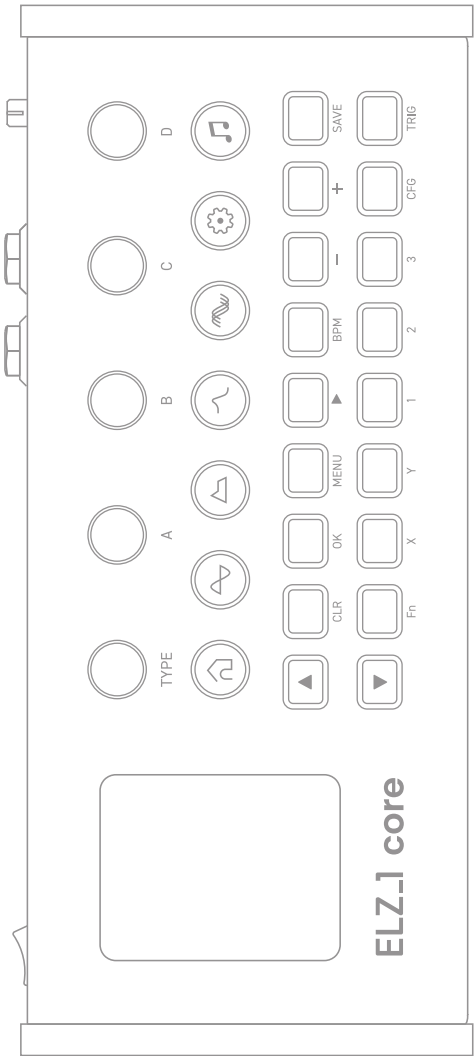
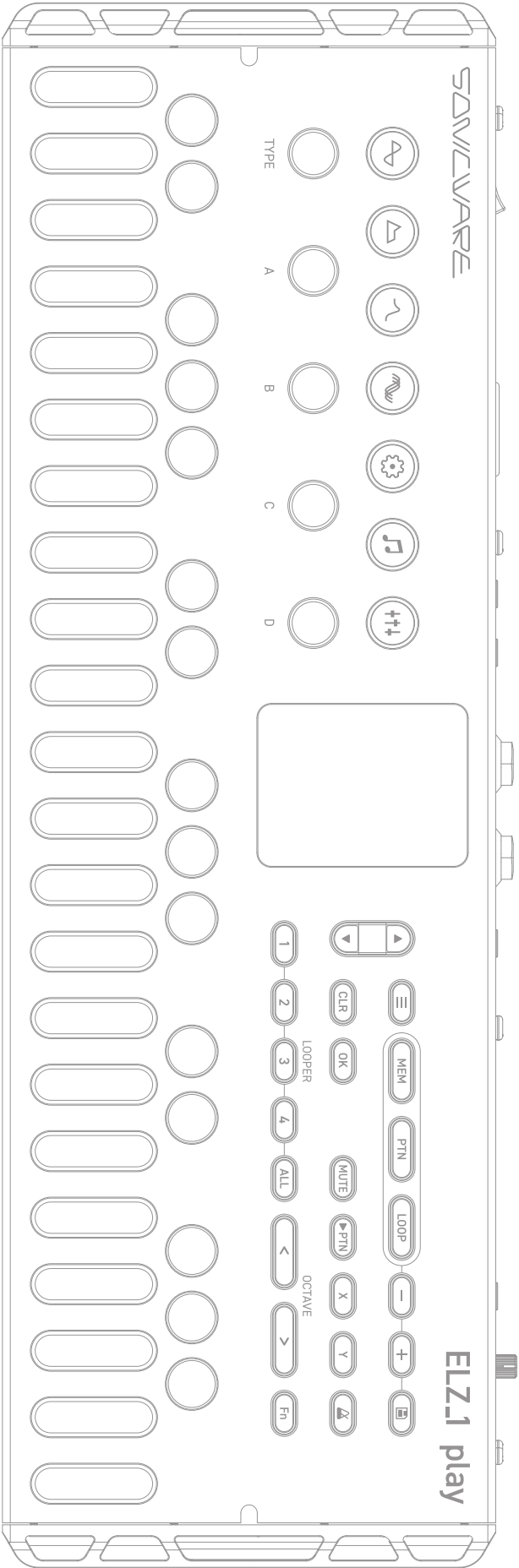


ELZ.1 play

Reference Manual
Rev.5



FCC regulation warning (for USA)

Note : 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.

Legal disclaimers

Sonicware Inc. (hereafter, " SONICWARE") strives to assure that this document is as accurate and current as possible, but will bear no responsibility for any compensation claims or losses due to content included in this document. Moreover, information in this document could be changed without notice. SONICWARE retains the right to change product specifications and programs at any time. SONICWARE will bear no responsibility for any errors depicted in this document.

SONICWARE will bear no responsibility for any losses resulting from the use of this information, functions or performance, regardless of contracts, lack of caution or other conduct.

Copyrights and registered trademarks

- SONICWARE is a registered trademark of Sonicware Inc.
- MIDI is a registered trademark of the Association of Musical Electronics Industry (AMEI).
- Other company names, product names, standard names and registered trademarks in this document are the property of their respective owners.
- All the trademarks and registered trademarks in this document are not intended to violate the copyrights of their owners, but rather are included for the purpose of identification only.
- Recording from copyrighted sources, including audio files, CDs, records, videos, tapes, broadcasts, streamed content and works of art, without permission of the copyright holder for any purpose other than personal use is prohibited by law.
- Sonicware Inc. will not assume any responsibility related to infringements of copyrights.
- The original wavetable data of Microwave/PPG is licensed from Waldorf Music GmbH.
- The contents built into or bundled with this product (including PCM sample data, audio data, sound and pattern program data, etc.) are either copyrighted by Sonicware Inc. or used under license.

Music created or performed using these contents with this product may be freely recorded and distributed.

However, it is strictly prohibited to sublicense, transfer, sell, resell, redistribute, lend, rent, lease, transmit, upload to a server, or enable downloading from a server any part or all of the contents in their original or modified form.

It is also strictly prohibited to use these contents in competing products (including but not limited to hardware products or sample libraries).

Important safety precautions

You must read the following precautions in order to use the product safely and prevent accidents.

< WARNING > Failure to follow these precautions could result in serious harm to the user or even death.

- Operation using an AC adapter

Do not do anything that could exceed the ratings of outlets and other electrical wiring equipment.

Disconnect the AC adapter from the outlet when lightning occurs and when not using it for a long time.

- Operation using batteries

Use commercially available 1.5V AA batteries.

Carefully read the precautions of the batteries being used.

Be sure to insert the batteries with +/ – ends oriented correctly.

Do not use new and old batteries together. Do not use batteries of different types together.

Remove the batteries when they will not be used for a long time.

If a leak occurs, thoroughly wipe the battery compartment and battery terminals to remove the leaked fluid.

- Do not open the case and disassemble or modify the product.

- Do not drop, strike or apply excessive force to the unit.

- Do not put liquid on or in the unit.

- Do not put foreign objects into the case.

- Do not use at a loud volume. Doing so could generate loud volumes that might lead to hearing loss.

- When transferring this unit, use the individual packing box and cushioning material that it came with when purchased new.

- When the unit is powered on, do not wrap it in cloth, plastic or other materials.

- Do not step on or apply pressure to the power cord.

- Do not use in the following environmental conditions. Doing so could cause malfunction.

Locations in direct sunlight, environments that exceed 40° C, or near stoves and other heat sources

Locations with extremely low or high temperatures

Locations with extremely high humidity or where the product could become wet

Locations with frequent vibrations or much dust or sand

- If the unit becomes broken or malfunctions, immediately turn the power off and stop using it.

< Usage Precautions >

Failure to follow these precautions could cause injury to the user and physical damage.

- When connecting cables or working with the power of the unit, minimize the input levels of connected devices or turn them off.

- Cleaning

If the screen or the case become dirty, wipe them gently with a soft cloth.

Do not use chemicals, including alcohol, benzene, thinner or cleansers.

If this does not clean them, wipe them with a slightly damp cloth that has been wrung out well.

Do not turn the power on until the product is completely dry.

Introduction

Thank you for purchasing the SONICWARE ELZ_1 series.

The ELZ_1 series is a battery-powered compact synthesizer with multi-synth engines that you can take anywhere for sound creation.

Based on the ELZ_1 released in 2019, it has been reborn with significant upgrades in both hardware and software.

