/off. Each time you press it, the power will alternate on or off.

2. DC 9V

Connect the included AC adapter here.

3. Adapter cable holder

Hook the adapter cable around this so that it will not be disconnected accidentally.

4. MIDI connectors

IN MIDI data is received at this connector to control the ER-1 from an external MIDI device or to receive a data dump.

OUT MIDI data is transmitted from this connector to control an external MIDI de vice or to transmit a data dump.

THRU MIDI data received at the **MIDI IN** connector is re-transmitted without change from this connector. This is used to "daisy-chain" multiple MIDI devices.

5. AUDIO IN 1, 2 jacks

These jacks are used for the audio-in parts. Sound that is input here can be used as the sound of the AUDIO IN 1 and 2 part selector keys.

6. L/MONO, R (line output) jacks

Connect your audio cables from these jacks to your mixer or powered monitor system (powered speakers) etc. If you wish to make monaural connections, connect the **L/MONO** jack.

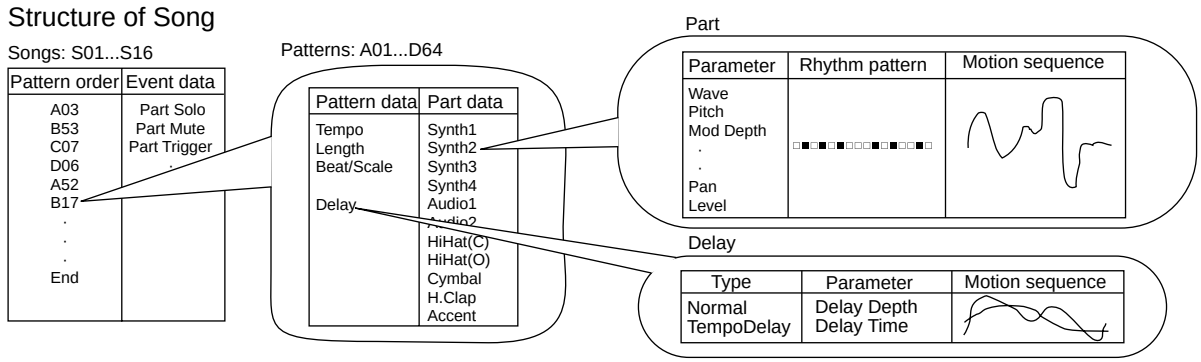
7. (headphone jack)

A set of stereo headphones fitted with a stereo jack plug can be connected here.

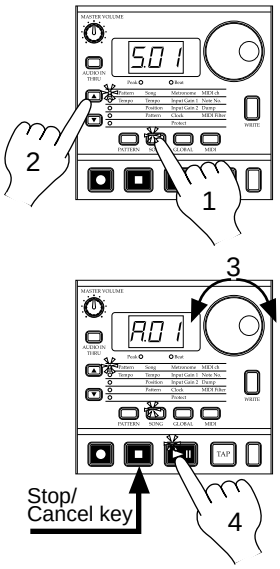
3. Basic operation (Quick Start)

Conceptual diagram of the ER-1

On the **ER-1**, a song consists mainly of Patterns (which consist of Parts and delay settings) and event data (refer to p.36 "Recording performances or knob movements to a song (Event Recording)").



Listening to a Song



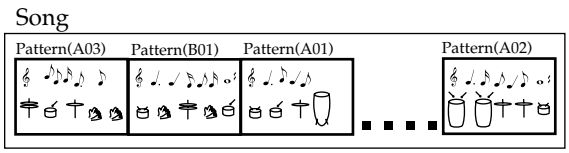
1. Press the Song Mode key to enter Song mode (the key will light).
2. Use the cursor [▲][▼] keys to make the parameter select LED indicate **Song** (the top LED).
3. Rotate the dial to select the desired song (**S01...S16**).
4. Press the Play/Pause key to playback the song (the key will light). When the song ends, playback will stop automatically (the key will go dark).

To pause during 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.

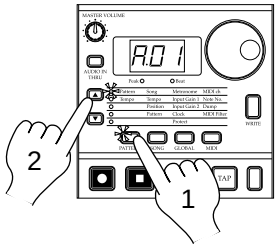
It is not possible to change songs during playback.

What is a Song?

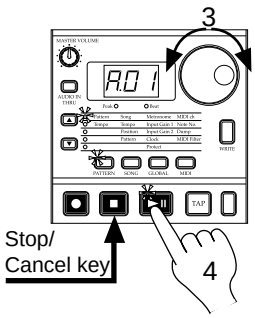
On the **ER-1**, a song is musical data consisting of Patterns arranged in the desired playback order. The ER-1 lets you create and store up to sixteen songs. In each song you can arrange up to 256 patterns, and rhythm and knob movements can also be recorded in addition to the playback. (Refer to p.33 "Song mode.")



Listening to Patterns



1. Press the Pattern mode key to enter Pattern mode (the key will light).
2. Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **Pattern** (top).
3. Rotate the dial to select the desired pattern (**A01...A64, b01...b64, C01...C64, d01...d64**).
4. Press the Play/Pause key to playback the pattern (the key will light). When pattern playback ends, the pattern will return to the beginning, and continue playing repeatedly.

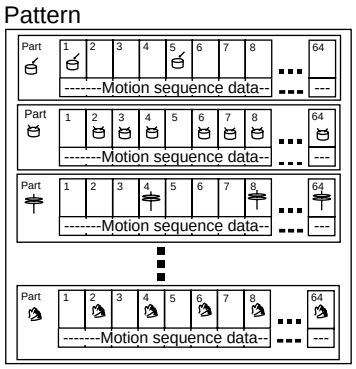


To pause during playback, press the Play/Pause key (the key will blink). To resume playback, press the Play/Pause key once again (the key will light). To stop playback, press the Stop/Cancel key.
You can rotate the dial to select patterns when playback is stopped or even during playback.

When you change patterns during playback, the change will actually occur at the end of each pattern. (Refer to p.22 "The timing at which patterns will change.")

What is a Pattern?

A pattern is a unit of musical data consisting of sounds arranged in a rhythm. On the **ER-1** you can create and save 256 patterns.
Each pattern consists of eleven parts (refer to p.14). In addition to the sounds of each part, you can also record rhythms and knob movements (refer to p.22 "Pattern mode").



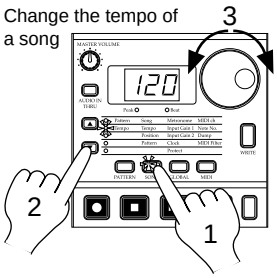
Trying out the functions

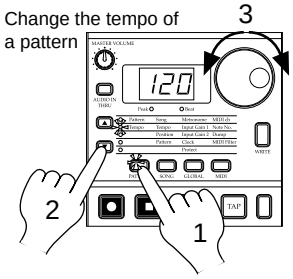
Changing the tempo of a song or pattern

There are two ways to change the tempo.
The tempo that you change here will return to the original tempo when you stop playback and switch to a different pattern or song.

• Using the dial to change the tempo

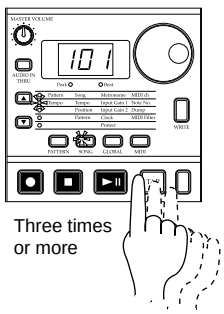
1. Press the Mode key to enter Song mode or Pattern mode.
2. Use the cursor [▲][▼] keys to set the parameter select LED to **Tempo**.
3. Rotate the dial to change the tempo.



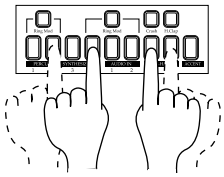


• Using the Tap Tempo key to change the tempo

While a song or pattern is playing, press the Tap key three times or more at the desired tempo. The ER-1 will detect the interval at which you pressed the Tap key, and will set the tempo accordingly. The tempo can also be changed in this way even if the ER-1 is not currently playing a song or pattern.
Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **Tempo**, and the tempo you modified will appear in the display.



Striking keys to play Parts

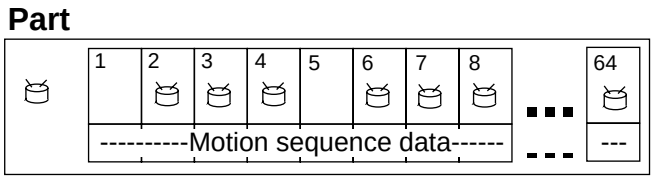


By striking the part keys, you can play the corresponding sounds.
The audio-in parts will sound when an audio signal is connected to the audio input jacks. (Refer to p.19, "Connecting various sources to the audio inputs.") However even if sound is being input, it will not be heard if Audio In Thru is turned on.
The sound of each part will differ depending on the pattern. Rotate the dial to switch patterns, and enjoy the wide range of sounds.
Parts for which the Ring Modulation Key is turned on will not sound unless their keys are pressed simultaneously (refer to p.25 "Modulation").

Pressing the Accent key will not sound the Accent part.
It is not possible to simultaneously play both the Close and Open hi-hat sounds.
It is not possible to simultaneously play both the crash cymbal and the handclaps.

What is a Part?

A Part consists of the timing at which sounds are produced (i.e., a rhythm pattern), and a motion sequence. Parts are the smallest unit of data from which a Pattern is created. There are the following types of Parts, and a total of eleven Parts. (Refer to p.22 "Pattern mode.")

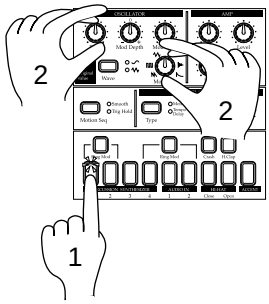


- Percussion Synthesizer parts (1--4): A synthesizer sound and a rhythm pattern.
- Audio In parts (1, 2): A rhythm pattern for the external audio input.
- Hi-hat parts (**Close**, **Open**): A rhythm pattern for the hi-hat.
- Crash Cymbal part: A rhythm pattern for the crash cymbal.
- Handclap pattern: A rhythm pattern for the handclap.
- Accent part pattern: A rhythm pattern for the points of emphasis (accents) for the overall pattern.

You are free to modify the sound of each part, and rhythm patterns and motion sequences can be stored independently for each part (refer to p.24 "Editing the sound of a part").

Modifying (editing) the sound

1. Press a part key to select the part that you wish to edit.
2. Use the knobs and keys of the Synthesizer section to edit the sound. The Original Value LED will light to indicate the position of the knobs and keys for the original settings of the sound.



Refer to the example sounds (p.45) and try creating your own sounds.
The pattern sound that you modified here can be saved by the Write operation (p.17 "Saving a pattern you create").

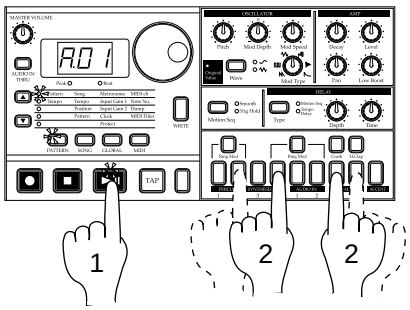
The knobs that are effective will depend on the pattern.
If a motion sequence is controlling a knob, it may be difficult to edit the sound as you intend. If so, turn the motion sequence off while you are editing (refer to p.28 "Motion sequences").

What is the synthesizer section?

This is the section where the parameters assigned to the panel knobs and keys work together to "synthesize" (produce) the sound of each part. (Refer to p.24 "Editing the sound of a part.") The knobs that are valid for each part are as follows.

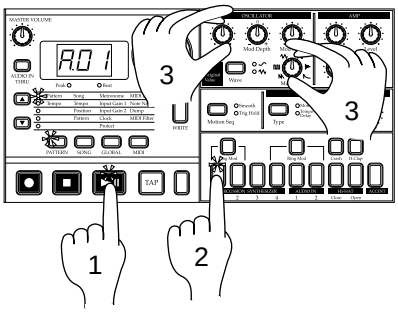
- Percussion Synthesizer parts: **Wave, Pitch, Mod Type, Mod Speed, Mod Depth, Decay, Pan, LowBoost, Level**
- Audio In parts: **Decay** (functions as gate time)**, Pan, LowBoost, Level**
- Hi-hat, Crash Cymbal, Handclap parts: **Pitch, Decay, Pan, LowBoost, Level**

Striking the part keys along with a song or pattern



1. In Song mode or Pattern mode, press the Play/Pause key to begin playback.
2. As you listen to the song or pattern, strike the part keys to play along.

Modify (edit) the sound along with a song or pattern



1. In Song mode or Pattern mode, press the Play/Pause key to begin playback.
2. Press a part key (the key will light) to select the part that you wish to edit.
3. Use the knobs and keys of the Synthesizer section to modify the sound. The sound of the part that is playing will be modified as you move the knobs or keys.

You can press other part keys to edit other parts.

To save the pattern sounds that you modify here, use the Write operation (refer to p.17 "Saving a pattern that you create").
If you re-select a pattern or turn off the power without performing the Write operation, the sound will return to its unedited state.

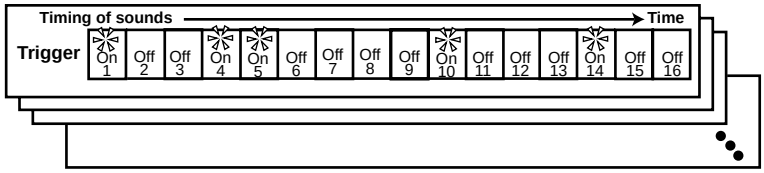
It is not possible to write the sounds you edit in a Song. Only in a Pattern can you write the edited sounds.

Modifying (editing) a rhythm pattern

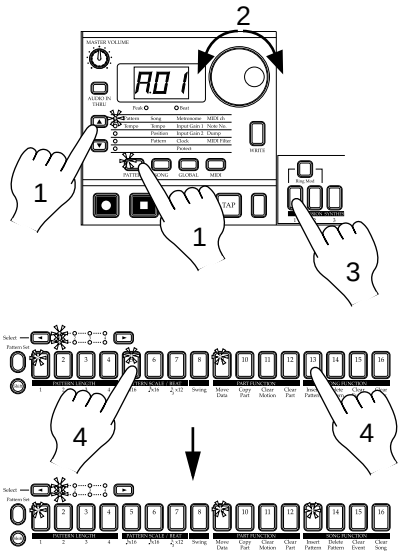
What is a Rhythm Pattern?

A Rhythm Pattern is a sequence of rhythms (i.e., the timing at which a sound is heard) for an individual part. You can use the sixteen step keys to modify the rhythm pattern of each part. A rhythm pattern can also be recorded as you listen to the playback (realtime input). (Refer to p.27 "Creating a Rhythm Pattern.")

Rhythm pattern



• Using the step keys to edit the rhythm (Step Recording)



1. Press the Pattern mode key (the key will light).
   Use the cursor [▲][▼] keys to set the parameter select LED to **Pattern**.
2. Rotate the dial to select the pattern that you wish to edit.
3. Press a part key (the key will light) to select the part that you wish to edit.
4. The step keys will light to indicate the rhythm of the selected part. You can press the step keys to modify the rhythm pattern. Each time you press a key, it will alternate between on (lit) and off (dark).

You can also playback the pattern while you select different parts and press the step keys to turn each step on or off.

In the case of a pattern with a length of 2 or greater, you can use the Select keys to move the select LED in the lower line (red) in order to change the step location that is shown by the step keys.

If you wish to save the completed pattern, press the Write key. (Refer to p.17 "Saving a pattern that you create.")

If the Pattern Set key is on, the step keys will not display the rhythm pattern.

Length	Select LED display	Area shown by the step keys	
		For ♪ x 16, ♪ x 16	For ♪3 x 12
1		Steps 1...16	Steps 1...12
2		Steps 17...32	Steps 13...24
3		Steps 33...48	Steps 25..36
4		Steps 49...64	Steps 37...48

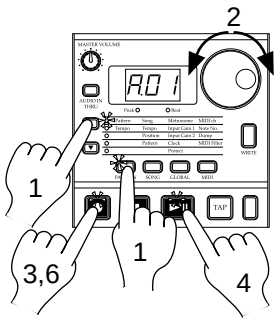
What is Length?

In this context, "Length" refers to the length of the rhythm pattern.
The "Length" of the pattern will be either 16 steps or 12 steps, depending on the Scale and Beat settings of the pattern. A rhythm pattern in triple meter will be shown in triplets. Depending on the Length and Beat settings, a single pattern can have up to 64 steps. (Refer to p.26 "Length and Scale/Beat settings.")

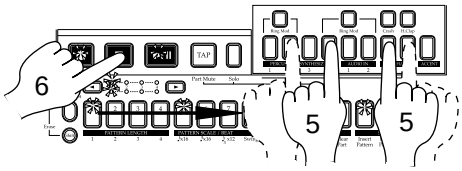
Scale/Beat display	Note value of each step key	Pattern Length (number of steps)			
		=1	=2	=3	=4
♪ X 16	16th note	16	32	48	64
♪ X 16	32nd note	16	32	48	64
♪3 X 16	16th note (triplet)	12	24	36	48

• Using the part keys to edit the rhythm (Realtime Recording)

If you wish to hear the metronome while you record, refer to p.38 "Metronome settings."