The ELZ_1's form remains unchanged, but with new synth engines, a newly developed 4-track looper that expands performance possibilities, and higher quality stereo speakers, the ELZ_1 play allows for deeper sound creation.

The ELZ_1 play takes you on another journey of sound exploration.

This manual covers firmware v3. In a single volume, it supports two models: the fully featured 37-key ELZ_1 play and the **keyboardless compact model ELZ_1 core**. Both models share the same synth engine and sound architecture. Model-specific differences are indicated by the model designation to the right of each major heading and by the **【Core】** / **【Play】** markers in the text.

In v3, the new **Macro** function lets you move multiple parameters with a single operation, further expanding the expressive range of your sound design. In addition, the ELZ_1 core features a USB Host so you can enjoy linking with external devices in an even more compact form.

Key Features

- 18 synth engines, including the newly added WAVE TABLE engine equipped with original wavetables from Waldorf
 - Layer Mode that allows up to three oscillators to be stacked
 - A total of 49 effects, including 34 insert effects and 15 master effects
 - Newly developed 4-track looper for easy recording, playback, and overdubbing at the touch of a track button
-

Key Features

More refined hardware

Playability has been greatly improved, not only by the stereo speakers built into the side panel and the velocity-sensitive keyboard, but also by the feel of the buttons and encoders on the panel.

Perform live anywhere

Since it's battery-powered and has a built-in speaker, you can create sounds anytime, anywhere, from the top of a majestic mountain to a relaxing cafe by the sea, or even crawling into bed without missing a moment's ideas.

Synchronize with all kinds of devices

By using the USB-C connector in addition to the MIDI/SYNC connectors, you can connect external synthesizers, drum machines, PCs, etc., and synchronize multiple devices to use them together.

It can be synchronized with the Liven series, SmpITrek, and even Teenage Engineering's PO series.

Also, by bridging clock synchronization signals between different types of connectors, such as generating MIDI clock from its SYNC IN connection, it will be useful at the center of live performances.

By expanding MIDI functionality to support MIDI CC, many parameters can now be controlled from external MIDI controllers or automation on your DAW.

Contents

Key Features	4	Envelope types and parameters	42
Names of parts [play]	9	Use separate envelopes for all layers	45
Names of parts [core]	10	Selecting filters and editing parameters	46
PLAY MODE Screen (Macro Control)	11	Filter modulation	50
PLAY MODE Screen (TAG Sort)	12	Use separate filters for all layers	53
EDIT screen	13	Editing effects	54
Connection example	14	Effect types and parameters	55
Basic operations — General	15	Selecting and editing settings	70
Preparing a power supply	15	Voice mode	71
Starting up	15	Unison	72
Turning the unit off	15	Arpeggiator	73
Selecting MEMORY	16	Level and Tune	74
Selecting MEMORY – Play Mode–	16	Editing Sequencer	75
Favorites and patch shortcuts	17	Main operations in sequencer mode	76
Adding a MEMORY to Favorites	18	Step Sequencer	77
Play on the keyboard	19	Step recording	77
Playing held notes	19	Parameters when stopped/step recording	79
Changing the keyboard octave range	19	Real-time recording	81
Setting Key Transpose	20	Selecting and editing MIXER	82
Play Mode	21	Using LOOPER [play]	86
Play Mode Functions	21	Main operations for LOOPER	87
Macro Control Function	22	Record to LOOPER	88
Editing MACRO Assignments	23	Queuing up another looper track while recording	89
TAG Sort Function	24	Recording to another Looper track that set to BAR setting Free while a Looper track is in playback or overdub mode	90
Editing MEMORY TAGs	25	Recording to the other Looper tracks that are set to a BAR settings of AUTO or 1 ~ 64, while a Looper track is in playback or overdub mode	90
TAG List	26	Editing Looper setting	91
Renaming a USER TAG	27	Exiting the LOOPER	93
Recalling and saving MEMORY settings in EDIT mode	28	TRIG Function [core]	94
Recalling MEMORY settings	28	DRUM TRIG SETTING (with an STK DRUMMER layer)	95
Saving settings to MEMORY	29	TEMPO Setting	96
EDIT mode overview	30	Setting metronome	96
Layer Functions	31	MIDI functions	97
Add a Layer	31	Setting MIDI Channels	97
Adjusting Layers	33	Using the MIDI THRU function	99
Selecting synth engines and editing parameters	34	MIDI TRNSPOSE Settings	99
Waldorf Original Wavetable	35		
Built-in Waldorf Original Wavetable	36		
Preset Wavetable	37		
Modulation of synth engine parameters	38		
Selecting and editing envelopes	41		