1. Press the Pattern Mode key (the key will light). Use the cursor [▲][▼] keys to make the parameter select LED indicate **Pattern**.
2. Rotate the dial to select the pattern that you wish to edit.
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. Strike the part keys at the desired rhythm. The pattern will continue playing back repeatedly, so you can continue recording additional material as long as the Rec key remains lit.



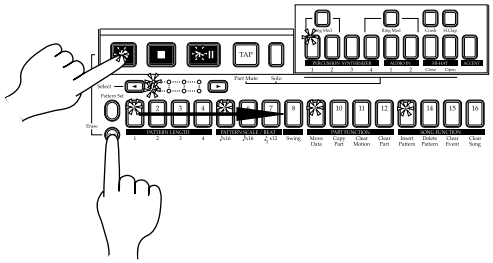
6. Press the Stop/Cancel key to stop recording. (The Rec key and Play/Pause key will go dark.) You can also press the Rec key without pressing the Stop/Cancel key, to stop recording but continue playback. (The Rec key will go dark, and the Play/Pause key will be lit.)

If you wish to save the pattern that you created, press the Write key. (Refer to "Saving a pattern that you create," below.)

The time that an audio part is heard (i.e., the gate time) is determined not by how long you continue pressing the key, but by the Decay value (p.19 "Connecting various sources to the audio inputs").

Erase

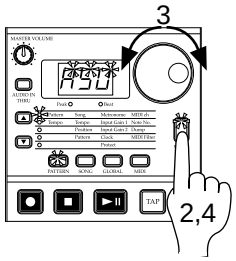
If you accidentally input a wrong note, you can hold down the Shift key and Rec key while the pattern continues playing to erase the rhythm pattern for the currently selected part (i.e., the part whose part key is lit).



Saving a pattern that you create

With the factory settings, memory protect will be on, and it will not be possible to save data. Before you save data, you must turn off the Memory Protect settings in Global mode. (Refer to p.39 "Protect settings.")

Please be aware that when you save data, the pattern in the save destination will be overwritten.



1. Edit a pattern as described in "Modifying the sound" or "Modifying (editing) a rhythm pattern."
2. Press the Write key once (the key will blink). The display will blink to indicate the pattern number.
3. Rotate the dial to select the pattern number in which the data will be saved (i.e., the "save destination").
4. Press the Write key once again to begin saving the data. While the data is being saved, the key will blink. When saving is complete, the key will go dark.

If you decide to cancel, press the Stop/Cancel key. If you do not wish to save the pattern you created, simply select a different pattern without performing the Write operation.

Never turn off the power while data is being saved to memory (i.e., while the Write key is lit). Doing so may damage the data.

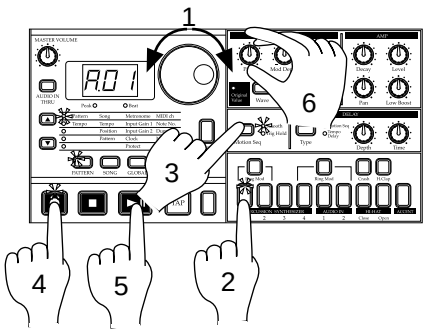
It is not possible to Write data during playback or recording.

Using a Motion Sequence

What is a Motion Sequence?

On parts other than the Accent part, you can record the changes you make to the sound using the knobs, and loop them for playback. This data is called a Motion Sequence (refer to p.28 "Motion Sequence"). There are two types of sequence. A "motion sequence" allows you to record any one of the parameters Wave, Pitch, Mod Type, Mod Speed, Mod Depth, Decay, Pan, Low Boost, or Level for an individual Part. A "delay sequence" lets you record this data for an individual Pattern.

The following knobs are valid for each part.
Synth parts: Wave, Pitch, Mod Type, Mod Speed, Mod Depth, Decay, Pan, Low Boost, Level
Audio In parts: Decay, Pan, Low Boost, Level
Hi-hat, Crash Cymbal, Handclap parts: Pitch, Decay, Pan, Low Boost, Level



As an example, here's how to record the Pitch parameter in a motion sequence.

1. In Pattern mode, select the pattern that you wish to edit.
2. Press the appropriate part key to select the part that you wish 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 to create various changes while the pattern makes one cycle (16 steps x length, or 12 steps x length).
7. After the pattern has completed one cycle after you began moving the knob, the Rec key will automatically go dark and you will return to Play mode so that you can listen to the motion sequence that you just recorded.

After pressing the Stop/Cancel key to stop playback, perform step numbers 2 and following for "Saving a pattern that you create" to save the pattern that contains the motion sequence you just recorded.

There are two types of motion sequence (**Smooth** and **Trig Hold**). During playback, switch between these to hear the difference. (Refer to p.28 "Playing a motion sequence.")

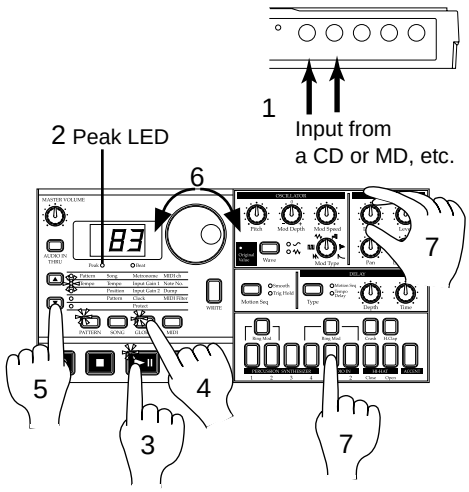
It is not possible to modify a motion sequence after it has been recorded. If the results are not as desired, please re-record your motion sequence.

For an individual part, only one knob can be recorded as a motion sequence. If you move two or more knobs when recording a motion sequence for an individual part, the effect of the previously-moved knob will be lost. (Refer to p.28 "Recording a motion sequence.")

Connecting various sources to the audio inputs

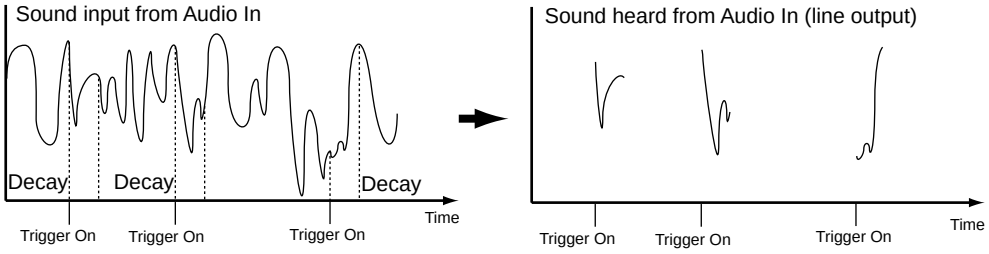
Let's try connecting various types of audio device (radio, or MD or CD player) or tone generator to the audio input jacks. Sound that contains no drums is most effective.
Try out various types of sounds or music. Depending on the content, you may discover unexpectedly interesting results.

1. Connect an audio device etc. to the audio inputs of the ER-1. Each jack is monaural, so you may need to use a stereo-mono adapter plug, depending on the device you are connecting.
2. Adjust the output level of the connected device so that the peak LED lights only at the maximum levels. At this time you can turn on the Audio In Thru key (the key will light) to hear the input sound without having to press the part key.
3. Select the pattern or song whose volume you wish to adjust, and press the Play/Pause key to begin playback.
4. Press the Mode key to enter Global mode.
5. Use the cursor [▲][▼] keys to set the parameter select LED to **Input Gain 1**.
6. Rotate the dial to adjust the input volume to create a balance with the volume of the other parts.



Adjust **Input Gain 2** in the same way.

The input sound will be heard while you press the Audio In part key. The Audio In parts that are recorded in a pattern or song do not produce the sound that was being input when the parts were being recorded; they simply allow the sound that is received in the audio input at that moment to be heard from when the trigger is turned on, for the duration set by the **Decay** knob.



If you wish to strike Audio In keys 1 or 2 to hear the sound, you must turn off the Audio In Thru key (the key will be dark).
The audio inputs are for line-level input. Microphones, guitars, or turntables etc. cannot be connected directly.
If the input gain setting is excessive, the sound may be distorted.

Playing with Pattern Set

What is Pattern Set?

Pattern Set is a function that lets you register a favorite pattern to each of the sixteen step keys, and use the step keys to switch patterns. You can use this function to play a performance simply by selecting patterns one after the other

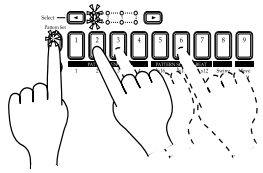
When you hold down the Pattern Set key (the key will blink) and press one of the sixteen step keys, the pattern registered for that key will be selected. At this time you can use the Select keys to change the pattern set group indicated by the red select LEDs (lower line) 1...4, to use 16 x 4 (total of 64) pattern sets.

If during playback you hold down the Pattern Set key and press another step key, the pattern registered for that key will begin playing when the currently-playing pattern finishes playing. (Refer to p.31 "Pattern Set.")

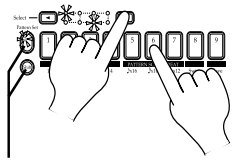
If you hold down the Shift key and press the Pattern Set key, the Pattern Set function will be held. (The Pattern Set key will blink.)
To defeat this "hold" condition, press the Pattern Set key once again.

You can register new pattern sets. (Refer to p.31, "Registering a pattern for Pattern Set.")

Pattern Set 1



Pattern Set 3



Hold down the Shift key
and press the Pattern Set key
to hold the Pattern Set function.

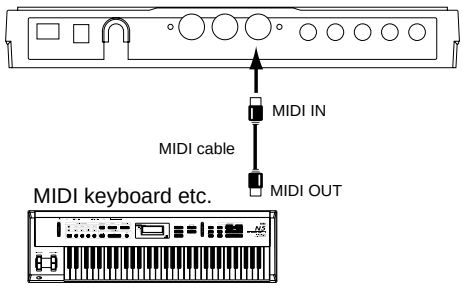
If you switch patterns during playback, the change will occur when each pattern finishes playing. (Refer to p.22 "The timing at which patterns will changed.")

Using the ER-1 as a tone generator module

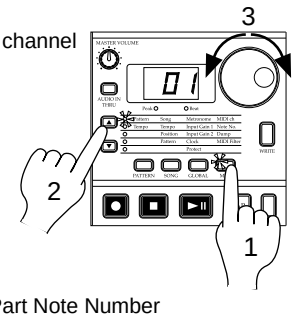
Read this section when you wish to use the ER-1 with other connected MIDI equipment. Use a MIDI cable to connect the MIDI OUT connector of your MIDI keyboard etc. to the MIDI IN connector of the **ER-1**.

1. Press the MIDI mode key to enter MIDI mode.
2. Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **MIDI ch**.
3. Set the channel of the transmitting device to match the channel of the **ER-1**. (Refer to p.40 "MIDI channel settings.")
4. Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **Note No**. (Refer to p.40 "Setting the MIDI note number for each part.")
5. Press the desired part key, and the note number for that part will appear in the display.

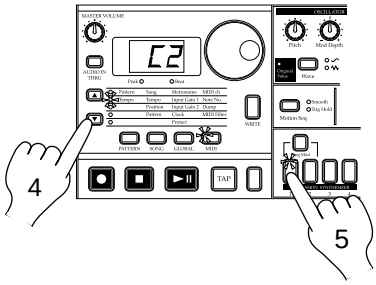
When you transmit the corresponding note from the transmitting device, the sound of that part will be played.



Set the MIDI channel



Check the Part Note Number



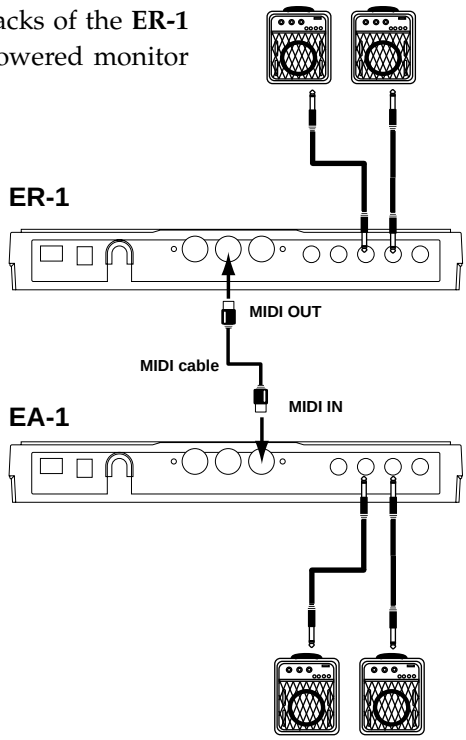
For details on the ER-1's MIDI functionality, refer to p.42 "About MIDI."

If you wish to save the settings of MIDI mode or Global mode, you must perform the Write operation in either of these modes. (Refer to p.39 "Saving the settings you modify in Global mode ," or p.41 "Saving the settings you modify in MIDI mode .")

Synchronized playback with the EA-1

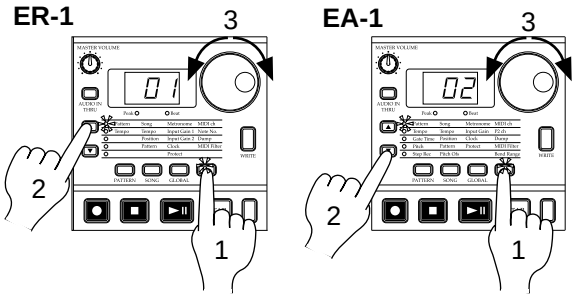
By synchronizing the **Electribe ER-1** and **EA-1** you can enjoy even greater performance possibilities. Here's how you can make the **EA-1** playback in synchronization with the tempo of the **ER-1**.

Use a MIDI cable to connect the **MIDI OUT** connector of the **ER-1** to the **MIDI IN** connector of the **EA-1**. Connect the line output jacks of the **ER-1** and the part output jacks of the **EA-1** to your mixer or powered monitor system (amplified speakers).

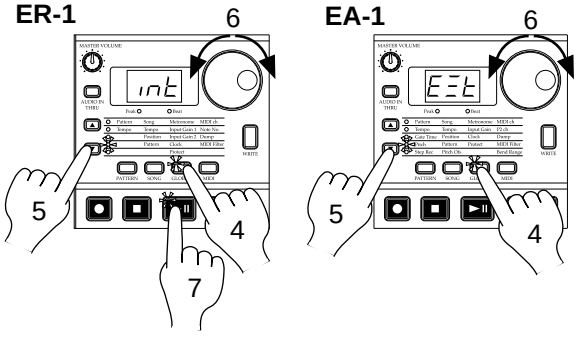


1. Press the MIDI mode key to move to MIDI mode.
2. Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **MIDI ch**.
3. Set the **ER-1** channel to "**01**," and the **EA-1** channel to "02." (Refer to p.40 "MIDI channel settings.")
4. Press the Global mode key to move to Global mode.
5. Use the cursor [▲][▼] keys to make the parameter select LEDs indicate **Clock**.
6. Set the **ER-1** to "**int**," and the **EA-1** to "**Ext**." (Refer to p.38 "Synchronizing the ER-1 with external MIDI device.")
7. Press the Play/Pause key of the **ER-1** to start a pattern or song. (The Play/Pause key will light.) The **EA-1** will play the pattern or tempo in synchronization with the tempo of the **ER-1**.

If you want the **ER-1** and **EA-1** to play the identically-numbered pattern in synchronization, make the following settings.



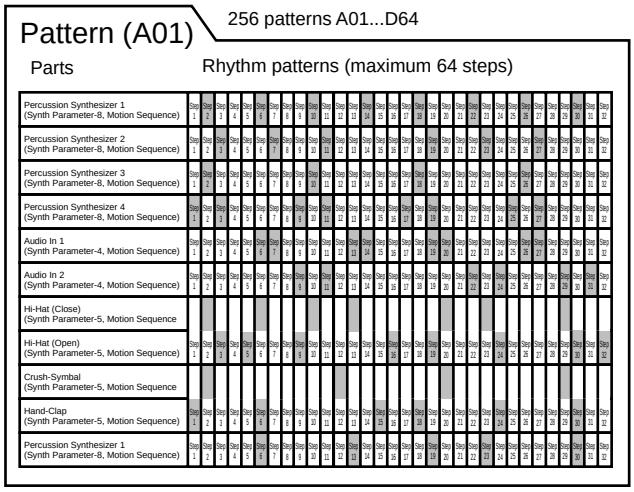
- Use a MIDI cable to connect the **MIDI OUT** connector of the **EA-1** to the **MIDI IN** connector of the **ER-1**.
- Synchronizing the **ER-1** to the **EA-1** as master.(Set the **EA-1** to "**int**," and the **ER-1** to "**Ext**.")
- Set the **ER-1** and **EA-1** to the same MIDI channel (for example, set both to "**01**").
- On the **ER-1** and **EA-1**, set the MIDI filter setting "**P**" to "**O**" (refer to p.41 "MIDI filter settings").
- On the **ER-1**, set the MIDI note number setting to **C-1...A-1** or **A#8...G9** (refer to p.40 "Settings the MIDI note number for each part").
  *This will prevent the **ER-1** from being sounded unintentionally when note-on messages are transmitted.