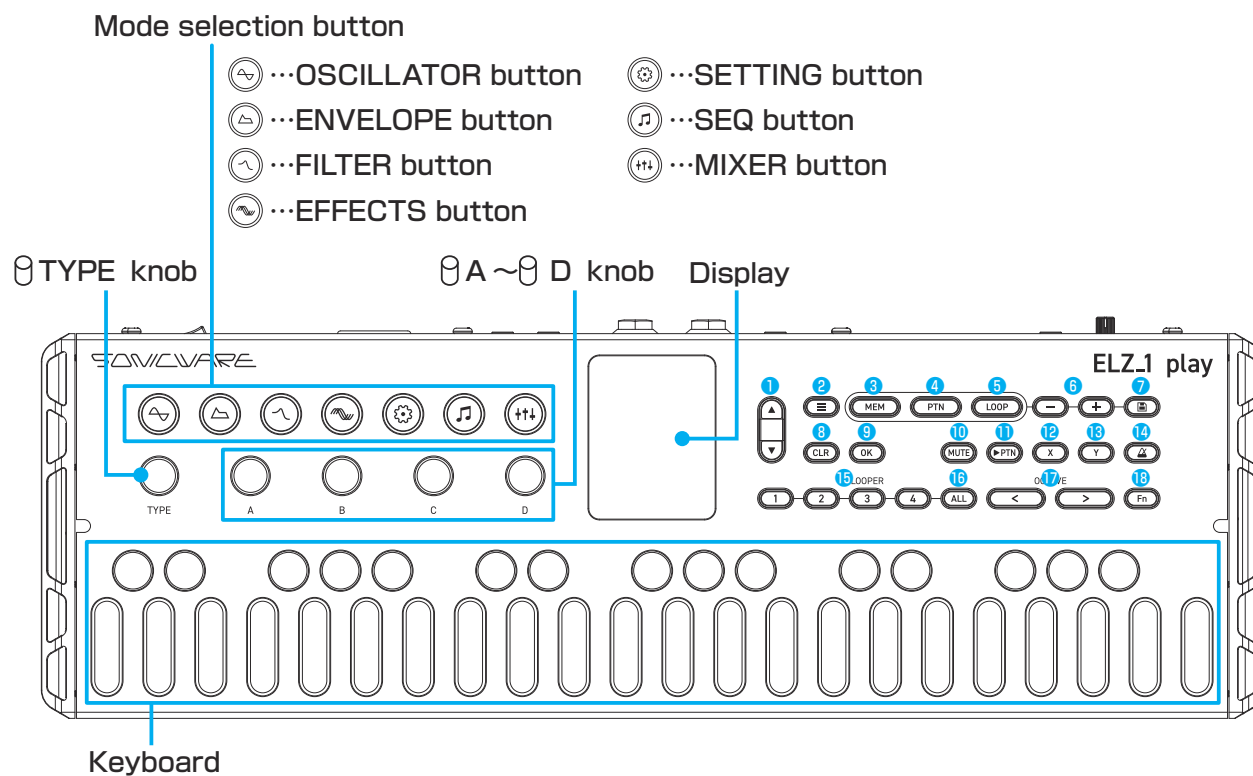
Contents

Setting CLOCK OUT	100	EXPLORER /SiGRINDER	131
SYNC functions	101	Importing waveform data for use with DNA EXPLORER/SiGRINDER	133
Synchronizing with external clock (CLOCK menu)	101	CARD functions	134
AUDIO SYNC functions [play]	102	Accessing the ELZ_1 play/core card from PC/Mac (USB mass storage mode) ..	134
Connecting an external clock source to the ELZ_1 play AUX IN jack	102	Using user waveforms with ZTRINGS ..	135
AUDIO SYNC OUT function	103	Using user waveforms with Wavetable ..	136
Keyboard Settings	104	Using a Drum Kit created on the SmpITrek with STK DRUMMER	137
Adjusting VELOCITY [play]	104	Delete files in the external card storage	138
Changing the Transpose Value	105	Backing up user data in the ELZ_1 play/ core	139
Setting the Pitch Bend Range	106	Restoring backup user data to the ELZ_1 play/core	141
DUAL MONO mode	107	Formatting the external card storage ..	142
Adjusting AUX IN GAIN	108	Changing POWER settings	143
Adjusting MASTER TUNE	109	Setting AUTO POWER OFF	143
Retaining Effect Sounds When Changing MEMORY	110	Changing Battery type [play]	143
Adjusting PLAYMODE SCROLL	111	Changing LCD brightness setting	144
MEMORY management	113	Other Settings	145
Selecting MEMORY	113	Displaying a Warning Dialog When Changing an Edited MEMORY	145
MEMORY TAG Settings	114	Changing the PLAY Mode Background Display	145
Changing MEMORY names	115	Restoring the ELZ_1 play to factory default settings	146
Initializing the settings of one MEMORY	116	System information	147
Exporting MEMORY settings	117	Updating the ELZ_1 play firmware	148
Importing MEMORY settings	118	Troubleshooting	150
Pattern management	119	There is no sound or it is very low	150
Changing PATTERN name	120	The display is dark or blinking	150
Initializing the settings of one Pattern	121	A PC/Mac does not recognize the ELZ_1 play/core	151
Exporting Pattern settings	122	Oscillator List	152
Importing Pattern settings	123	Synth engines and parameters	152
LOOPER management [play]	124	WAVE TABLE	152
Selecting LOOPER	124	Loading Wavetables from the Card	155
Changing LOOPER names	125	LOW-BIT OSC	156
Deleting one LOOPER file	126	STANDARD OSC	157
WAVEDATA management	127	CUSTOM OSC	158
Exporting waveforms for the 8BIT WAVEMEM SYNTH/8BIT WAVEMEM SYNTH (FM MODE)	127	SUPER OSC	159
Importing waveform data for use by the 8BIT WAVEMEM SYNTH/8BIT WAVEMEM SYNTH (FM MODE)	129		
Exporting waveform data used with DNA			

Contents

8BIT WAVENEM SYNTH	160
8BIT WAVEMEM SYNTH (MORPH) ...	162
8BIT WAVEMEM SYNTH (FM MODE) ...	164
8BIT WAVEMEM SYNTH (WARP)	166
8BIT WAVEMEM SYNTH (ADSAR) ...	167
8BIT WAVEMEM SYNTH (TIME)	169
Creating waveforms in the 8BIT WAVEMEM SYNTH (FM MODE)	170
Copying waveforms between MEMORY and Banks	171
DNA EXPLORER	172
SiGRINDER.....	173
Recording audio data for use with DNA EXPLORER and SiGRINDER	174
Recording	174
FM SYNTH	175
MASKED NOISE	176
SAND FLUTE.....	177
ZTRINGS	178
STK DRUMMER	179
STK DRUMMER の MIDI NOTE MAP ...	180
Appendix	181
Figure1. Sound architecture	181
Specs	182

Names of parts [play]



1 UP/DOWN button 2 MENU button 3 MEM button 4 PTN button

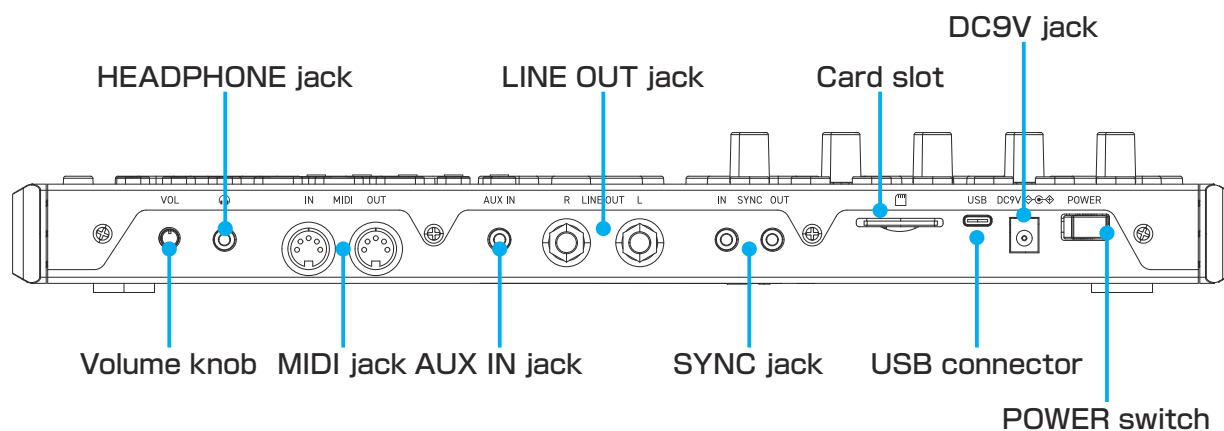
5 LOOP button 6 + / - button 7 SAVE button

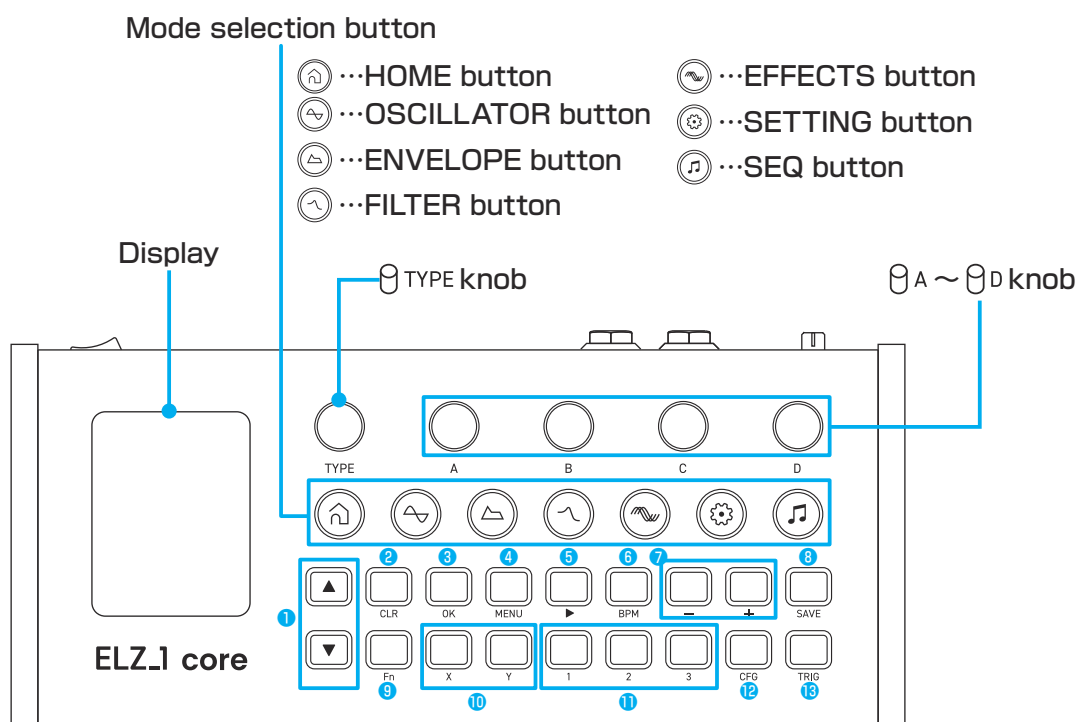
8 CLR button 9 OK button 10 MUTE button 11 PTN PLAY button

12 X button 13 Y button 14 TEMPO button

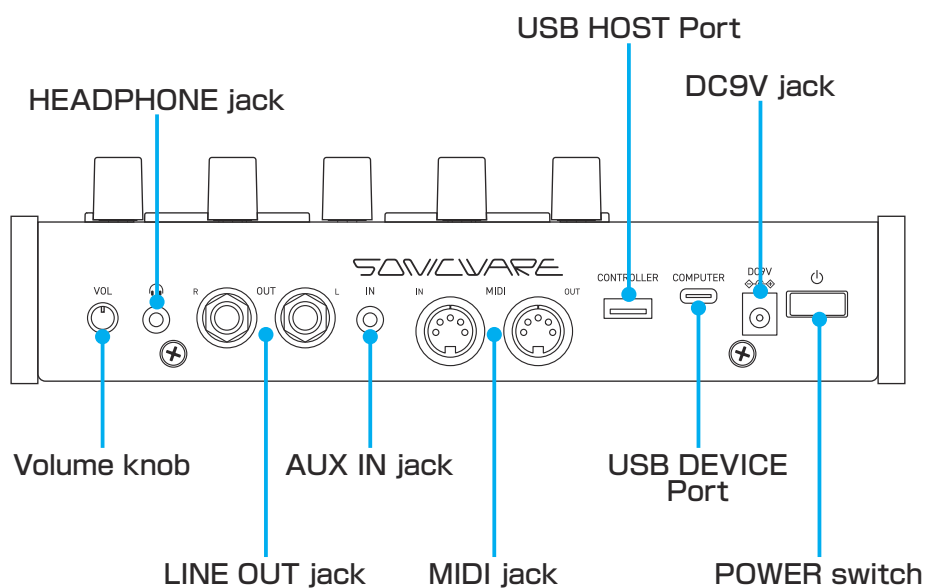
15 LOOPER1 ~ 4 button 16 LOOPER ALL button 17 OCTAVE UP/DOWN button

18 Func button



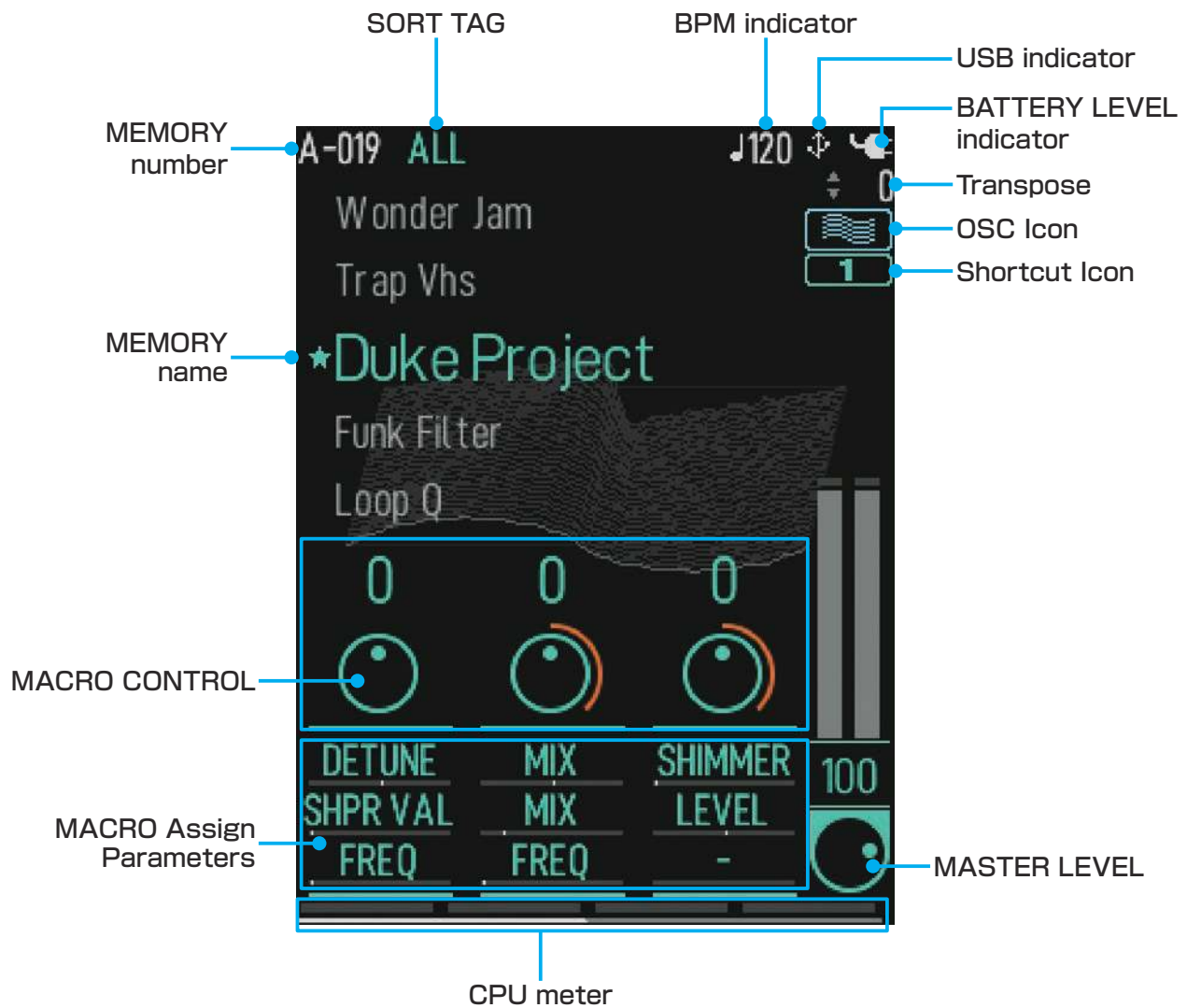


- ① UP/DOWN button ② CLR button ③ OK button ④ MENU button ⑤ PLAY button
⑥ BPM button ⑦ + / - button ⑧ SAVE button ⑨ FN button ⑩ X/Y button
⑪ 1/2/3 button ⑫ CFG button ⑬ TRIG button



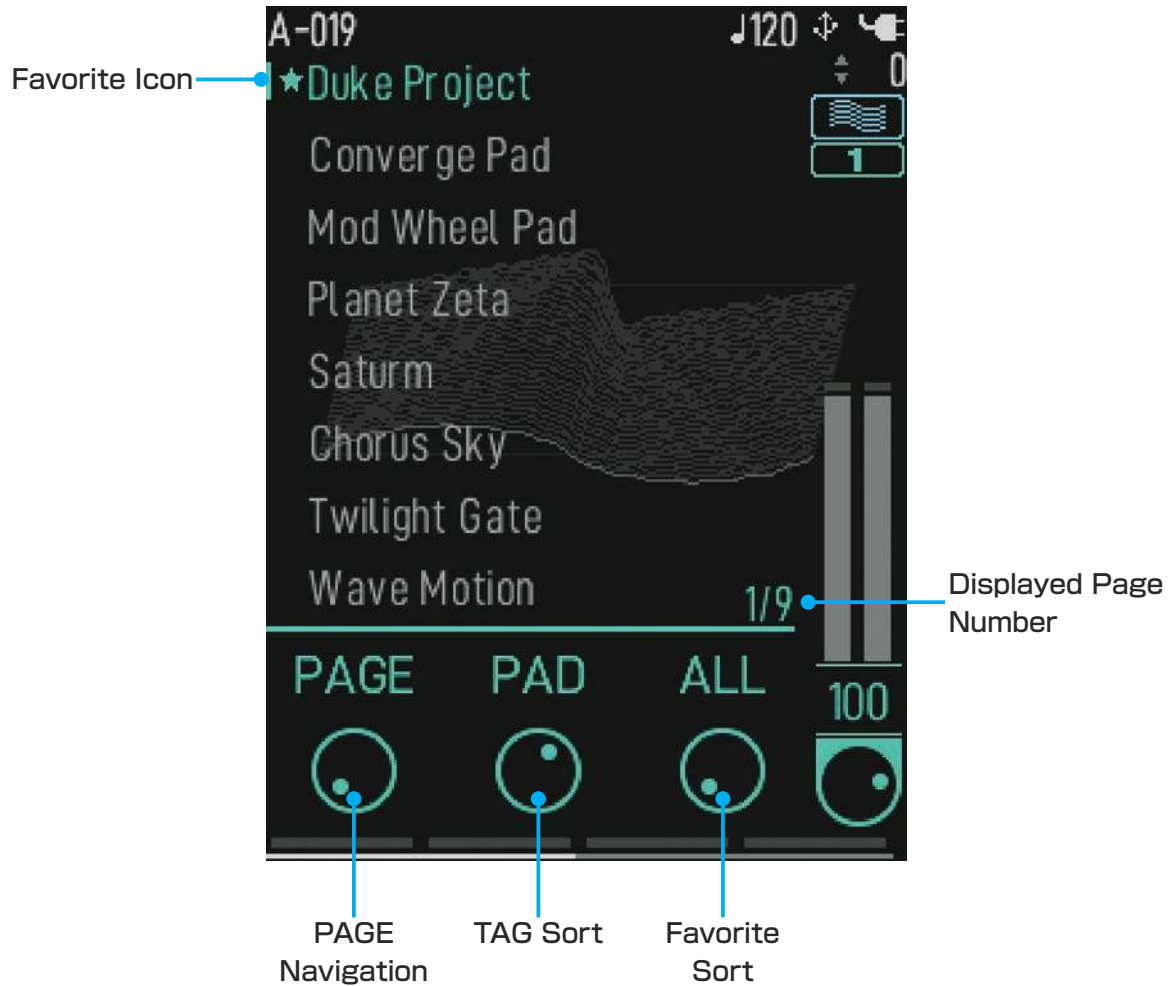
Names of parts

PLAY MODE Screen (Macro Control)