It is also easy to make the **ER-1** playback in synchronization by connecting it to a sequencer or synthesizer that can transmit and receive MIDI Clock messages.

4. Pattern mode

In this mode you can play patterns, or edit them to make new patterns.
Press the Pattern mode key to enter Pattern mode.



Selecting a pattern

Pattern A01...d64

Use the cursor keys to make the parameter select LEDs indicate **Pattern**.
Rotate the dial to select one of the 256 patterns: **A01...A64**, **b01...b64**, **C01...C64**, and **d01...d64**. By holding down the Shift key as you rotate the dial, you can change the pattern number in steps of ten.

Setting the playback tempo

Tempo 20...300

• Using the dial to change the tempo

Use the cursor keys to make the parameter select LEDs indicate **Tempo**. Rotate the dial to modify the tempo.

• Using the Tap Tempo key to change the tempo

While the pattern is playing, press the Tap key three times or more at the desired tempo. The ER-1 will calculate the interval at which you pressed the Tap key, and will change the tempo accordingly. You can change the tempo in the same way even when playback is stopped.
When you use the cursor keys to make the parameter select LEDs indicate **Tempo**, and the tempo you modified will appear in the display.

If you switch to a different pattern without writing the pattern whose tempo you modified, the pattern tempo will return to the previous value. If you wish to keep the modified tempo, you must perform the Write operation (refer to p.32 "Saving a pattern").

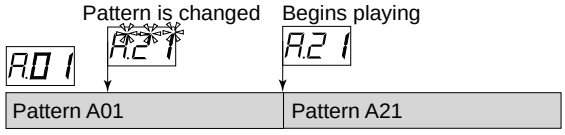
If you press and hold the Tap key, the Part Mute function (checking the Part Mute status) will be selected, and the ER-1 will stop detecting the interval at which Tap tempo was pressed.

Playing a pattern (Pattern Play)

Use the cursor keys to make the parameter select LEDs indicate **Pattern**. Press the Play/Pause key to start pattern playback. When the pattern finishes playing, it will return to the beginning and continue playing.
While listening to a pattern, you can strike the part keys along with the rhythm, or move the knobs to modify the sound. By taking advantage of the various functions of Pattern mode as part of your performance technique, you can enjoy even wider possibilities.

The timing at which patterns will change

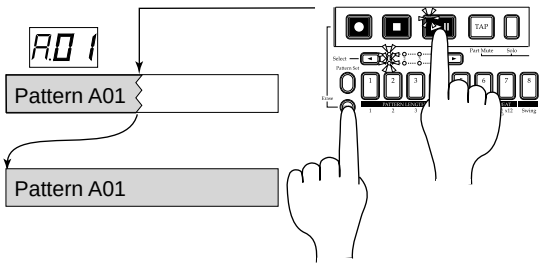
When you switch patterns during playback, the change will occur when the currently playing pattern finishes its last step. Until the pattern actually changes, the pattern number selected in the display will blink.



Playing from the beginning of a pattern (Reset & Play)

If you hold down the Shift key when pressing the Play/Pause key, the playback will be forced to playback from the beginning. By using this function in conjunction with setting the tempo by the Tap key, you can synchronize the playback without using MIDI.

In order to ensure that the rhythm always matches, you will need to perform this adjustment each time.



About the tempo when the pattern is changed

When you switch patterns during playback, the tempo of the previous pattern will always be maintained. If you wish to use the tempo that is stored in the newly selected pattern, press the Stop/Cancel key to stop playback, and then start playback once again. The pattern's own tempo will be applied from the point at which the pattern was stopped.

Selecting parts

The ER-1 has the following eleven parts.

- Four synthesizer parts produced by analog modeling
- Two audio input parts which gate the audio signal from the AUDIO IN jacks
- Open Hi-hat, Closed Hi-hat, Crash Cymbal, and Handclap parts that use PCM waveforms
- An Accent part that contains dynamics data for each step

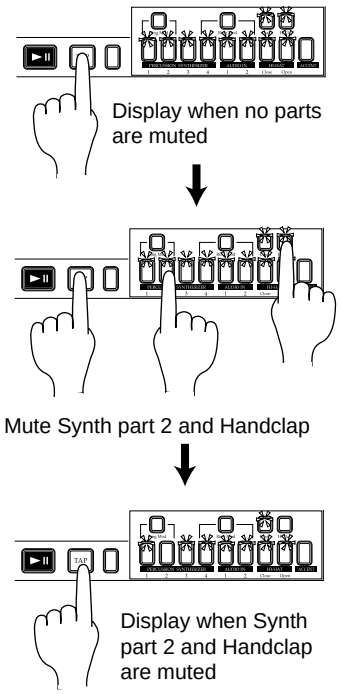
When you press a part key, its sound will be heard, and simultaneously that part will be selected. During playback, you can hold down the Shift key and press a part key to select that part without sounding it.
When a part is selected, its part key will light, and the step keys will show the rhythm pattern of that part. The controls of the Synthesizer section will be enabled for that part.

During playback, each part key will light at the timing with which it sounds, making it easy for you to determine which sounds are playing. The step keys will continue to show the rhythm pattern of that part, and will also indicate the rhythm location.

When you sound a part by pressing its part key, it will sound at the volume of when Accent is On.

The Part Mute function

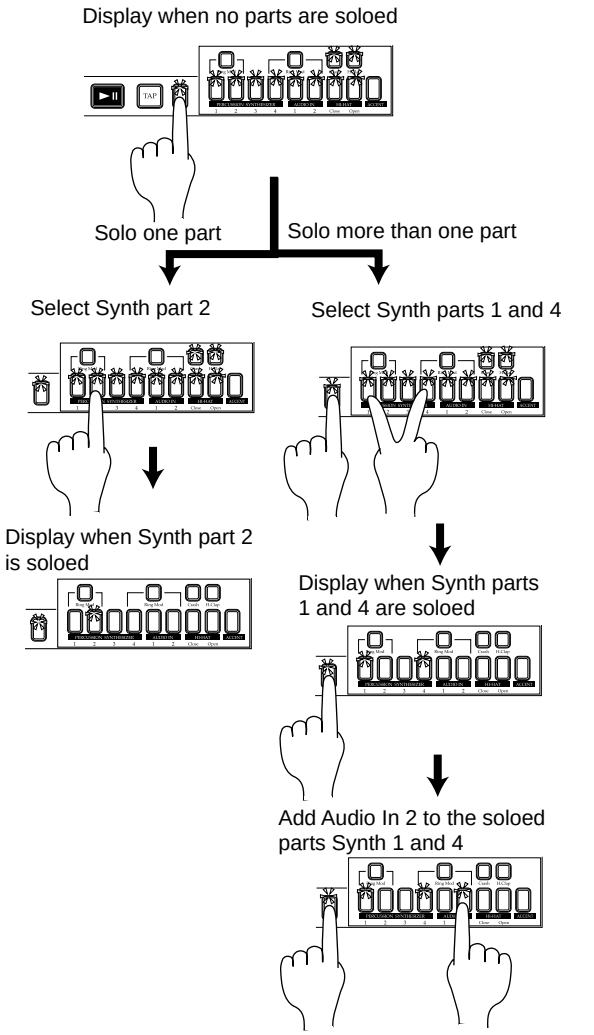
By holding down the Part Mute key (Tap key) while you press a part key, you can mute (temporarily silence) that part.
While you hold down the Part Mute key (Tap key), the mute status of each part will be displayed. The part key of unmuted parts will light, and muted part keys will be dark.
You can also mute two or more parts. To cancel part muting, press the corresponding part key.



When you hold down the Part Mute key (Tap key) to select the Mute function, pressing a part key will not sound that part.

The Part Solo function

By pressing the Solo key (the key will light) and pressing a part key, you can hear only that part.
To solo two or more parts, hold down the Solo key and select the desired parts. While the Solo key is lit, you can hold down the Solo key (or Mute key) and press other part keys to add more solo parts. If you press and then release the Solo key, the Solo function will be canceled (the key will go dark).



When you press the Solo key, the Part Mute settings you made will be canceled (i.e., no parts will be muted).

Creating a pattern

There are two ways to create a pattern. You can start with a pattern that is similar to the desired result and then edit it, or you can create a pattern from scratch by specifying the sound and rhythm pattern for each part. Either way, the **ER-1** makes it easy for you to create your own original rhythm patterns.

If you wish to save a pattern you create, you must perform the Write operation before you select a different pattern or turn off the power.

Editing the sound of a part

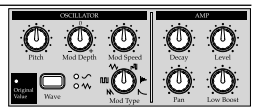
Select a pattern that is close to what you have in mind (or a pattern which contains no sound or rhythm). Strike the part keys to hear each sound, and use the knobs and keys to edit the sounds. At this time, the Original Value LED will light when the knob etc. that you are currently moving reaches the same value as the original sound of the pattern.
Referring to the example sounds in the appendix (p.45) will help you learn how to create your own sounds.
You can also edit while playing back a pattern. It is also possible to use an external MIDI device to control the value of each knob (refer to p.42 "About MIDI").

If the sound does not change when you rotate a knob or switch the setting of a key, either that knob or key is not valid for that part, or the Motion Sequence function (p.28 "Motion Sequence") is operating.

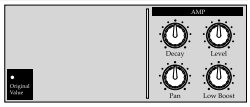
Oscillator and amp parameters

The parameters that are valid for each part are shown in the following diagram.

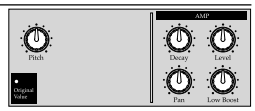
· PERCUSSION SYNTHESIZER part x 4



· AUDIO IN part x 2



· HI-HAT part x 2
· Crash Cymbal part
· Hand Clap part



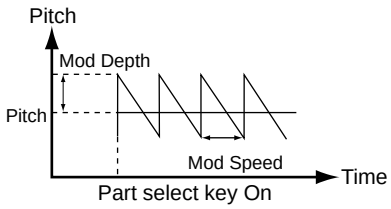
· ACCENT part

The Audio In parts are valid only when a signal is being input to the audio input jacks.
Although the sounds of the Close and Open hi-hat parts can be edited independently, they cannot be sounded simultaneously. If both are triggered in the same step, the Open hi-hat will sound.
Similarly, the sounds of the Crash Cymbal part and the Handclap part can be edited independently, but cannot be sounded simultaneously. If both are triggered in the same step, the Handclap part will sound.

OSCILLATOR

This specifies the oscillator waveform and pitch.

Example : Mod Type=



Wave sine wave, triangle wave

Select the basic waveform. Each time you press the key, the waveform will alternate. A sine wave produces a mild (colorless) sound. A triangle wave is slightly brighter than a sine wave.

Pitch 20 Hz...12,000 Hz

Adjust the pitch. Rotating the knob toward the left will lower the pitch, and rotating it toward the right will raise the pitch.

Mod Type (modulation type)

(Saw Down) ... (Envelope)

Select the type of pitch modulation.

(Saw Down): The pitch will fall cyclically.
(Square): Two pitches will alternate cyclically.
(Triangle): The pitch will rise and fall cyclically.
(Sample & Hold): The pitch will change randomly.
(Noise): A noise component will be cyclically added to the pitch. This is effective when creating snare drum sounds.
(Envelope): An envelope will be applied to the pitch. This is effective when creating kick or tom sounds.

Mod Depth (modulation depth) –100...0...100

Adjust the depth and direction of the pitch modulation. Positive (+) settings (right) and negative (–) settings (left) will invert the direction of the pitch modulation effect. When the knob is positioned in the center (0), the Modulation Type and Modulation Speed will have no effect.

Mod Speed (modulation speed)

0.1 Hz...5,000 Hz

Adjust the speed of pitch modulation. Rotating the knob toward the right will speed up the pitch modulation, allowing you to apply cross-modulation effects.

AMP

These parameters control the volume and panning.

Decay 0...100

Adjust the speed at which the volume will decay. For Audio In parts, this will function as a gate time (duration of the sound) synchronized to the tempo.

Pan L...R

Set the stereo position (panpot) of the sound. When the knob is located in the center, the sound will be heard from the center. Rotating the knob toward the left will place the sound toward the left, and rotating the knob toward the right will place the sound toward the right.

Level 0...100

Adjust the output level. Rotating the knob toward the right will increase the volume. For the Accent part, this will adjust the Accent Level (the degree to which the volume will be emphasized when Accent is on). (Refer to p.27 "Adding accents to a rhythm pattern.")

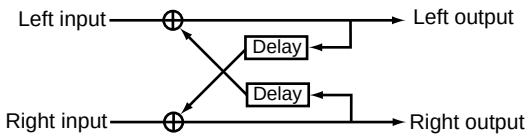
Low Boost 0...100

This emphasizes the low-frequency range of each part. If you notice distortion (clipping) in the sound, adjust this parameter. Setting this parameter to the maximum (far right) allows it to function as a distortion effect.

Depending on the settings of Level and other parameters, raising the Low Boost may damage your speakers or headphones etc., so please use appropriate caution.

DELAY

Delay is an effect that adds one or more delayed "echoes" to the sound. The delay effect of the **ER-1** is a "cross-feedback delay." This feeds the delayed L and R signal back into the opposite side to produce a greater feeling of spaciousness from left to right.
By using the Type key to switch the type of delay, you can record delay knob movements as a Motion Sequence, or use the effect as a Tempo Delay.



The delay effect will apply to the entire rhythm pattern, and it is not possible to change the effect independently for each part.

Type Motion Seq, Tempo Delay

Each time you press the key, the effect will alternate between Normal (LED dark), **Motion Seq**, and **Tempo Delay**. When Normal is selected, the effect will function as a conventional delay.

Motion Seq (motion sequence)
The motion sequence will control the delay (refer to p.28 "Motion Sequence").

Tempo Delay
The delay time will automatically be adjusted (synchronized) to the tempo of the pattern. If the MIDI Clock setting is "**Ext**," the delay time can also be synchronized to the clock of an external device. (Refer to p.38 "Synchronizing the ER-1 to a master external MIDI device.")

Depth 0...100

Adjust the level of the delay sound and the amount of feedback (the number of delay repeats).
Rotating the knob toward the right will increase the level of the delay sound, and will also increase the amount of feedback.
The further left or right the Pan of each part is set, the more the sound will be spread to left and right.

Raising the Depth excessively may cause the sound to distort (clip).

Time (delay time) 5 msec ... 2 sec
(for tempo delay) 1/4...8

Specify the delay time. Rotating the knob toward the right will lengthen the delay time. Rotating the knob toward the left to shorten the delay time will produce a "doubling" effect (an impression as though multiple instruments are playing in unison).
If the Type parameter is set to Tempo Delay, this parameter will let you set the tempo in terms of sixteen different multiples of the tempo: 1/4, 1/3, 1/2, 2/3, 3/4, 1, 1.33, 1.5, 2, 2.5, 3, 4, 5, 6, 7, or 8.

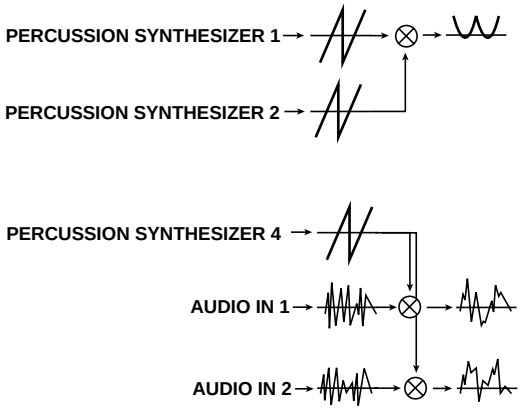
If you change the delay time during playback, the pitch of the delayed sound will change.

Depending on the tempo setting, it may be impossible to set the delay time. In such cases, set the delay time to half the desired value.

Modulation

Ring Mod (ring modulation)

You can apply a ring modulation effect between two parts.
Each time you press this key, the setting will alternate between on (lit) and off (dark). By applying this to the Percussion Synthesizer parts you can create metallic sounds with a rich overtone structure. By inputting a voice to an Audio In jack, you can use ring modulation to transform the voice to a robot-like character.



Ring modulation can be applied only between the PERCUSSION SYNTHESIZER 1 and 2, or between the PERCUSSION SYNTHESIZER 4 and AUDIO IN 1 and 2.

The effect may be difficult to notice if the level of one signal is too low, or if the decay time is too short.
When the ring modulation effect is on, the level and pan settings of PERCUSSION SYNTHESIZER 1 or of AUDIO IN 1 and 2 parts will take priority.

When ring modulation is on, no sound will be output unless both parts are played simultaneously.

Depending on the settings of both parts, very loud sounds may be output. Please adjust the level of each part appropriately.

The tone and volume of Ring Modulation may vary depending on the timing at which Percussion Synthesizer 1 and 2 are sounded.

Length, Scale/Beat settings

You can set the length (the length of the entire pattern) and the basic beat (time signature).The Length and Scale/Beat you specify here will affect the correspondence between step keys and note values, and the maximum number of steps as shown in the following diagram.
While you hold down the Shift key, the step keys will light to indicate the length and beat of the current pattern.
To change the Length, hold down the Shift key and press a Step Key 1...4.
To change the Beat/Scale, hold down the Shift key and press a Step Key 5...7.

It is not possible to view or change the Length or Beat/Scale during playback or recording, or during Pattern Set Play.

· If you select triplets (♪3 x 12) for Beat/Scale, step keys 13...16 will have no function.

Length	Maximum number of steps	
	♪x 16 or ♪x 16	♪3 x 16
1 Shift + step key 1	16	12
2 Shift + step key 1	32	24
3 Shift + step key 1	48	36
4 Shift + step key 1	64	48

Scale/Beat	Correspondence between step keys and note values
♪x 16 Shift + step key 5	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
♪x 16 Shift + step key 6	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
♪3 x 12 Shift + step key 7	3 3 3 3 1 2 3 4 5 6 7 8 9 10 11 12

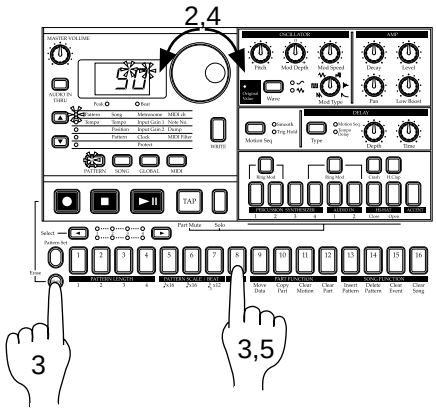
Swing settings

By adjusting the Swing settings you can offset the note timing of the steps. For example, you can change a straight 16-beat by adding a slight "bounce" or shuffle. The Swing value can be adjusted from **50** to **75** (%), and will affect the note timing of even-numbered steps. A setting of **50** will produce a perfect 16-beat, and a setting of **66** will produce a shuffle.

1. If a pattern is playing back, press the Stop/Cancel key to stop playback.
2. Rotate the dial to select the pattern for which you wish to make Swing settings.
3. Hold down the Shift key, and press step key 8 (**Swing**). Key 8 will light.
4. A value will blink in the display. Rotate the dial to set the Swing value.
5. Once again press step key 8 to execute the Swing setting (key 8 will go dark).

If you decide to cancel without making the setting, press the Stop/Cancel key.

If the Length and Beat/Scale settings are set to triplets (♪3 x 12), the Swing setting has no effect.
It is not possible to view or adjust the Swing parameter during playback or recording, or during Pattern Set Play.



Creating a Rhythm Pattern

There are two ways to create a rhythm pattern. The first is Step Recording, in which you use the step keys to create the rhythm as you view the lit/unlit condition of the keys. The second is Realtime Recording, in which you strike the part keys at the timing at which you want to record each note. If you wish to erase the rhythm of each part before you create your own rhythm data, refer to p.29 "Erasing rhythm data from a part."

• Using the step keys (Step Recording)

In this method, you use the sixteen step keys to create the rhythm pattern while watching the lit/unlit condition of the keys to verify the rhythm.
For details refer to p.16 "Using the step keys to edit the rhythm (Step Recording)," in section 3. Basic operation (Quick Start).

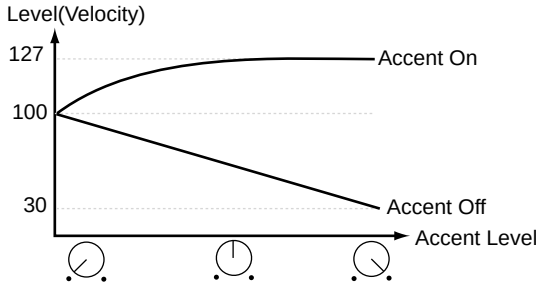
• Using the part keys (Realtime Recording)

For details refer to p.17 "Using the part keys to edit the rhythm (Realtime Recording)," in section 3. Basic operation (Quick Start).

Adding accents to the rhythm pattern (Accent)

You can apply accents (changes in volume) to the rhythm pattern. When Accent is on, the specified notes (steps) of the entire pattern will be accented.

1. Press the Accent part key, and the accent pattern will be shown by the step keys.
2. Each time you press a step key it will alternate on/off, allowing you to specify the desired accent pattern. You can playback the pattern to hear the results as you create the accent part.
3. The amount of the accent is adjusted by the Level knob in the synthesizer section. Rotating the knob toward the right will increase the difference between on and off. If the knob is rotated all the way toward the left, there will be no effect. Play back the pattern to hear the results as you make this setting.



Pressing the Accent part key by itself will not produce sound. Also, if a part key is struck to play the sound, it will be sounded with Accent on (i.e., the emphasized sound). If you wish to hear the results of Accent, you need to play back the pattern.

Accent level cannot be recorded in a motion sequence.

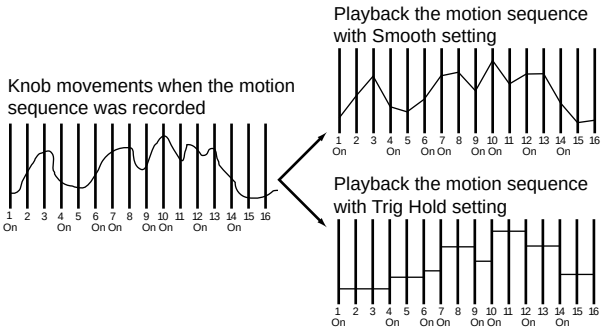
Motion sequence

Playing a motion sequence

A motion sequence can be played back in one of the following two ways, and you can select the playback method independently for each part.

Smooth: Knob values will be connected smoothly, and the sound will change smoothly.

Trig Hold (trigger hold): The value of the motion sequence knob will be held at the note timing of that part.



There will be no effect when the Motion Sequence LED is dark (off).

Recording a motion sequence

You can record knob movements (motion sequence) for each part. When recording a motion sequence, only one knob is valid for each part. If you record a motion sequence on the same part using a different knob, the effect of the previously recorded knob will disappear.

For the recording procedure, refer to p.18 "Using a motion sequence" in section 3. Basic operation (Quick Start).

Motion sequences are recorded in realtime while you listen to the playback. It is not possible to partially modify a motion sequence after it has been recorded. You will need to keep trying until you record a motion sequence to your liking. (Refer to p.30 "Erasing part or delay motion sequence data.")

Playing a delay motion sequence

A "delay motion sequence" is a special motion sequence just for the delay effect. Unlike a motion sequence for a part, the movements of two knobs, Delay Depth and Delay Time, can be recorded simultaneously. The playback method is the same as for **Smooth** playback of a part motion sequence.

There will be no effect if the delay type Motion Seq LED is dark.

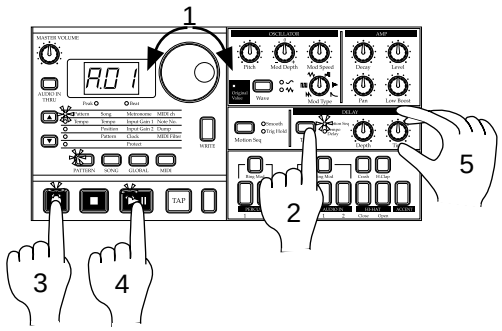
Recording a delay motion sequence

You can record the movements of two knobs, Delay Depth and Delay Time.

1. Select the pattern that you wish to edit.
2. Press the Type key to select **Motion Seq**.
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 Rec key and Play/Pause key will light.)
5. Move the Delay Time knob to create various changes until the pattern plays for one cycle (16 steps x length, or 12 steps x length).
6. When the pattern has played for one cycle after you began moving the knob, the Rec key will automatically go dark and playback will resume, allowing you to hear the motion sequence that you just recorded.

You can record the movements of the Delay Depth knob in the same way.

Motion sequences are recorded in realtime while you listen to the playback. It is not possible to partially modify a motion sequence after it has been recorded. You will need to keep trying until you record a motion sequence to your liking. (Refer to p.30 "Erasing part or delay motion sequence data.")



Checking motion data

If motion sequence data has been recorded, you can hold down the Shift key and press the Motion Sequence key to view the status in the step keys.

- If motion sequence data is included in the selected part step keys 1, 2, 3, 4 will light
- If delay motion sequence data (Delay Depth data) is included step keys 5 and 6 will light
- If delay motion sequence data (Delay Time data) is included step keys 7 and 8 will light

It is not possible to check the status of motion sequence data during playback or recording, or during Pattern Set Play.

Convenient functions for editing patterns

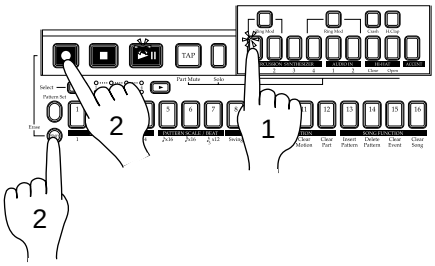
If you wish to save the pattern you edit using these functions, you must perform the Write operation before selecting a different pattern or turning off the power.

Erasing rhythm pattern data from a part

To erase the rhythm pattern data for the selected part, you can use one of the following two methods in addition to turning each of the sixteen step keys off.

• Erasing data during playback or recording (Erase)

1. Press a part key to select the part from which you wish to erase data.
2. During playback or recording, hold down the Shift key and press the Rec key. As long as you continue holding these keys, data will be automatically be erased from the selected part.

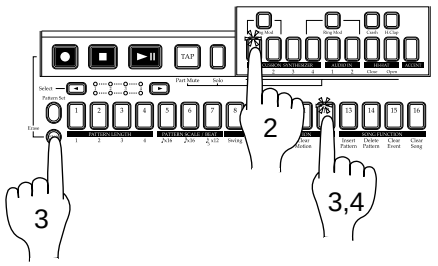


• Erasing all data from a part (Clear Part)

This operation erases all rhythm pattern and motion sequence data at once.

1. If the pattern is playing, press the Stop/Cancel key to stop playback.
2. Press a part key to select the part whose data you wish to erase.
3. Hold down the Shift key and press step key 12 (**Clear Part**). (Key 12 will blink.)
4. Once again press step key 12 to clear the data.

To cancel without clearing the data, press the Stop/Cancel key.



Moving data within a part (Move Data)

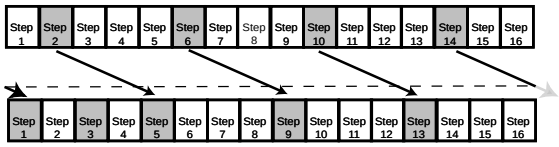
The Move Data operation lets you move the rhythm pattern and motion sequence data of a part backward or forward by –16...+16 steps.
You can use this when you want to change the starting location of a pattern.

1. If the pattern is playing, press the Stop/Cancel key to stop playback.
2. Hold down the Shift key and press step key 9 (**Move Data**). (Key 9 will blink.)
3. All of the part keys will blink. Each time you press a part key, it will alternate between dark and blinking. Press the part keys so that only those parts that you wish to move are blinking. (You can select two or more parts.)
4. A number will blink in the display. Rotate the dial to select the number of steps and the direction (positive or negative) in which the data will be moved.
5. Press the blinking step key 9 to execute the Move Data operation.

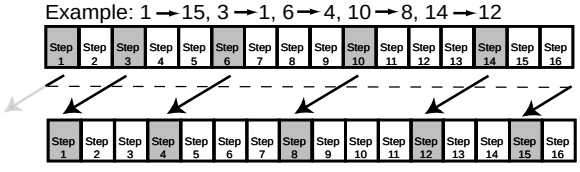
To cancel without executing, press the Stop/Cancel key.

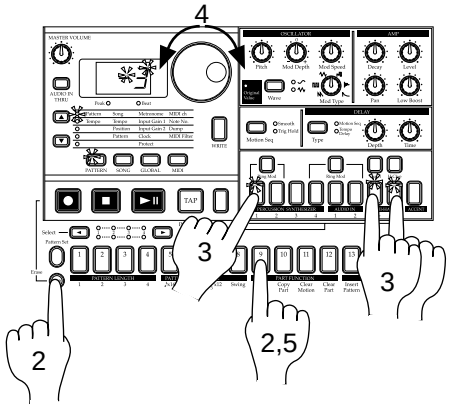
The Move Data operation applied to all steps of the selected part. Data that is moved beyond the last step of the pattern will "wrap around" to the first step. For example if 64-step data is moved for "**5**" steps, the data that was in steps 60 through 64 will be moved to steps 1 through 5. Likewise, data that is moved earlier than the first step of the pattern will "wrap around"to the last step. For example if 48-step data is moved for "**–3** " steps, the data that was in steps 1 through 3 will be moved to steps 46 through 48.

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





Copying a part (Copy Part)

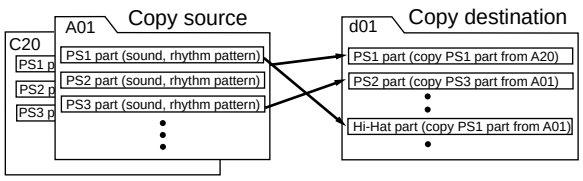
You can copy the sound settings and rhythm pattern data (including motion sequence) from another part to the selected part.

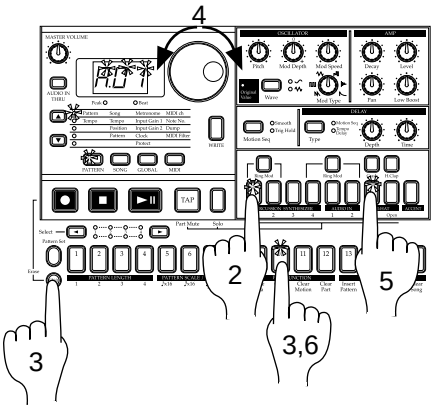
1. If the pattern is playing, press the Stop/Cancel key to stop playback.
2. Press a part key to select the copy destination part (the key will light).
3. Hold down the Shift key and press step key 10 (**Copy Part**). (Key 10 will blink.) The display will begin blinking.
4. Rotate the dial to select the copy source pattern number.
5. Use the part keys to select the copy source part. (The copy source key will blink, and the copy destination key will be dark.)
6. Press step key 10 once again to execute the Copy Part operation.

To cancel, press the Stop/Cancel key.

When copying between parts of the same type, the sound and the rhythm pattern data will both be copied. However when copying between parts of a different type, the sound will not be copied.
For details on data copy within the same part, refer to the following section "Data Copy within a part."

Example





Data Copy within a pattern

Phrase pattern data (including motion sequence data) that you create for a pattern of length 1 can be copied to the steps of lengths 2...4. This function is a convenient way to create a pattern that uses similar phrases repeatedly.

1. Create a pattern with a length of 1, and Write it into memory. (Refer to p.32 "Saving a pattern.")
2. At this point, the same data as in length 1 will automatically be copied to the steps of lengths 2...4.
3. Change the pattern length to the desired length. (Refer to p.26, "Length, Scale/Beat settings.")
4. The steps of lengths 2...4 will contain the same data as length 1. Now you can edit the data of lengths 2...4 to complete the pattern.

The data will be copied in a similar way when the pattern length is 2 or 3 (refer to the table below). If you shorten a pattern you create, the data will be copied according to the shortened length.

Copy Pattern data

Pattern length	Pattern data before writing	Pattern data after writing
1	A — — —	A A A A
2	A B — —	A B A B
3	A B C —	A B C C

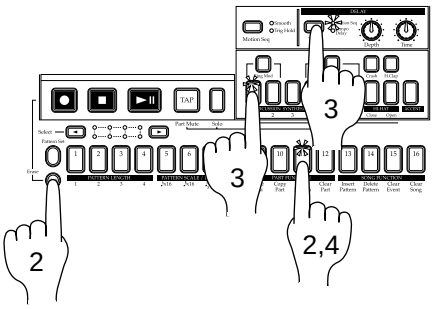
The data that is copied automatically when you Write a pattern does not force the pattern length (1--4) to change. If the length is 4, data will not be copied within the pattern.

Erasing part or delay motion sequence data (Clear Motion)

This operation erases all the motion sequence data of a part or of the delay.