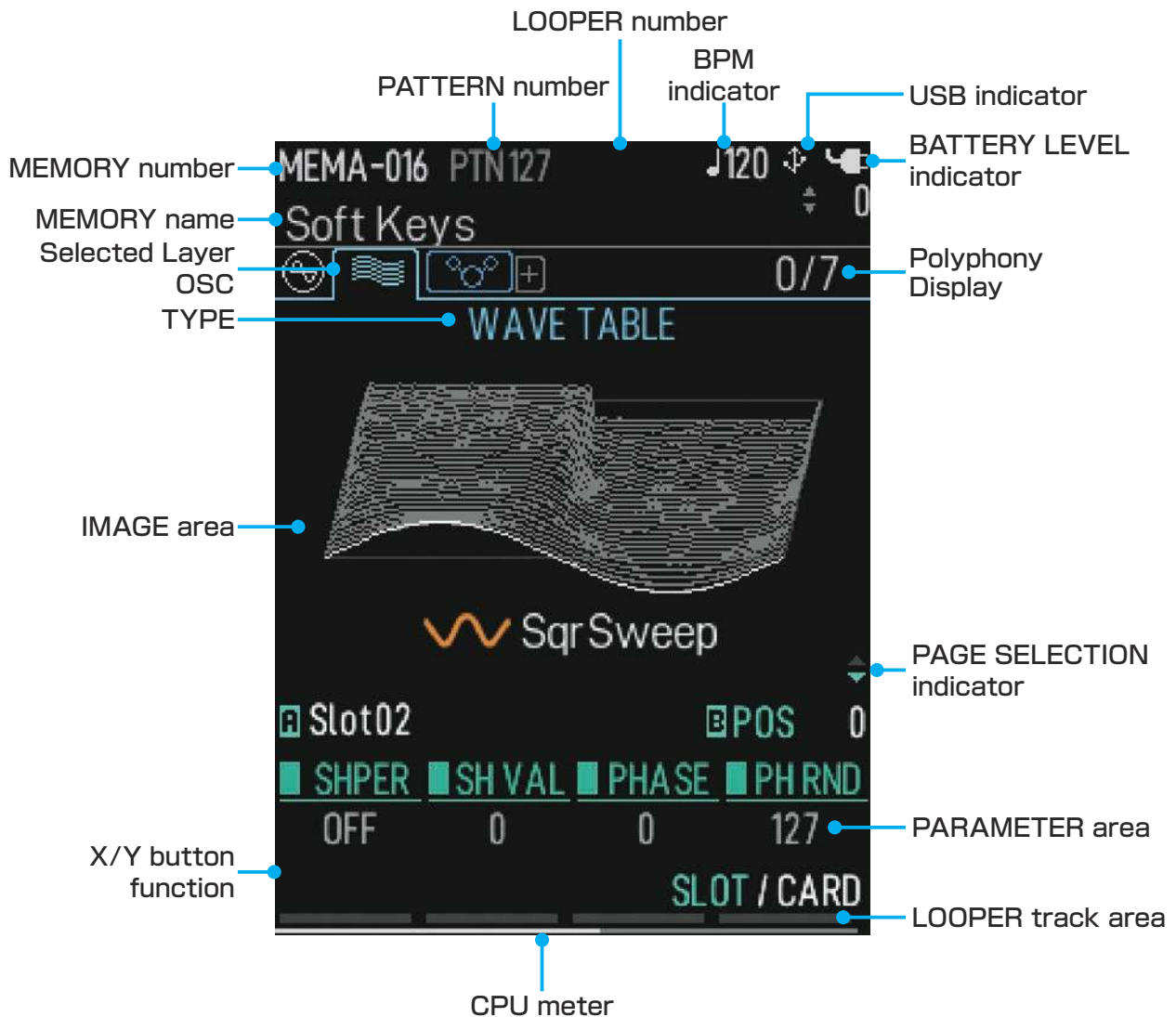
Names of parts

PLAY MODE Screen (TAG Sort)

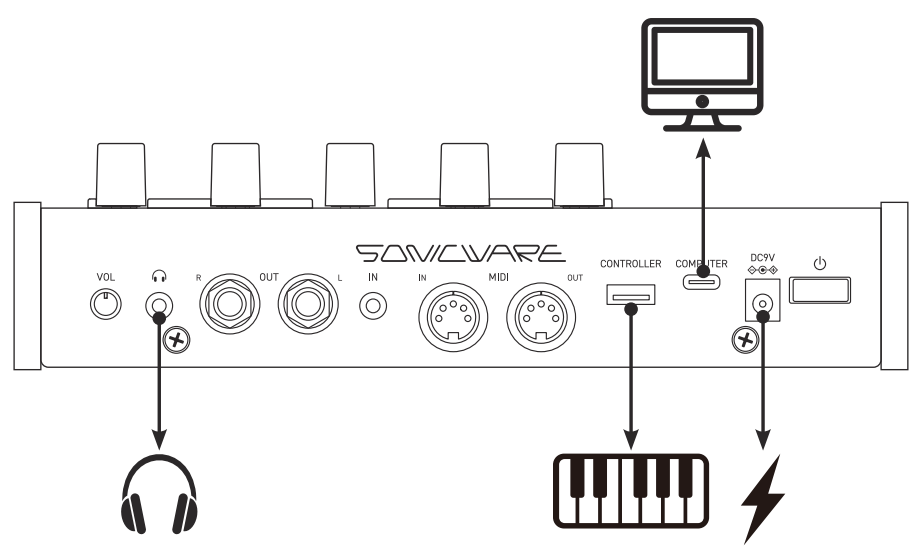
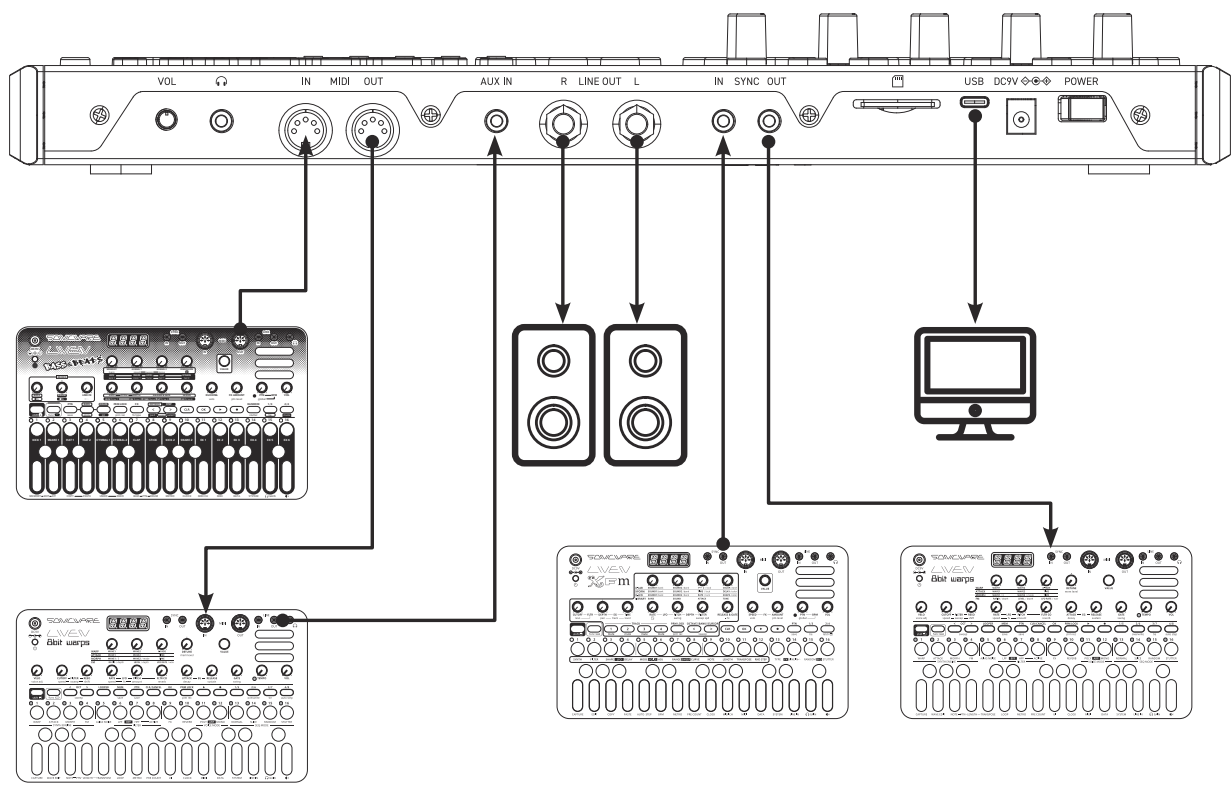