1. If the pattern is playing, press the Stop/Cancel key to stop playback.
2. Hold down the Shift key and press step key 11 (**Clear Motion**). (Key 11 will blink.)
3. Press the part key of the part whose motion sequence you wish to erase, or press the **DELAY** type key. (The part key or the **DELAY** motion sequence LED will blink.)
4. Press step key 11 once again to clear the motion sequence data. If you selected the **DELAY** motion sequence, both the Depth and the Time motion sequences will be erased.

To cancel, press the Stop/Cancel key.



Pattern Set

Pattern Set is a function that lets you assign your favorite patterns to each of the sixteen step keys, and switch them at the touch of a key.
During playback, you can successively switch patterns to perform a song.
By using the Select key in conjunction with this to switch pattern set groups, you can register and select 16 x 4 (total of 64) patterns.

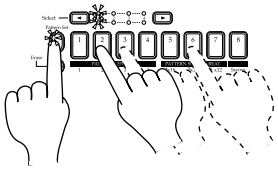
Using Pattern Set to perform (Pattern Set Play)

Press the Play/Pause key to begin playback.
Hold down the Pattern Set key and press a step key to switch to the pattern that was registered for that step key.
By holding down the Pattern Set key and pressing a Select key, you can switch to a different group of registered pattern sets. The pattern set group will be indicated by the lower line of the Select LEDs (red).
By holding down the Shift key and pressing the Pattern Set key, you can hold the Pattern Set function (the key will light).
To defeat the Hold condition, press the Pattern Set key once again (the key will go dark).

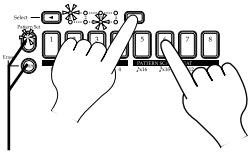
Example

Step key / Select LED	1	2	3	4	5		14	15	16
1	A01	A20	B03	B04	A51		A20	B43	B61
2	C21	C23	C56	C64	C28		C21	A07	A08
3	B01	B02	B04	B62	A01		A05	A45	A64
4	D01	D02	D03	D04	D05		D07	D08	D09

Pattern set 1



Pattern set 3



Hold down the Shift key and press the Pattern Set key to hold the function

In Pattern Set Play, the timing at which patterns will change, tempo adjustment, and functions such as Reset & Play etc. are the same as for Pattern Play.

Pattern Set cannot be used during recording. When you enter recording (ready) mode, Pattern Set will be cancelled.

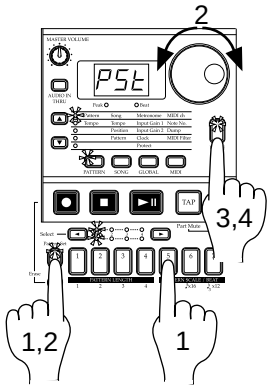
Registering a pattern for Pattern Set

1. With playback stopped, continue pressing the Pattern Set key (or Hold it) and press the step key for the location that you wish to register.
2. While continuing to press the Pattern Set key (or while Hold is still in effect), rotate the dial to select the pattern number that you wish to register. Release the Pattern Set key (or defeat Hold) to complete the registration process.
3. To save the pattern set registrations, press the Stop/Cancel key to stop playback. Continue pressing the Pattern Set key, and press the Write key (the Write key will blink).
4. The display will blink "**PSt**." Press the Write key once again to save the data.

To cancel, press the Stop/Cancel key.

If the Global mode Memory Protect setting is on, it will not be possible to write the data. In this case, turn off the Global mode Memory Protect setting before you execute the Write operation.

Never turn the power off during the Write operation. This may damage the data.

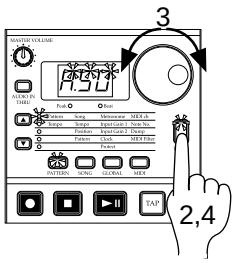


Saving a pattern (Write)

If you wish to keep the pattern data that you create, you must perform this Write operation. When you perform the Write operation, "Data Copy within a pattern" (p.30) will occur automatically, depending on the pattern length.
If you intentionally want to discard your edits and revert to the original pattern data, simply select a different pattern without Writing.

1. If the pattern is playing, press the Stop/Cancel key to stop playback. Use the cursor keys to make the parameter select LEDs indicate **Pattern**.
2. Press the Write key once (the key will blink). The pattern number will blink in the display.
3. Rotate the dial to select the writing destination pattern number.
4. Press the Write key once again to write the data.

To cancel, press the Stop/Cancel key.

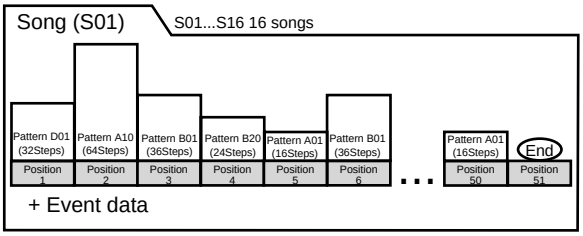


If the Global mode Memory Protect setting is on, it will not be possible to Write. In this case, you must turn off the Global mode Memory Protect setting before you execute the Write operation.

Never turn off the power during the Write operation. This can damage the data.

5. Song mode

A song consists of patterns arranged in the desired order of playback.
You can create and save up to sixteen songs in the internal memory of the **ER-1**. In addition to pattern playback, songs can also record rhythms and knob movements.
Press the Song mode key to enter Song mode.



Selecting a song

Song **S01...S16**

Use the cursor keys to make the parameter select LEDs indicate **Song**.
Rotate the dial to select one of the sixteen songs **S01** to **S16**.

Setting the playback tempo

Tempo **20...300**

• Using the dial to set the tempo

Use the cursor keys to make the parameter select LEDs indicate **Tempo**. Rotate the dial to set the tempo.

• Using the tap tempo key to set the tempo

While the song is playing, strike the Tap key three times or more in succession at the desired tempo. The **ER-1** will calculate the interval at which the Tap key was pressed, and will set the tempo accordingly. The tempo can be set in the same way even when playback is stopped.

When you use the cursor keys to make the parameter select LEDs indicate **Tempo**, and the tempo you modified will appear in the display.

If you modify the tempo of a song but then switch to another song without Writing, the first song will return to its original tempo. If you wish to keep the tempo setting you modified, you must perform the Write operation (refer to p.37 "Saving a song").

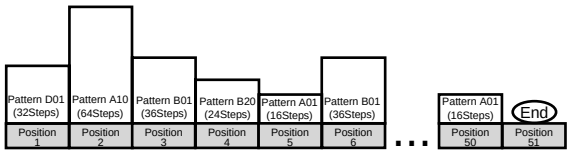
Playing a song (Song Play)

Press the Play/Pause key to begin playing the song. The song will begin playing from the pattern of the currently selected position. When the song ends, playback will automatically stop.

It is not possible to save edited sounds in a song. Please use Pattern mode to edit sounds.

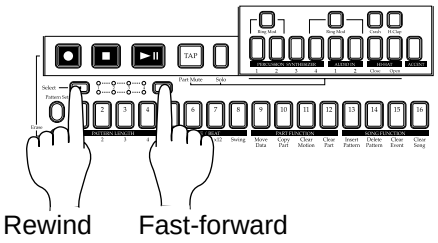
What is Position?

"Position" refers to the playback or recording order of the patterns within the song, and is the unit by which you edit a song.



Fast-forward or rewind a song

During song playback, you can use the select keys to fast-forward or rewind. To fast-forward, press the [►] select key. To rewind, press the [◄] select key.



Switching songs

It is not possible to switch songs during playback, but it is possible to select the song number beforehand. If you select a song number during playback, the display will blink to indicate the selected number. When the currently playing song ends, playback will stop, and the newly selected number will now be steadily lit. Press the Play/Pause key to playback the selected song.

Playing from the beginning of a position or song (Reset & Play)

While a song is playing, you can hold down the Shift key and press the Play/Pause key to start playback from the beginning of the pattern specified for the currently-playing position. In addition, you can press the Play/Pause key while a song is playing to pause the playback, and then hold down the Shift key and press the Play/Pause key to playback from the beginning of the song.

Creating a song

Creating a song from scratch

Here's how to create a song by placing patterns in the desired order.

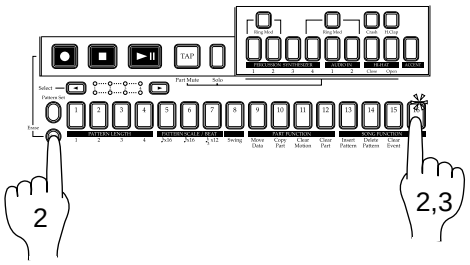
If you switch to a different song while editing a song, your edited data will be lost. If you wish to keep the edited song, you must perform the Write operation to save the song data.

Erasing song data (Clear Song)

1. If the song is playing, press the Stop/Cancel key to stop playback. Then select the song that you wish to erase.
2. Hold down the Shift key and press step key 16 (**Clear Song**). (Key 16 will blink.)
3. Press step key 16 once again to erase the song data.

To cancel, press the Stop/Cancel key.

If you erase the song data by mistake, rotate the dial to re-select the song before you save it. This will restore the data to its original condition.



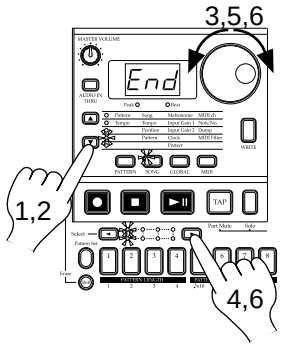
Specifying a pattern for each position

Position	001...256
Pattern	A01...d64

Here's how to specify the pattern for each position.

1. Use the cursor keys to make the parameter select LEDs indicate **Position**. Notice that the display indicates "**001**."
2. Use the cursor keys to make the parameter select LEDs indicate **Pattern**.
3. Rotate the dial to select the pattern that you wish to assign to position "**001**."
4. Press the select [▶] key to advance to the next position. The display will indicate "**End**."
5. Rotate the dial to select the pattern. The pattern you select here will be the pattern for position "**002**."
6. When you select a pattern for the "**End**" position, the "**End**" will move to the next position. Repeat steps 4 and 5 to assign as many patterns as you wish.

To playback the completed song from the beginning, press the Play/Pause key once, and then press the Stop/Cancel key. Alternatively, use the cursor keys to make the parameter select LEDs indicate **Position**, and rotate the dial or use the select keys to set the position to "**001**." Then press the Play/Pause key.



If you wish to view the order of patterns in the song, or to re-select the pattern for a specific position, make the parameter select LEDs indicate Pattern. Each time you press a select key, you will move to the next or previous position. You can use the dial to change the pattern number that is displayed.

Use the select keys to move through the positions, and use the dial to select patterns

Pattern A01 - A13 - A22 - b01 - b30 - b60 - End

Alternatively, you can make the parameter select LEDs indicate Position, and use the dial or select key to select the position you wish to check. Then make the parameter select LEDs indicate Pattern, and view or change the pattern.

At the Position setting use the select keys or dial to move; then select Pattern and use the dial to select or view the pattern.

Position	001	002	003	004	005	006	007
Pattern	A01	A13	A22	b01	b30	b60	End

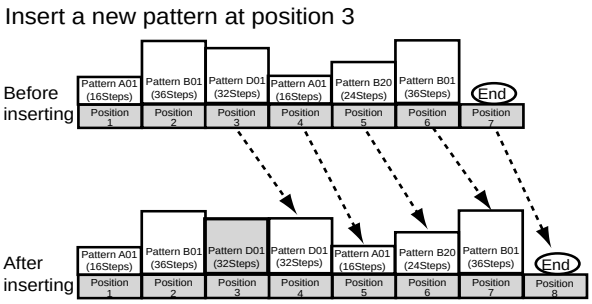
Editing a song

You can insert a new pattern into a song, or delete an existing pattern. You can also add knob movements or your own performance to a song.

If you wish to keep the edited song, you must perform the Write operation. If you select a different song or turn off the power without performing the Write operation, the song will return to the state in which it was before you edited it.

Inserting a pattern at a specified position (Insert Pattern)

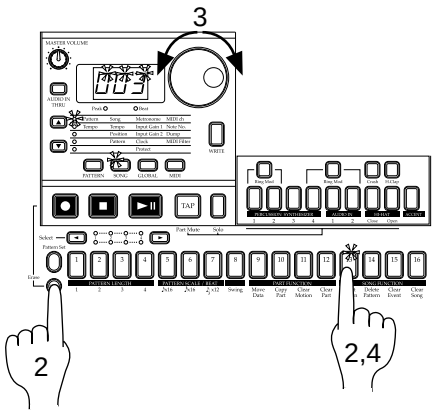
You can insert a pattern at a specified position, and subsequent patterns will be moved backward (toward the end of the song).



1. If the song is playing, press the Stop/Cancel key to stop playback.
2. Hold down the Shift key and press step key 13 (**Insert Pattern**). (The 13 key will blink.)
3. The position indication in the display will blink. Rotate the dial to select the position at which you wish to insert a pattern. (For example if you wish to insert a pattern into position 3. make the display blink "**003**.")
4. Press step key 13 once again, and a pattern will be inserted in front of that position.

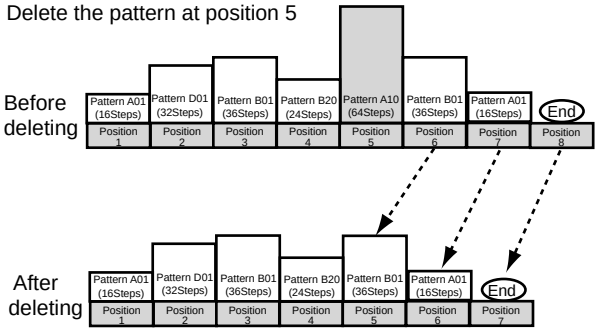
To cancel, press the Stop/Cancel key.

The pattern that is inserted will be the pattern which had previously been at that position. Now you can specify the desired pattern for the position that was inserted.
Data following the inserted pattern will be moved backward.



Deleting a pattern from a specified position (Delete Pattern)

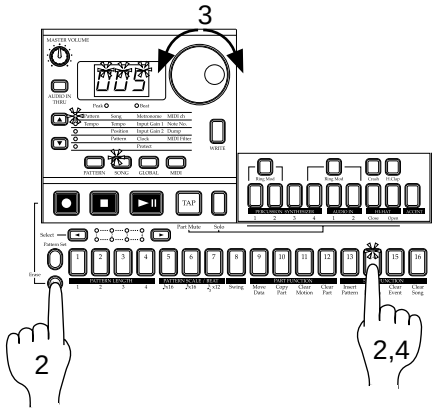
You can delete a pattern from a specified position, and subsequent patterns will be moved forward (toward the beginning of the song).



1. If the song is playing, press the Stop/Cancel key to stop playback.
2. Hold down the Shift key and press step key 14 (**Delete Pattern**). (The 14 key will blink.)
3. The position indication in the display will blink. Rotate the dial to select the position from which you wish to delete the pattern. (For example if you wish to delete the pattern from position 5. make the display blink "**005**.")
4. Press step key 14 once again, and the pattern will be deleted.

To cancel, press the Stop/Cancel key.

When you delete a pattern, the event data (refer to the following page) at that position will also be deleted.
Data following the inserted pattern will be moved forward.



Changing the pattern for a specific position

1. If you are playing back, press the Stop/Cancel key to stop playback.
2. Use the cursor keys to make the parameter select LEDs indicate **Position**.
3. Use the dial to select the position that you wish to modify.
4. Use the cursor keys to make the parameter select LEDs indicate **Pattern**.
5. Use the dial to select the pattern that you wish to assign to the selected position.

If you wish to audition the patterns as you select one, press the Pattern mode key to enter Pattern mode, and listen to the playback. To return to Song mode, press the Stop/Cancel key to stop playback, and then press the Song mode key.

Recording performances or knob movements into a song (Event Recording)

In addition to putting patterns together to create a song, Song mode also allows you to realtime-record knob movements and your performances on the part keys.
Recording this data in Song mode is referred to as "event recording."
Four types of musical data (event data) can be recorded by event recording.
· Pressing the part keys
· Using Part Mute or Part Solo
· Movements of the knobs or switches (only for the selected part)
· Tempo

Event recording allows you to record two or more types of events in the same area, as long as the events are played at the same time.

Event recording always rewrites the previous data ("replace recording"), and when you record your performance, any event recording data previously in that area will be erased. (It is not possible to layer event recording over the same area.)

1. Select the song on which you wish to record events.
2. Use the cursor keys to make the parameter select LEDs indicate **Position**.
3. Use the dial or the Select keys to move to the position at which you wish to begin recording.
4. Press the Rec key, and then press the Play/Pause key to begin event recording.
5. Use the part keys and/or the knobs to perform.
6. Press the Stop/Cancel key to stop event recording.

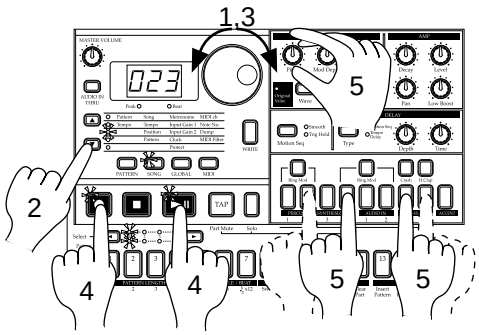
If the musical data of the song coincides with the event-recorded data, the song data will be given priority during playback.

Knob movements that are event-recorded in Song mode will always playback in a way that corresponds to the **Smooth** type motion sequence setting (and not the **Trig Hold** type).

If you wish to save the event recording, you must perform the Write operation. If you switch songs or turn off the power without performing the Write operation, the recorded performance will be lost.

If during playback you operate a knob that had been event-recorded, playback of the events of that knob will be cancelled until it reaches the next position. However if you modify the tempo that was event-recorded, the tempo will be cancelled until the end of the song.

After rewinding a song, it may not be possible to playback exactly according to the event data.

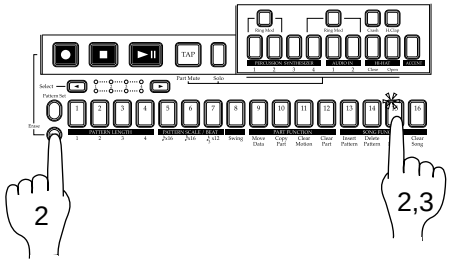


Deleting event data from a song (Clear Event)

This operation deletes all event data from the selected song.

1. If the song is playing, press the Stop/Cancel key to stop playback.
2. Hold down the Shift key and press step key 15 (**Clear Event**). (The 15 key will blink.)
3. Press step key 15 once again to clear the data.

To cancel, press the Stop/Cancel key.



Checking for song event data

If event data has been recorded in a song, holding down the Shift key and pressing the Motion Sequence key will make step keys 13 through 16 light.

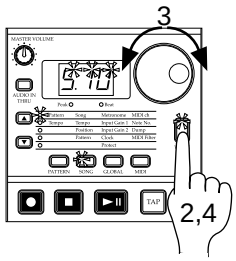
It is not possible to check for event data during playback or recording.

Saving a song (Write)

If you wish to save a song that you create, you must perform this Write operation.
If you decide not to save the song data you create, simply switch songs without performing the Write operation.

1. If the song is playing, press the Stop/Cancel key to stop playback. Use the cursor keys to make the parameter select LEDs indicate **Song**.
2. Press the Write key once (the key will blink). The song number will blink in the display.
3. Rotate the dial to select the writing destination song number.
4. Press the Write key once again to save the data. (The key will light, and then go dark.)

To cancel, press the Stop/Cancel key.



If the Global mode Memory Protect setting is on, it will not be possible to write the data. In this case, turn off the Global mode Memory Protect setting before you execute the Write operation.

Never turn the power off during the Write operation. This may damage the data.

6. Global mode

In Global mode you can set parameters such as Metronome or Protect. Press the Global mode key to enter Global mode.
To execute Global mode, press the previous mode key.

The settings you make in Global mode will be cancelled if you turn off the power without Writing. If you wish to save the settings you make, you must perform the Write operation (refer to p.39 "Saving the settings you modify in Global mode").

Metronome settings

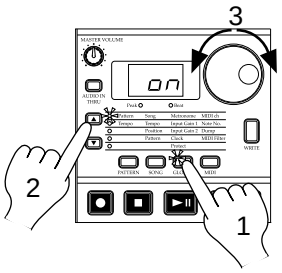
Metronome oFF, r-0, r-1, r-2, on

Specify how the metronome will function. If you will be using realtime recording to create a pattern from scratch, it is convenient to use the metronome. The metronome will sound at quarter-note timing.

oFF: The metronome will not sound.
r-0: The metronome will sound only during recording (when the Rec and Play/Cancel keys are lit).
r-1: When recording, a one-measure count will be sounded before recording begins. The metronome will sound only during recording.
r-2: When recording, a two-measure count will be sounded before recording begins. The metronome will sound only during recording.
on: The metronome will sound during playback and record ing. There will be no count before recording begins.

1. Use the cursor keys to make the parameter select LEDs indicate **Metronome**.
2. Rotate the dial to make the metronome setting.
3. Press the Pattern or Song key to return to the previous mode.

The metronome setting cannot be written. When you turn on the power, it will always be "oFF."



Adjusting the volume of the Audio In

Input Gain 1 (AUDIO IN 1) **0...100**

Input Gain 2 (AUDIO IN 2) **0...100**

These parameters adjust the volume that is input to the Audio In jacks. For the procedure, refer to p.19 "Connecting various sources to the audio inputs" in section 3. Basic Operation (Quick Start).

Synchronizing the ER-1 with external MIDI devices (MIDI Clock)

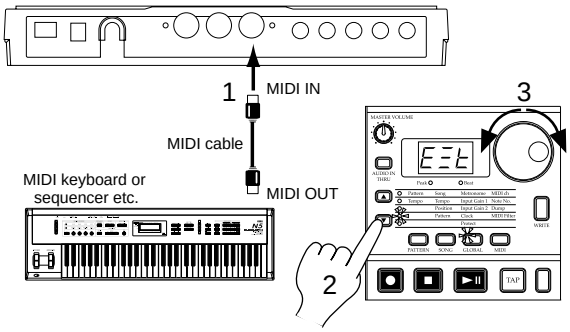
Clock int, Ext

The Global mode **Clock** setting allows the tempo of the **ER-1** to be synchronized with the tempo of an external MIDI device that is able to send or receive MIDI Clock messages.
For details on synchronization settings of your external MIDI device, refer to the owner's manual for your device.

Even if you set Clock to Ext, the ER-1 will operate with its own internal clock if no MIDI Clock messages are being received at its MIDI IN connector.

Synchronizing the ER-1 to a master external MIDI device (Ext)

1. Use a MIDI cable to connect the **MIDI IN** connector of the **ER-1** to the MIDI OUT connector of the external MIDI device (sequencer or synthesizer etc.).
2. Use the cursor keys to make the parameter select LEDs indicate **Clock**.
3. Rotate the dial to select "**Ext**" (external clock).
4. Make settings on the external MIDI device (master) so that it will transmit MIDI Clock messages.
5. Return to Pattern mode or Song mode.
6. When you start the sequencer of the external MIDI device, the **ER-1** will simultaneously begin playback.
7. If MIDI Clock data is being received at the **MIDI IN** connector, you can make the ER-1 playback in synchronization with the external MIDI device by pressing the **ER-1**'s Play/Pause key.



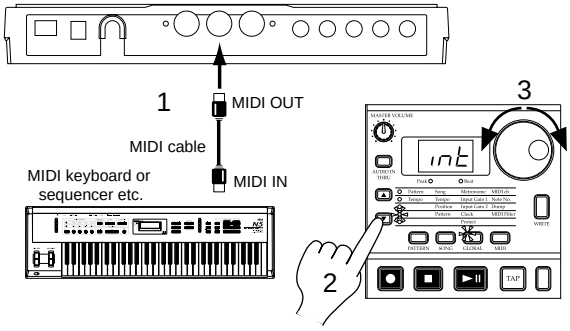
If the MIDI Clock parameter is set to "Ext" and the ER-1 is synchronized to the external MIDI clock, it will synchronize to the tempo of the external sequencer, and it will not be possible to change the tempo on the ER-1.

If a MIDI Start message is received while the ER-1 is already playing in synchronization with MIDI Clock, the ER-1 will begin playback from the beginning of the currently playing pattern (or in the case of a song, from the beginning of the pattern that was playing when the Start message was received).

Synchronizing an external MIDI device to the ER-1 as master (int)

1. Use a MIDI cable to connect the **MIDI OUT** connector of the **ER-1** to the MIDI IN connector of the external MIDI device (sequencer or synthesizer etc.).
2. Use the cursor keys to make the parameter select LEDs indicate **Clock**.
3. Rotate the dial to select "**Int**" (internal clock).
4. Make settings on the external MIDI device (slave) so that it will receive MIDI Clock messages.
5. When you start playback on the **ER-1**, the external MIDI device will begin playback in synchronization.

When you perform the Reset & Play operation to begin playback from the beginning of the pattern, the ER-1 will transmit only a MIDI Start message.



Protect settings (Memory Protect)

Protect **on, oFF**

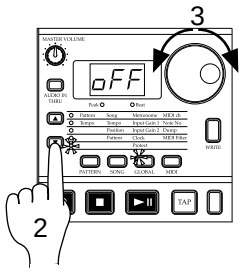
This is the memory protect setting for Pattern mode and Song mode. When protect is "**on**," the Write key will not function, and it will not be possible to rewrite data or to receive MIDI data dumps.
If you wish to save data you edited or to receive a data dump, you must turn protect "**oFF**."

1. Press the Stop/Cancel key to stop playback.
2. Use the cursor keys to make the parameter select LEDs indicate **Protect**.
3. Rotate the dial to turn Protect "**on**" or "**oFF**."

If you wish to save the Protect setting, perform the Global mode Write operation.

This setting applies to Pattern mode and Song mode. In Global mode and MIDI mode, it is always possible to Write data regardless of the Protect setting.

With the factory settings, this will be "on."



Saving the settings you modify in Global mode (Write)

When you perform the Write operation in either Global mode or MIDI mode, the modified settings of both modes will be saved.

Here's how to save the Global mode settings. If you wish to save the settings you modify, you must perform this Write operation. Each time you turn on the power, those settings will be in effect. Conversely, if you do not wish to save the modified settings, simply turn off the power without performing the Write operation.

1. Press the Stop/Cancel key to stop playback.
2. Press the Global mode (or MIDI mode) key.
3. Press the Write key once (the key will blink). The display will indicate "**---**."
4. Press the Write key once again to write the data.

To cancel, press the Stop/Cancel key.

In Global mode or MIDI mode, it is always possible to execute the Write operation, regardless of the Protect settings (see the previous section).

Never turn off the power while data is being written to memory. This may damage the data.

7. MIDI mode

In MIDI mode you can make MIDI-related settings, and dump exclusive data. Press the MIDI mode key to enterMIDI mode. To exit MIDI mode, press the mode key for the previous mode.

If you turn off the power without Writing, the settings you made in MIDI mode will be lost. If you wish to keep the modified settings, you must execute the Write operation (refer to p.41 "Saving the settings you modify in MIDI mode").

MIDI channel settings (MIDI ch)

MIDI ch 1...16

This sets the MIDI channel. The same MIDI channel is used for both transmission and reception.With the factory settings this will be "**10**"

1. Use the cursor keys to make the parameter select LEDs indicate **MIDI ch**.
2. Rotate the dial to select the channel.

Setting the MIDI note number for each part (Note No.)

Note No. C-1...G9

Here you can specify the MIDI note number for each part.
If you specify the same note number for two or more parts, the sounds of those parts will be played simultaneously when that note is received from an external MIDI device.

1. Use the cursor keys to make the parameter select LEDs indicate **Note No**.
2. Press the part key whose note number you wish to change (the key will light).
3. Rotate the dial to select the note number.

The factory settings are as follows.

Part	Note number	Note name
Percussion Synth 1	C2	36
Percussion Synth 2	D2	38
Percussion Synth 3	E2	40
Percussion Synth 4	F2	41
Audio In 1	G2	43
Audio In 2	A2	45
Hi-hat (Close)	F#2	42
Hi-hat (Open)	A#2	46
Crash	C#3	49
Handclap	D#2	39

The correspondence between note names and note numbers will differ by manufacturer. Please refer to the owner's manual for the device you have connected.

Transmit/receive dump data(MIDI Data Dump)

Dump Ptn, SnG, ALL

Transmission

Here's how system exclusive data (pattern data, song data, or Global mode settings) can be transmitted from the **ER-1** to an external MIDI data filer or computer connected to the **MIDI OUT** connector.

1. Connect the **MIDI OUT** connector of the **ER-1** to the MIDI IN connector of an external MIDI device that is able to receive MIDI data dumps (another **ER-1**, or a computer that is running a MIDI data filer program or editing program, etc.).
2. Set the MIDI channel of the external MIDI device and the **ER-1** to match. However when transmitting to a data filer, it is not normally necessary to match the MIDI channel.
3. Use the cursor keys to make the parameter select LEDs indicate **Dump**.
4. Rotate the dial to select the data that you wish to transmit.
   Ptn: All pattern data
   SnG: All song data
   ALL: All data (pattern data, song data, Global data)
5. Press the Play/Pause key to transmit the data dump.

Reception

Here's how **ER-1** system exclusive data can be received from an external MIDI data filer or computer connected to the **MIDI IN** connector.

1. Connect the **MIDI IN** connector of the **ER-1** to the MIDI OUT connector of the external MIDI device that will transmit the MIDI data dump (another **ER-1**, or a computer that is running a MIDI data filer program or editing program, etc.).
2. Set the MIDI channel of the external MIDI device and the **ER-1** to match. However when transmitting from a data filer, it is not normally necessary to match the MIDI channel.
3. Use the cursor keys to make the parameter select LEDs indicate **Dump**.
4. Transmit the data dump from the external MIDI device.

Details on data dumps are provided in the MIDI implementation chart of the ER-1.
Consult your local Korg distributor for more information on MIDI implementation

Do not touch the keys of the ER-1 while a data dump is in progress.

When the parameter select LEDs indicate Dump, system exclusive data can be transmitted or received even if the MIDI Filter parameter "E" is set to "-."
If the MIDI Filter parameter "E" is set to "O," system exclusive data can be transmitted or received in any mode.

MIDI filter settings

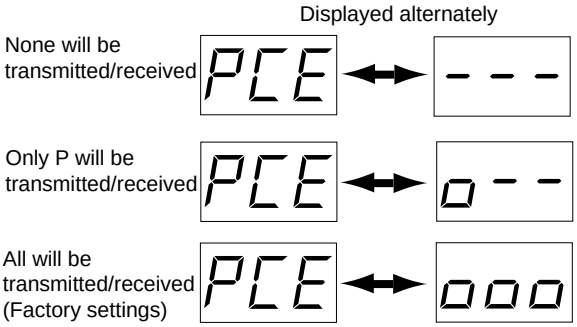
Here you can select the types of MIDI message that will be transmitted and received.
For each character "**PCE**" in the display, select "**O**" if you want that type of message to be transmitted and received, or select "**-**" if you do not want that type of message to be transmitted or received.

1. Use the cursor keys to make the parameter select LEDs indicate **MIDI Filter**.
2. Rotate the dial to select the combination of message types that will be transmitted and received; "O" allows transmission and reception, and "-" disables it.

   P: Transmission/reception of Program Change, Bank Select, and Song Select messages.

   C: Transmission/reception of Control Change messages.

   E: Transmission/reception of Exclusive data. However when the parameter select LEDs indicate **Dump**, Exclu sive data can be transmitted/received regardless of this setting.



Saving the settings you modify in MIDI mode (Write)

When you perform the Write operation in either MIDI mode or Global mode, the modified settings of both modes will be saved.

Here's how to save the MIDI mode settings. If you wish to save the settings you modify, you must perform this Write operation. Each time you turn on the power, those settings will be in effect. Conversely, if you do not wish to save the modified settings, simply turn off the power without performing the Write operation.

1. Press the Stop/Cancel key to stop playback.
2. Press the MIDI mode (or Global mode) key.
3. Press the Write key once (the key will blink). The display will indicate "**---**."
4. Press the Write key once again to write the data.

To cancel, press the Stop/Cancel key.

In Global mode or MIDI mode, it is always possible to execute the Write operation, regardless of the Protect settings (see the previous section).

Never turn off the power while data is being written to memory. This may damage the data.

8. Appendices

About MIDI

1. MIDI channels

Similarly to a television, data can be received when the channel of the receiving device matches the channel on which the data is being transmitted.
The transmit/receive channel of the ER-1 is set by the MIDI Channel setting in MIDI mode.

2. Note-on/off

When you strike a key pad, the note number assigned to that pad and a velocity value will be transmitted as a Note-on message [9n, kk, vv] (n: channel, kk: note number, vv: velocity). On the ER-1, the vv: velocity value is determined by the Accent level. When you release a pad, a note-off message [8n, kk, vv] is transmitted. However, most devices do not transmit note-off velocity, and neither does the ER-1. When note-on/off messages for a note number assigned to a part are received, that part will sound.
Note-on/off messages are transmitted and received on the MIDI channel that you specify in MIDI mode.

3. Switching patterns

When you switch patterns, Program Change message and Bank Select messages [Bn, 00, mm] (control change #00), [Bn, 20, bb] (control change #32) (mm: bank number upper byte, bb: bank number lower byte, together allowing 16,384 banks to be selected) will be transmitted.
If a Program Change is received on the MIDI channel of the ER-1, patterns will be switched within the same group (e.g., from A01 to A02). After a Bank Select has been received, the next-received Program Change will be able to switch to a pattern of a different group (e.g., from A01 to C01).
Transmission and reception of Program Change messages can be controlled by the MIDI mode MIDI Filter setting.