Names of parts

EDIT screen



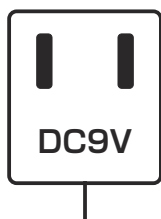
Connection example



Basic operations — General

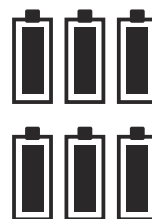
Preparing a power supply

An AC adapter is included.



or

6 AA batteries



Use only the included AC adapter. Using an AC adapter with different specifications could cause damage.

“Low Battery” will appear on the display if the remaining battery charge is low. Replace the batteries immediately.



When using nickel-metal hydride batteries or lithium batteries, change the battery setting. (→ P.143)

Starting up

- 1 Install batteries or use the included AC adapter (at least 2000mA output current) to the DC 9V connector on the unit.
- 2 Press the **POWER** switch ON.

POINT!

- By default, the battery level indicator is calibrated to be accurate with alkaline batteries. To correct this when using nickel-metal hydride batteries or lithium batteries, change the battery setting. (→ P.143)

Turning the unit off

- 1 Press the **POWER** switch OFF.

POINT!

- Sound settings that are being edited will be lost when the unit is turned off. Save the changes if necessary.

Selecting MEMORY

Selecting MEMORY - Play Mode-



- 1** **[play]** Use the θ TYPE knob to select a MEMORY.
Press $\text{MEM} + \text{(1)}$, (2) , (3) , or (4) to switch MEMORY banks.
Press $\text{Fn} + \text{(-)}$ / (+) to switch MEMORY banks.

- 2** Press the OK key.
The selected MEMORY will be recalled.

You can also instantly recall an adjacent MEMORY by pressing the (-) / (+) keys.

POINT!

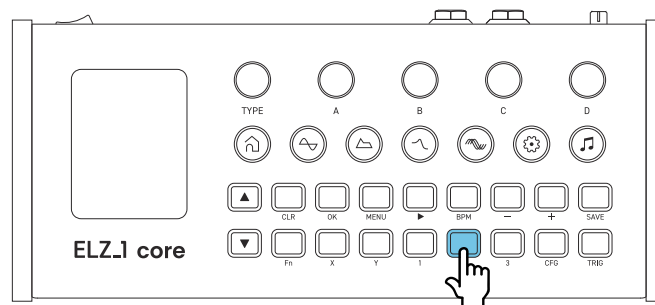
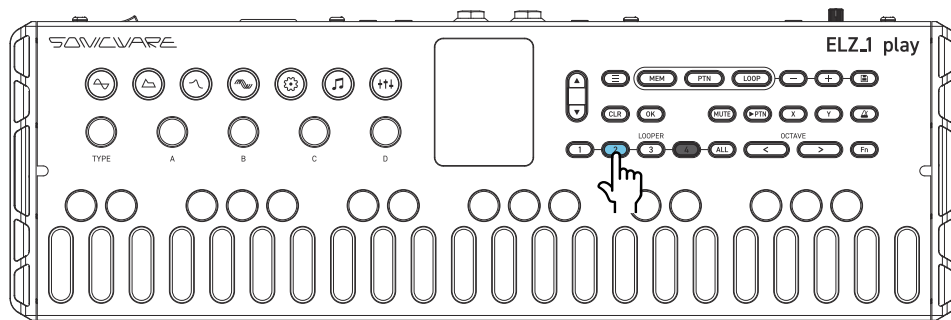
- When the unit is first used after purchase, a preset sound is recalled.
- You can also change the MEMORY selection direction.
(→ P.119)

Selecting MEMORY

Favorites and patch shortcuts

In PLAY mode, you can register frequently used patches as favorites, or assign them to shortcut slots for quick recall.

To use a MEMORY shortcut, press one of the **1**, **2**, **3**, or **4** buttons lit white on the PLAY Mode screen to recall the assigned MEMORY. The selected shortcut button lights blue.



- Patch shortcuts: Assign the current patch to a slot with **Fn** + **1**, **2**, **3**, or **4** (for **[Core]**), **Fn** + **1** / **2** / **3**, and jump to a shortcut with **1**, **2**, **3**, or **4** (for **[Core]**), **1** / **2** / **3**. The number of slots is 4 for **[Play]** and 3 for **[Core]**.

Selecting MEMORY

Adding a MEMORY to Favorites



- 1** Select the MEMORY you want to add to Favorites, then press the **OK** key.
- 2** Press **Fn** + **OK** to add the MEMORY to Favorites. MEMORY entries added to Favorites are displayed first when using TAG Sort. You can also use Favorite Sort to quickly find frequently used MEMORY entries.

Play on the keyboard

Playing held notes

1 [Play] Press the  key and a keyboard key simultaneously.

[Core] Press the  OK and  TRIG keys simultaneously.

This will hold played notes.

Press the same keys again to release held notes.

All held notes can be released by pressing  + .

POINT!

- You can hold the arpeggiator by setting the voice mode to Arpeggiator.
- All held notes will be released by changing MEMORY or some other operations .

Changing the keyboard octave range

Press   button to move the octave of the keyboard.

 : Move one octave lower

 : Move one octave higher

The octave range is two octaves above and below.

		+2 OCT
		+1 OCT
		
		-1 OCT
		-2 OCT

POINT!

- The octave range is saved for each MEMORY.

Play on the keyboard

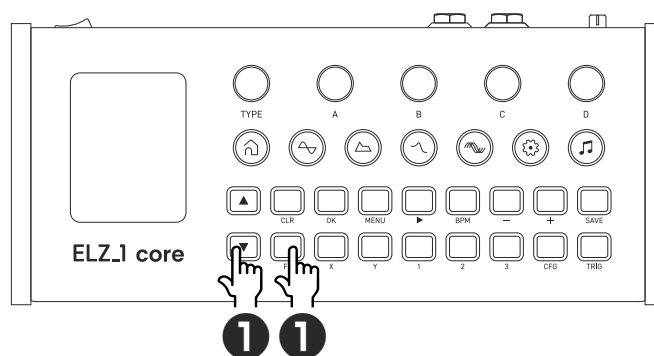
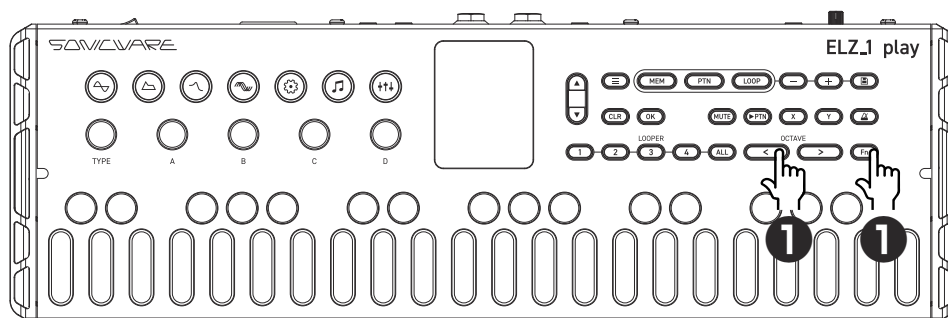
Setting Key Transpose

When KEYBOARD Transpose is enabled in the MIDI settings (→ P.99), transposition can be applied to [Play] notes played on the built-in keyboard and [Play/Core] NOTE messages received via external MIDI input.