Bank Select			
MSB	LSB	Program Change	Pattern number
00	00	0...127	A01...b64
00	01	0...127	C01...d64

4. Using NRPN messages to edit

NPRN (Non Registered Parameter No.) messages are messages to which manufacturers are free to assign their own functions. On the ER-1, NRPN messages are assigned to all knobs and keys of the Synthesizer section other than Motion Seq. and Delay Type.
To edit, first 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 no.) to select the parameter. Then transmit Data Entry (MSB) [Bn, 06, mm] and Data Entry (LSB) [Bn, 26, vv] (control change #06 and 38) (mm, vv: upper and lower bytes of the value, together expressing 16,384 steps) to set the value. The ER-1 uses only the MSB value (128 steps) of the Data Entry message.

5. If "stuck notes" occur

If for some reason a note fails to stop sounding, you can usually switch modes to stop the sound. If a note played via MIDI fails to stop, you can simultaneously press the Shift key and the Stop/Cancel key to perform a MIDI Reset.

6. About synchronization

Two or more sequencers can be connected via MIDI and made to playback in synchronization. Messages used for synchronization (realtime messages) include Timing Clock [F8], Start [FA], Continue [FB], and Stop [FC]. In a synchronized system, one synthesizer (the master) will transmit these messages, and the other sequencer(s) (the slave(s)) will receive these messages. The slave devices will playback according to the tempo specified by the Timing Clock messages transmitted by the master. Twenty-four Timing Clock messages are transmitted for each quarter note. When the ER-1's Global mode parameter Clock is set to INT, it will be the master device, and will transmit these realtime messages. When Clock is set to EXT, it will be the slave device, and will receive these realtime messages. However even when Clock is set to EXT, the ER-1 will operate according to its own internal clock if no Timing Clock messages are being received. The Start message specifies when playback will begin. When the Start/Pause key is pressed on the master device, it will transmit a Start message. Slave devices that receive this Start message will synchronize to the Timing Clock messages subsequently received, and will begin playback from the beginning. If the Start/Pause key is pressed on the master devices when it is paused, the master will transmit a Continue message. When a slave device receives the Continue message, it will resume playback from the point where it is currently stopped. If the Stop key is pressed during playback, the master will transmit a Stop message. Slave devices will stop playback when they receive a Stop message.

7. Synchronization in Song mode

In Song mode, the ER-1 can transmit and receive Song Select and Song Position Pointer messages. When you switch songs, a Song Select [F3 ss] message will be transmitted (ss: song number, where one of 128 songs can be selected. On the ER-1 you can select 16 songs.) If the ER-1 receives a Song Select message in Song mode, it will switch songs. Transmission and reception of Song Select messages can be restricted by the MIDI Filter settings of MIDI mode. If you change the current position on the master device (i.e., the device whose Clock is set to INT) when the song is stopped, a Song Position Pointer message [F2 pp pp] will be transmitted. (pp: the number of MIDI beats from the beginning of the song; i.e., the number of Timing Clocks divided by six.) Song Position Pointer indicates the location at which the sequencer is currently stopped. When Song Position Pointer is received in Song mode by a slave device (i.e., a device whose Clock is set to EXT), it will change the location at which its song is currently stopped to match the location of the master. However on the ER-1, the length of each pattern may be different, so the master and slave will not necessarily be in the same location. When the Start/Pause key is pressed on the master device, a Continue message is transmitted, and the song will begin playback from the currently selected position. When the slave device receives the Continue message, it will synchronize to the Timing Clock messages and begin playback from the current point in the song. In the same way as synchronizing the playback from the beginning of the song, you can specify

the location at which playback will start, and then playback in synchronization. If you use the dial or Select keys to fast-forward or rewind while the song is playing, Song Position Pointer messages will not be transmitted. Be aware that if you perform these operations during synchronized playback, the synchronization will be lost. Also, even if Song Position Pointer messages are received during playback, the playback location will not change.

8. About system exclusive messages

Manufacturers are free to use system exclusive messages in any way they choose, and these messages are used mainly to transmit and receive parameters that are specific to particular devices, such as sound data and editing data.
The system exclusive message format of the ER-1 is [F0, 42, 3n, 51, ... F7] (n: exclusive channel).
However, some system exclusive messages have been defined for use in a specific way, and these are called "universal system exclusive messages."
Of the several different universal system exclusive messages, the ER-1 supports the following one.
- When an Inquiry Message Request [F0, 7E, nn, 06, 01, F7] is received, the ER-1 will transmit an Inquiry Message [F0, 7E, nn, 06, 02, (nine bytes), F7] that means "I am a Korg ER-1 and my system version is ..."

9. Transmitting sound setting data (Data Dump)

Song, Pattern, or All (song, pattern, global) data can be transmitted as MIDI exclusive data, and stored on an external device. This data is transmitted by the MIDI mode Dump command. The channel used for transmission and reception of this data is set by the MIDI mode MIDI ch setting. Data dumps are also transmitted when a Data Dump Request message is received.

10. Editing sounds etc.

By sending MIDI exclusive data dumps, you can rewrite all patterns or individual programs. By using NRPN messages in Pattern mode, you can edit the knobs that are active for each part.

Troubleshooting

The display does not light up when I press the Power switch!

- Is the AC adapter connected?
- Is the AC adapter plugged into an AC outlet?

No sound!

- Is your amp, mixer, or headphones connected to the correct jack? (Can you playback a pattern? If so, the connections are correct.)
- Are your amp or mixer powered-on and set correctly?
- Is the master volume knob of the ER-1 raised?

Sound does not stop!

- When a pattern is played back, it will continue playing repeatedly. When you are finished listening to a pattern, press the Stop/Cancel key (p.12, 13).

Sounds or operations are different than when I edited!

- Did you perform the Write operation after editing? (p.32, 37) After you have edited, you must perform the Write operation before switching songs or patterns, or turning off the power.
- Did you edit the selected pattern or song after writing it?

Can't control via MIDI!

- Is the MIDI cable or special cable connected correctly?

When playing the ER-1 from an external device

- Has the ER-1 been set to receive MIDI data on the channel on which the data is being transmitted? (p.40)
- Is the MIDI mode MIDI Channel parameter set to the desired channel? (p.40)
- Are the MIDI mode MIDI Filter settings set appropriately? (p.41)

When playing an external device from the ER-1

- Does the MIDI channel of the ER-1 match the MIDI channel of the receiving device? (p.40)

Can't write a pattern or song!

- Is the Global mode Protect setting turned "on"? (p.39)

Striking a part key does not play the specified drum sound!

- After editing the sound of a part, did you perform the Write operation? (p.32)
- Is the Ring Mod key on? (p.25)
- Is a motion sequence operating? (p.28)

Error messages

Er.1 Data could not be written.

Er.2 When writing a song to a different song number, the maximum number of recordable events was exceeded. Use the Clear Event operation to erase unwanted events from the song.

Er.9 Protect was turned "on" for the memory into which you attempted to write data. In Global mode, turn the Protect setting "oFF" (p.39).

Full When event-recording on a song, event data memory has filled up. If you attempt to record additional events, the "memory full" message will appear immediately. Either use Clear Event to delete unwanted events from a song, or record blank data to clear the memory.

Restoring the factory set data

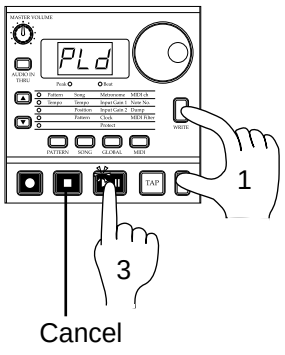
The pattern and song data with which the ER-1 is shipped from the factory is referred to as the "preloaded data," and you can restore this preloaded data back into the memory of the ER-1. When you do this, the patterns you created and the songs which use these patterns will be erased, and replaced by the preloaded data. If you wish to keep the patterns and songs you created, you must save the data on a data filer etc. before you load the preloaded data.

1. While simultaneously pressing the Solo key and the Write key, turn on the power.
2. The display will indicate "**PLd**," and the Play/Pause key will blink.
3. To load the factory preloaded data, press the blinking Play/Pause key.

This will require apporoximately 30 seconds.
To cancel, press the Stop/Cancel key.

When loading is complete, the ER-1 will return to its initial state. After several seconds the display will indicate pattern number "**A01**," and the ER-1 will be in Pattern mode.

Never turn off the power during the Load process. The data may be damaged.



Specifications

System: Analog modeling + PCM

Number of parts: 11 parts
- Synthesizer parts x 4
- PCM parts x 4
- Audio In parts x 2
- Accent part

Memory capacity: 256 patterns, 16 songs

Effects: Delay
- Normal, Motion Sequence, Tempo Delay

Sequencer: Pattern
- Maximum 64 steps per part
- Motion sequence
- One parameter for each part, 64 events

Song
- Maximum 256 patterns per song
- Maximum 35,700 events for event recording

Connectors: PHONES
- Stereo phone plug
- Nominal level: 21 mW + 21 mW (32 ohms)

OUTPUT (L/MONO, R)
- Phone jacks: mono x 2
- Nominal output level: -10dBu
- Output impedance: 1 k-ohms

AUDIO IN (phone jack: mono x 2)
- Nominal input level: -10dBu
- Input impedance: 47 k-ohms

MIDI (IN, OUT, THRU)

Power supply: DC 9 V (AC adapter included)

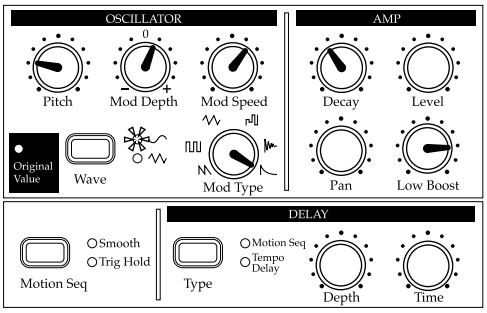
Power consumption: 8 W

Dimensions: 300 (W) x 222.5 (D) x 53.4 (H) mm (with rubber feet)

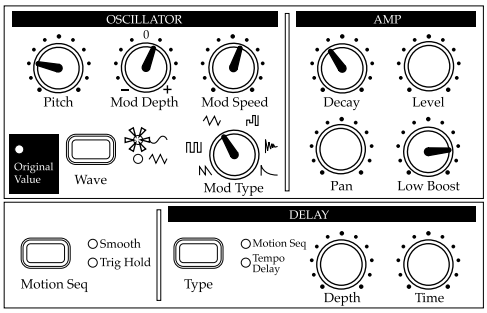
Weight: 1.25 kg

Example sounds

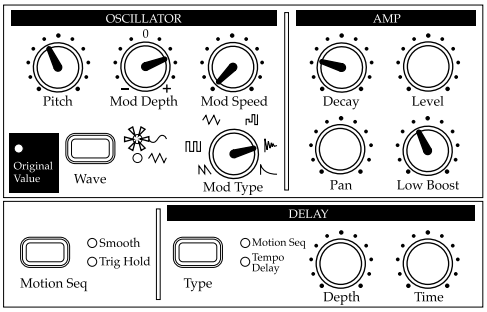
Analog Kick 1



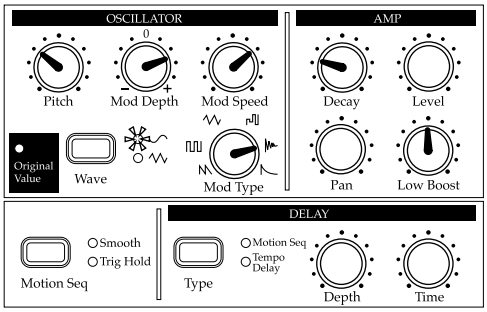
Analog Kick 2



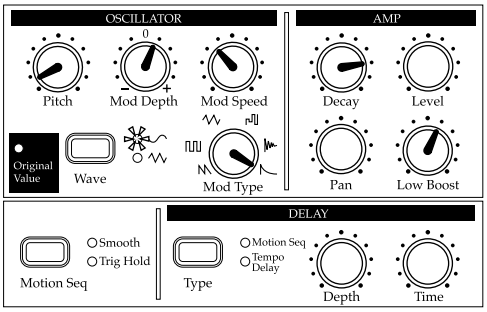
Analog Snare 1



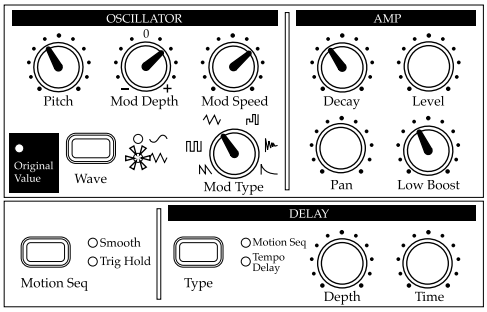
Analog Snare 2



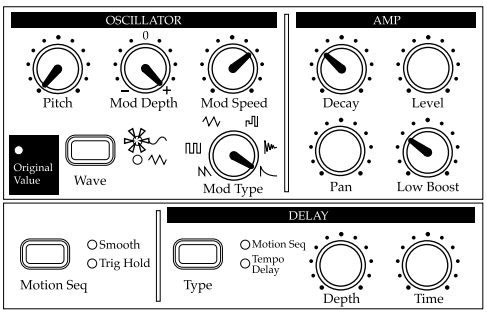
Electric Tom



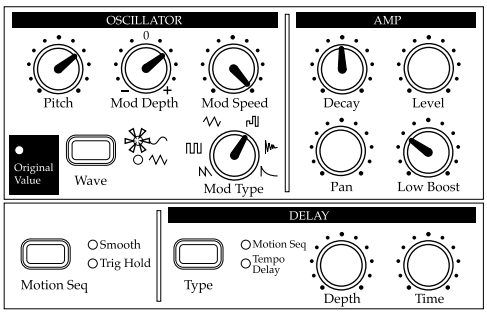
Analog Cowbell



Zap

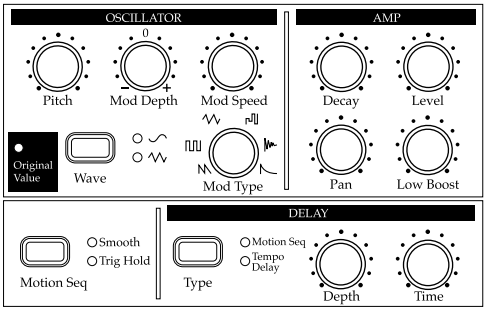


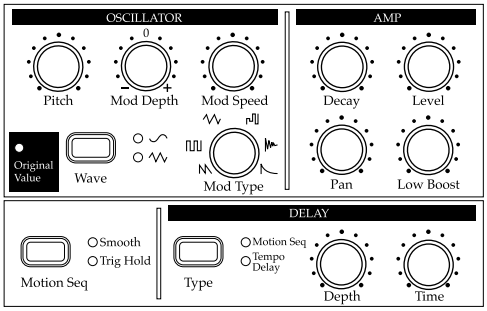
Noise Shot

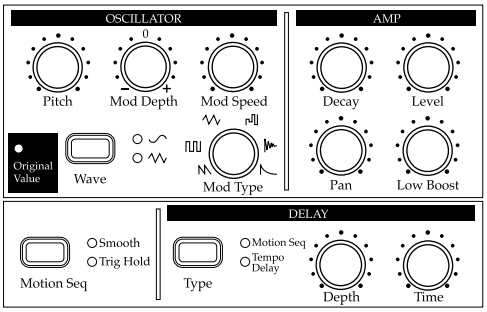


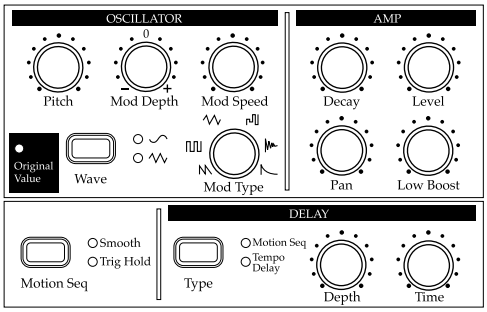
Blank chart

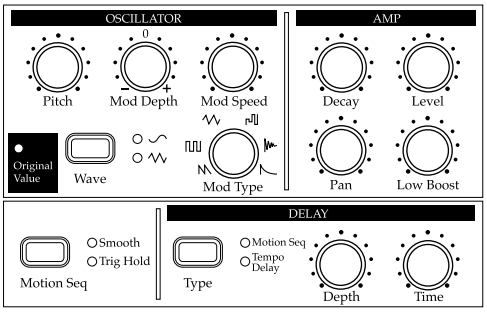
When you have created a sound that you like, you can store the knob and key locations in this page.

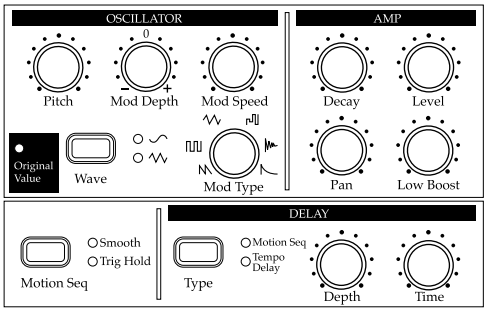


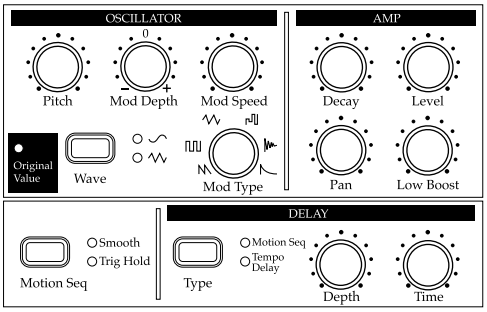


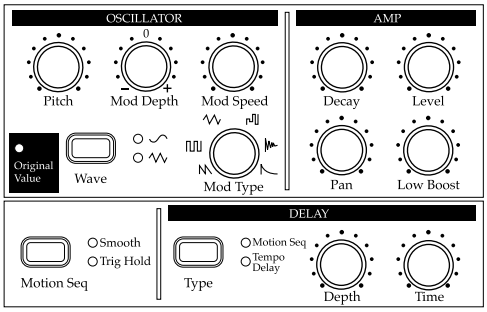


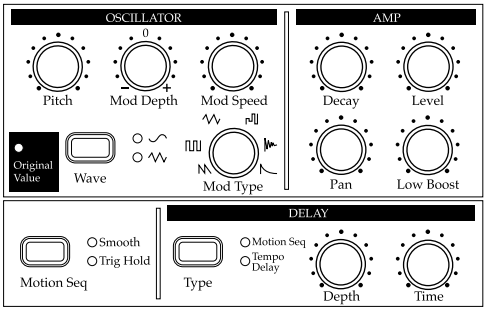








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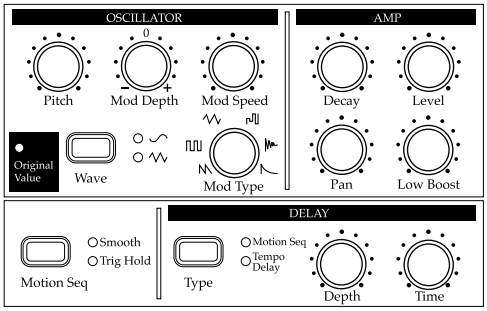
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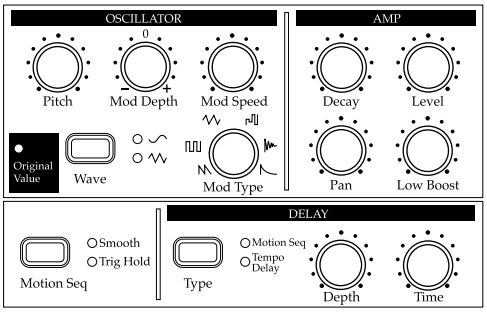
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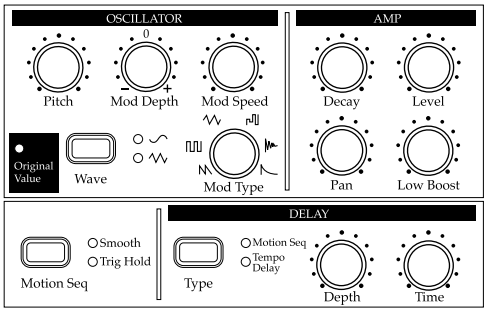
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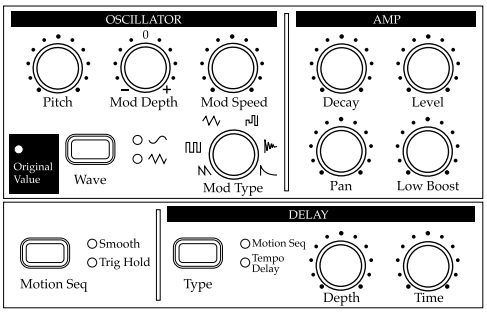
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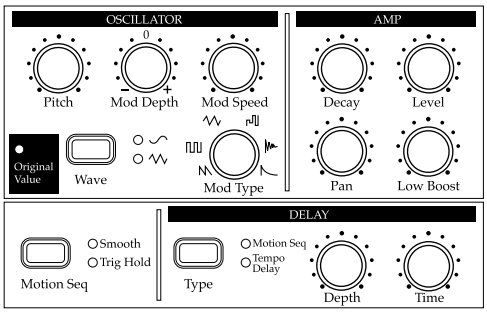
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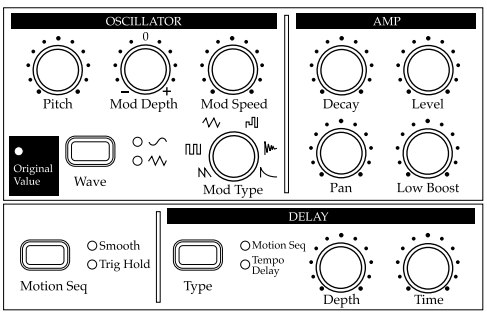
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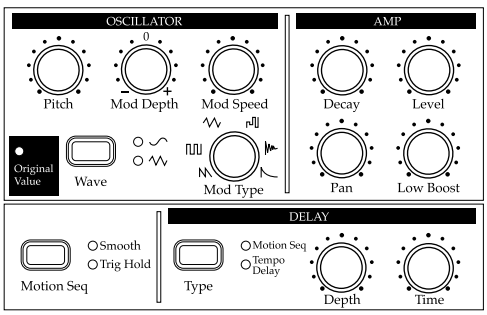
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Pattern Name List

* Patterns and initial data for the demo song are assigned to bank D.
* The first pattern of each style is assigned to step keys 1...16 of the Pattern Set function.

A Bank

No.	Pattern Name	Style	Tempo
A01	Electro Live	Electro	135
A02	Analog Perc	Electro	130
A03	Old Skewl	Electro	129
A04	Fun with Knobs	Electro	135
A05	Come Inside	Electro	130
A06	Downsize	Electro	135
A07	Fantasy Girl	Electro	134
A08	Zoop 1	Electro	128
A09	Planet	Electro	125
A10	Whiney	Electro	121
A11	Big Beat Electro	Electro	120
A12	8 bit groove	Electro	130
A13	IDM	Electro	130
A14	Renegade	Electro	125
A15	Pitch Motion	Electro	103
A16	Bells	Electro	120
A17	Electric Eel	Electro	127
A18	Electroflux	Electro	125
A19	Slither 1	Electro	120
A20	Flubbery	Electro	125
A21	This Goes Out...	Electro	120
A22	Electribe Vibe	Electro	125
A23	Chem Beat	Electro	130
A24	Minimal 1	Techno	137
A25	Crazy Cymbal	Techno	145
A26	Dorian Gray	Techno	125
A27	Hard	Techno	140
A28	Hard fill	Techno	140
A29	Zoop 2	Techno	120
A30	Detroit	Techno	140
A31	Aceeeed	Techno	140
A32	Prog Trance	Techno	140
A33	Quagmire	Techno	150
A34	Minimal 2	Techno	138
A35	Weirdo Beat	Techno	122
A36	Minimal 3	Techno	125
A37	I need a Voice 1	Techno	132
A38	Stereo Minimal	Techno	130
A39	Light Tek	Techno	120
A40	Zoop 3	Techno	114
A41	Face	Techno	100
A42	Ultra Sound	Techno	120
A43	Kid March	Techno	120
A44	Industrial Techno	Techno	120
A45	Driving Forward	Techno	112
A46	Flashback	Techno	100
A47	Old Skins	Techno	100
A48	Commander E	Techno	106
A49	Zapper	Techno	120
A50	BoomBat	Techno	125
A51	Industry	Techno	140
A52	Zoop 4	Techno	138
A53	Satellite	Techno	143
A54	Cutting Edge 1	Techno	149
A55	Cutting Edge 2	Techno	149
A56	Electric Frog	House	134
A57	Gimme the Beat	House	140
A58	Module House	House	130
A59	In the Park	House	134
A60	Ping Pong	House	134
A61	Happy House	House	140
A62	Handbag	House	135
A63	Dub Side	House	125
A64	Deep House	House	130

B Bank

No.	Pattern Name	Style	Tempo
B01	Can't Stop	House	150
B02	Step it Out	House	135
B03	Hard House 1	House	134
B04	Housy Cows	House	138
B05	Hard House 2	House	138
B06	Hard House 3	House	138
B07	Bangin' Garage	Garage	134
B08	Garumba	Garage	130
B09	Face In The Place	Garage	134
B10	Speed Garage 1	Garage	134
B11	Speed Garage 2	Garage	134
B12	Speed Garage 3	Garage	134
B13	DNB Garage	Garage	130
B14	Hip House	Garage	134
B15	Garage House 1	Garage	126
B16	Garage House 2	Garage	126
B17	Garage House 3	Garage	126
B18	Pork Scratchin'	Garage	130
B19	Da Boss	Garage	134
B20	T-Step	Garage	140
B21	Two Step Garage 1	Garage	130
B22	Two Step Garage 2	Garage	130
B23	You've got a Groove	Hip Hop	96
B24	Acid Jazz	Hip Hop	88
B25	Funk Loops	Hip Hop	96
B26	Roots of Africa	Hip Hop	96
B27	What's da' Frequency?	Hip Hop	90
B28	For the Jeeps	Hip Hop	90
B29	Daytime RnB	Hip Hop	90
B30	Smoove	Hip Hop	90
B31	Clap your Hands	Hip Hop	99
B32	Simple Groove	Hip Hop	90
B33	Zappin' Hop	Hip Hop	92
B34	Gang Rap	Hip Hop	90
B35	Oakland Grooves 1	Hip Hop	96
B36	Oakland Grooves 2	Hip Hop	96
B37	White Bread	Hip Hop	95
B38	Boppers	Hip Hop	100
B39	Electro NJS	Hip Hop	100
B40	Dazz	Hip Hop	100
B41	Carnival	Hip Hop	112
B42	Electric Funk	Hip Hop	109
B43	T-roys Groove 1	Hip Hop	110
B44	T-roys Groove 2	Hip Hop	110
B45	T-roys Groove 3	Hip Hop	110
B46	Rapid Beat	Hip Hop	114
B47	Check it out	Hip Hop	118
B48	Big Beat 1	Big Beat	122
B49	So what?	Big Beat	115
B50	Big Beat 2	Big Beat	129
B51	Motown Beat	Big Beat	122
B52	Pip Pop	Big Beat	115
B53	8Beat Soul	Big Beat	120
B54	Manchester Rock	Big Beat	122
B55	80's Ballad	Big Beat	120
B56	Robot Bomb 1	Big Beat	115
B57	Robot Bomb 2	Big Beat	115
B58	Breath Beat	Big Beat	124
B59	Bridge	Big Beat	126
B60	Spiral Kit	Big Beat	120
B61	Break Beats	Big Beat	114
B62	Digital Rock Beat	Big Beat	128
B63	Electro Rock	Big Beat	133
B64	Hard Core DNB 1	Big Beat	172

C Bank

No.	Pattern Name	Style	Tempo
C01	Hard Core DNB 2	Big Beat	185
C02	Gabber	Big Beat	200
C03	Drum 'n' Bass 1	Drum'n'Bass	170
C04	Drum 'n' Bass 2	Drum'n'Bass	170
C05	Dime Droppin'	Drum'n'Bass	155
C06	Drum 'n' Bass 3	Drum'n'Bass	175
C07	Drum 'n' Bass 4	Drum'n'Bass	175
C08	Air Shot Bass 1	Drum'n'Bass	166
C09	Air Shot Bass 2	Drum'n'Bass	166
C10	Drum 'n' Bass 5	Drum'n'Bass	185
C11	Drum 'n' Bass 6	Drum'n'Bass	175
C12	Simple 'n' Bass	Drum'n'Bass	175
C13	Electro Step	Drum'n'Bass	170
C14	Jungle 1	Drum'n'Bass	165
C15	Jungle 2	Drum'n'Bass	180
C16	Bass Motion	Drum'n'Bass	160
C17	Jump Up 1	Drum'n'Bass	170
C18	Jump Up 2	Drum'n'Bass	170
C19	The Tribe is Electric	Drum'n'Bass	185
C20	Slither 2	Drum'n'Bass	185
C21	Tech Step 1	Drum'n'Bass	185
C22	Tech Step 2	Drum'n'Bass	175
C23	Big Bristol	Trip Hop	80
C24	Get Creative!	Trip Hop	91
C25	Slowmotion	Trip Hop	72
C26	Chill Out	Trip Hop	80
C27	What'cha Gonna Do	Trip Hop	92
C28	Slow Trip 1	Trip Hop	67
C29	Slow Trip 2	Trip Hop	72
C30	Thinking Time	Trip Hop	85
C31	Tense Atomosphere	Trip Hop	96
C32	Trip Hip Hop	Trip Hop	80
C33	Dub Trip	Trip Hop	85
C34	After Hours	Trip Hop	78
C35	Binary Samba	Other	120
C36	Technova	Other	78
C37	Arablip	Other	100
C38	No Problem	Other	95
C39	Ragga Soul	Other	102
C40	Marching Reggae	Other	136
C41	Lounge 1	Other	90
C42	Lounge 2	Other	130
C43	Triplet Beat	Other	72
C44	VintageBox (Disco)	Vintage	120
C45	VintageBox (16Beat)	Vintage	120
C46	VintageBox (Rock1)	Vintage	112
C47	VintageBox (Rock2)	Vintage	130
C48	VintageBox (Pop)	Vintage	120
C49	VintageBox (Bossa1)	Vintage	70
C50	VintageBox (Bossa2)	Vintage	70
C51	VintageBox (Swing)	Vintage	76
C52	Miami Bass	Vintage	175
C53	Try Again? 1	S.E.	120
C54	Try Again? 2	S.E.	120
C55	Insert 25 Cents	S.E.	120
C56	Network Operator	S.E.	132
C57	Faust	S.E.	145
C58	Modulation	S.E.	142
C59	On A Trip	S.E.	70
C60	Very Wet	S.E.	128
C61	Bleep Bloop	S.E.	125
C62	Digital Storm	S.E.	101
C63	I need a Voice 2	S.E.	132
C64	Warp	S.E.	115

Song Name List

S01: Electribe Remix Part1
S02: Electribe Remix Part2
S03: STATION X Troyster Mix

S08...S16**:** Blank

S04: Bass Burn
S05: Macrocaustic

S06: Elect-Rave
S07: Dugan's Midnight X-press

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[Rhythm machine]

ELECTRIBE R·ER-1 MIDI Implementation Chart

1999.2.3

Function ...		Transmitted	Recognized	Remarks
Basic channel	Default	1 – 16	1 – 16	Memorized
	Changed	1 – 16	1 – 16	
Mode	Default		3	
	Messages	×	×	
	Altered	**********		
Note number :	True voice	0– 127 **********	9n, v=1– 127	Specified by MIDI mode for each part
Velocity	Note ON	9n, v=30 – 127	9n, v=1 – 127	Transmitted velocity is specified by Accent level
	Note OFF	×	×	
After Touch	Polyphonic	×	×	
	Channel	×	×	
Pitch Bender		×	×	
Control Change	0,32	O	O	Bank Select(MSB,LSB) *P
	98, 99	O	O	NRPN(LSB,MSB) *C
	8	O	O	Data Entry(MSB) *C
Program Change :	True#	O 0 – 127 **********	O 0 – 127 0 – 127	Transmitted/received in Pattern mode *P
System Exclusive		O	O	Can always be transmitted/received in the MIDI Dump page *2 *E
System Common	: Song Pos	O	O	Transmitted/received in Song mode *1
	: Song Sel	O 0 – 15	O 0 – 15	*P
	: Tune	×	×	
System Realtime	: Clock	O	O	*1
	: Commands	O	O	*1
Aux Messages	: Local ON/OFF	×	O	
	: All Notes OFF	×	O123-127	
	: Active Sense	O	O	
	: Reset	×	×	
Notes		*P, *C, *E: Sent and received when MIDI mode MIDI Filter (P, C, E) 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.		

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

❋ Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.

ELECTRIBE·R ER-1 Owner's Manual

NOTICE

KORG products are manufactured under strict specifications and voltages required by each country. These products are warranted by the KORG distributor only in each country. Any KORG product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

KORG Ⓔ②

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1104 ETH ***Printed in Japan***