- 1 **[play]** Press **Fn** + **<** **>** .
[core] Press **□** **Fn** + **▲** **▼** .

When transposition is set, the key corresponding to the transpose direction flashes white.

When no transposition is set, the key lights solid white.



Play Mode

Play Mode Functions

In Play Mode, you can recall MEMORY, adjust the volume balance of each layer, and control the master volume.

You can also assign parameters to the MACRO knobs and change the MEMORY TAG settings.



Entering and leaving PLAY mode differs by model.

- **[Play]** Enter by pressing the **MEM** button twice (a double-press within 400 ms). Pressing **MEM** once (a press longer than 400 ms) while in PLAY mode returns you to edit mode.

[Core] Enter and leave with the **⏮** button.

- **[Play]** Press **MEM** + **1**, **2**, **3**, or **4** to access Memory Banks A, B, C, or D.

• **[Core]** Press **Fn** + **-/+** to access Memory Banks A, B, C, or D.

POINT!

- Pressing an edit button such as the **⏮** key opens the corresponding EDIT page.
- Press the **PTN** button or the **🎵** key to move to the SEQ page.
- **[play]** To return to Play Mode from Edit Mode, press the **MEM** key.

Macro Control Function

On the Macro Control screen, you can operate three virtual control knobs, each of which can be assigned to multiple parameters.

Each MACRO knob has up to three assignment slots. For each assigned parameter, the amount of change can be set within a range of up to $\pm 100\%$ around the current setting.

An external MIDI MOD wheel can also be assigned to all MACRO knobs, with the direction of parameter change configurable.

Add even greater expressive variation to a MEMORY created in Edit Mode.



PLAY MODE (MACRO CONTROL)		
⌚ _{TYPE} knob	MEMORY Selection	
⌚ _A knob	MACRO1	-127 ~ 127
⌚ _B knob	MACRO2	-127 ~ 127
⌚ _C knob	MACRO3	-127 ~ 127
⌚ _D knob	MASTER LEVEL	0 ~ 127

Macro Control Function

Editing MACRO Assignments

Edit the parameter assignments for the MACRO control knobs.

- 1 On the Macro Control screen, press **Fn** + **Y**.



PLAY MODE (MACRO CONTROL)		
button	Changing the Assignment Slot	
X/Y button	Exiting the Macro Edit Screen	
1/2/3 button	Selecting the MACRO Knob to Edit	
TYPE knob	MOD Wheel Assignment	OFF、+、-、±
A knob	Operating the MACRO Knob Being Edited	-127 ~ 127
Fn+ A knob	Editing the Assigned Parameter	This varies depending on the MEMORY's edit settings.
B knob	Amount of Change in the Negative Knob Direction	-100% ~ 100%
C knob	Amount of Change in the Positive Knob Direction	-100% ~ 100%
D knob	Changing the Assigned Parameter	This varies depending on the MEMORY's edit settings.
Fn+ D knob	Changing the Assigned Parameter Category	This varies depending on the MEMORY's edit settings.

Macro Control Function

TAG Sort Function

The TAG Sort function makes it easier to find the desired type of MEMORY and recall frequently used sounds.



- 1 In Play Mode (Macro Control screen), press **Fn** + **X** to open the TAG Sort screen.

[play] You can also switch screens by pressing the **MEM** key.

[core] You can also switch screens by pressing the **Home** key.

POINT!

- When used together with Favorites (added using **Fn** + **OK**), you can recall frequently used sounds even more quickly. (→ P.21)

Macro Control Function

Editing MEMORY TAGs

- 1 On the TAG Sort screen, press **Fn** + **Y** to open the TAG Edit menu.



TAG EDIT

TYPE knob or ▲ ▼ button

Moving the Selection

OK button

Turning TAGs On/Off

Macro Control Function

TAG List

TAG LIST	
Fixed TAG	
1	BRASS
2	PIANO
3	ORGAN
4	KEYS
5	PAD
6	LEAD
7	BASS
8	STRING
9	PLUCK
10	GUITAR
11	SCAPE
12	WIND
13	ARP
14	AMBNT
15	GAME
16	FX
USER TAG (Renamable)	
17	USER1
18	USER2
19	USER3
Favorite	
FAV	

POINT!

- USER TAG and FAV settings are not applied when importing a MEMORY.

Macro Control Function

Renaming a USER TAG

- 1 On the TAG Edit screen, select a USER TAG.
- 2 Press  +  to rename it.
- 3 Use the  and  knobs to edit the USER TAG name.

 knob	Moving the Cursor Left/Right
 knob	Changing Characters
 knob	Switching Character Types (Uppercase → Lowercase → Numbers → Symbols)

- 4 Press the  button to finish editing.

POINT!

- While editing, press the  or  button to cancel the changes.
- The following characters and symbols are available:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!"#\$%&'()*+,-./:;<=>?@[\] ^ _ ` { | } ~ (Space)

Recalling and saving MEMORY settings in EDIT mode

Recalling MEMORY settings

MEMORY settings can be recalled.

The MEMORY number is shown at the top left of the screen.

1 Press the  /  buttons to select a MEMORY.

2 Recall the desired MEMORY.

POINT!

- If you recall a MEMORY while the EDITED icon is displayed, any edits to the sound will be discarded. Save the edits to a MEMORY as necessary.

Recalling and saving MEMORY settings in EDIT mode

Saving settings to MEMORY

Edited sounds can be saved to MEMORY.

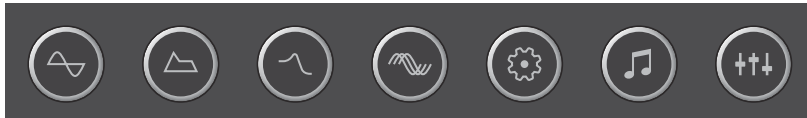
- 1** **[play]** Press the  button./ **[core]** Press the  **SAVE** button.
The save destination selection screen appears.
- 2** Press the  /  buttons or turn the θ_{TYPE} and $\theta_A - \theta_D$ knobs to select the desired MEMORY.
[play] Press the , , , or  button to change the save destination bank.
[core] Press the  **LAYER 1, 2, or 3** button or the  **CFG** button to change the save destination bank.
- 3** Press the  or  button.

POINT!

- To cancel saving a MEMORY settings, press a button other than ,  or .
- The EDITED icon will appear at the top of the screen when a sound is edited.
- You can also save while in PLAY Mode.
- The positions of the Macro Control knobs are not saved.

EDIT mode overview

ELZ_1 play/core has seven sound edit modes.

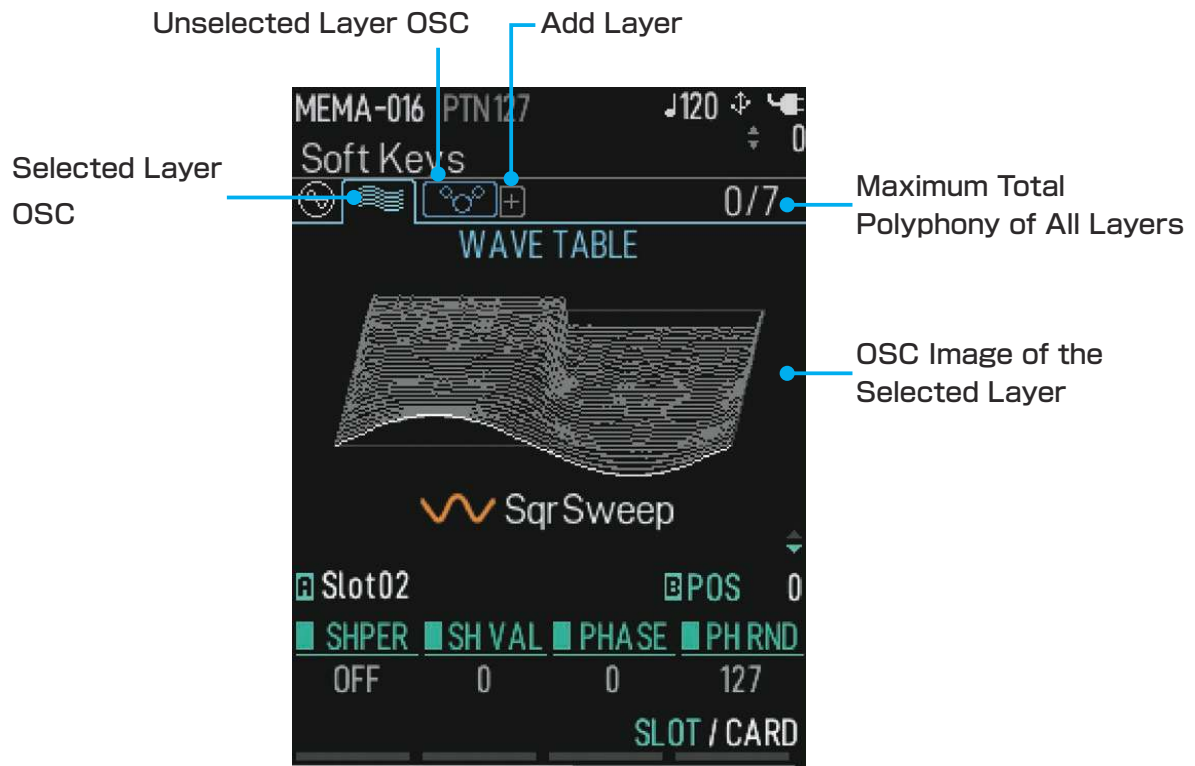


EDIT MODE		
	Oscillator mode	ELZ_1 play is equipped with multiple synthesis engines, including a wavetable oscillator. This section is used to select a synthesis engine and edit its parameters.
	Envelope mode	The envelope can be applied to the volume of the voices. In this mode, select the envelope type and edit its parameters.
	Filter mode	The filter types include low pass, high pass and band pass. In this mode, select the filter type and edit its parameters.
	Effects mode	The effects include drive, modulation, delay and reverb. In this mode, select the effect types and edit their parameters.
	Setting mode	The voice setting can be applied to a current Memory. In this mode, select a voice mode, unisons, an arpeggiator type, and edit their parameters.
	Sequencer mode	Sequencer mode has a step sequencer independent of Memory. In this mode, it is used for recording and editing patterns.
	Mixer mode	The Mixers includes LOOPER tracks, synthesis engine, AUX IN, USB In, Master. In this mode, edit the volume balance of the various sound sources, effects, and outputs.

Layer Functions

By using the Layer Functions, you can play multiple oscillators simultaneously.

This makes it easy to create rich sounds and complex harmonic structures.



Add a Layer [Play]

- 1 Press the  key to switch to the Add Layer tab.
- 2 Press the  key to add a layer.

[Core]

- 1 Press the  LAYER 2 or 3 button to add a layer.
If layers have already been added, the  LAYER 1, 2, and 3 buttons select their corresponding layers.

Layer Functions

POINT!

- Up to three layers can be created.
- Pressing the  key allows you to switch the layer to be edited.
- To delete a layer, switch to the target layer and press **【Play】**  +  / **【Core】**  **CLR** +  **1 / 2 / 3** buttons.
- Press **【Play】**  +  / **【Core】**  **Fn** +  **1 / 2 / 3** buttons to mute the selected layer.
- On the **【Core】** , the  **1 / 2 / 3** buttons are for "layer selection" and serve a different role from the **【Play】** 's LOOPER tracks. Note that the meaning of the buttons differs by model.

Layer Functions

Adjusting Layers

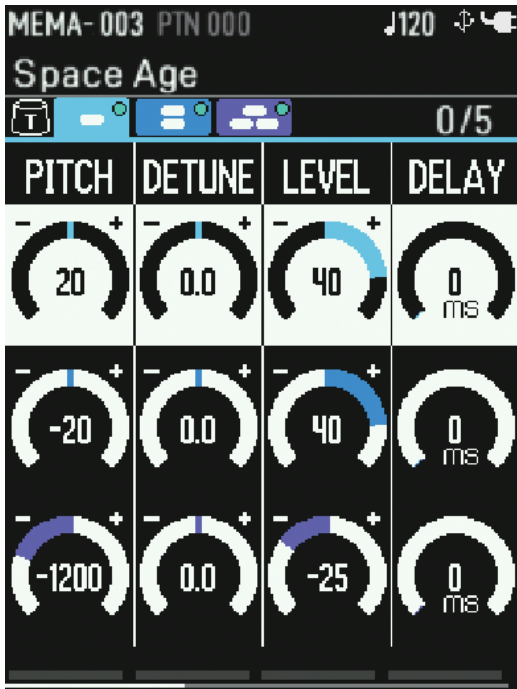
Adjust the volume balance, pitch, detune, and timing of each layer.

[play]

- 1 Press the  +  buttons.
- 2 Use the  knob or   buttons to select the layer you want to adjust.

[core]

- 1 Press the  CFG button.
- 2 Use the  knob or   buttons to select the layer you want to adjust.



LAYER CONFIG

 knob or   keys	Layer Selection	Layer 1 ~ 3
PRM1	PITCH	-2400~2400: Changes in steps of 10 cents.
PRM2	DETUNE	-50~50: Changes in steps of 0.1 cent.
PRM3	LEVEL	-63 ~ 63
PRM4	DELAY	0 ~ 1000 (msec)

Selecting synth engines and editing parameters

In Oscillator Mode, you can edit 18 different synthesis engines. Each synthesis engine has its own unique parameters, which you can adjust to create sounds.

This page explains the Wavetable engine as an example. For details on all synthesis engines, please refer to the Oscillator List (→ P.152).

- 1 Press the  button to activate oscillator mode.
- 2 Turn the Θ_{TYPE} knob to select the synth engine.
- 3 Turn knobs $\Theta_A \sim \Theta_D$ to adjust the corresponding parameters on the screen.

POINT!

- If the synth engine has more than four adjustable parameters, press the   buttons to show the next page of parameters.

WAVE TABLE		
	Includes 16 original wavetables carefully selected from PPG and Microwave, along with 24 original Sonicware wavetables. Up to 32 user wavetables can also be registered.	
	Special operations	For instructions on loading user waveform data from the card, refer to “Using User Waveforms in Wavetable” (→ P.136)
	  $\neq$	BEND DOWN/BEND UP
PRM1	WAVE	Slot 01 ~ 48
PRM2	POS	0 ~ 255 For Waldorf Original Wavetable 0 ~ 63
PRM3 ~ 6		Refer to the Oscillator List (→ P.152).

Selecting synth engines and editing parameters

Waldorf Original Wavetable

The WAVE TABLE oscillator of the ELZ_1 play includes original wavetable data from the PPG Wave, the world's first synthesizer to adopt a wavetable synthesis engine in the 1980s, and from its successor, the Waldorf Microwave.

The wavetable synthesis engine, which became one of the defining digital sounds of the 1980s, continues to be used in many synthesizers—both hardware and software—to this day.

The 16 carefully selected wavetables are officially licensed from Waldorf Music and contain the exact same data format used in the PPG Wave: 128 samples × 64 tables, 8-bit.

Experience the ELZ_1 play, an evolved instrument that brings the timeless, classic wavetable sound into a new era.

Selecting synth engines and editing parameters

Built-in Waldorf Original Wavetable

Waldorf Original Wavetable		
Microwave	Slot01	#2 Resont 2
	Slot02	#4 SqrSweep
	Slot03	#6 PulSweep
	Slot04	#7 SawSweep
	Slot05	#14 Clipper
	Slot06	#26 2 Echoes
	Slot07	#27 Formant2
	Slot08	#29 MW Sync
PPG	Slot09	Upper Wavetable
	Slot10	Piano/Sax
	Slot11	Harmonic Split / Saw+WT
	Slot12	Voice / V 3 Aa 55
	Slot13	Utterance / Feels Like
	Slot14	Mix / EPno2Inharm
	Slot15	Analysis / Clavinet
	Slot16	Synthesis / AnotherWT

Selecting synth engines and editing parameters

Preset Wavetable

WAVETABLE	
Slot17	Tri-Phase
Slot18	Saw-Phase
Slot19	Sqr-Phase
Slot20	PWM-Phase
Slot21	Additive Morph
Slot22	Saw-Detune
Slot23	Synth String
Slot24	Electric Piano
Slot25	Ep vintage
Slot26	Vibes+Sin
Slot27	Choir
Slot28	Clear Trumpet
Slot29	Upright Bass
Slot30	Strings+Accordion
Slot31	FM+Crush
Slot32	FM+Fold
Slot33	FM+Overdrive
Slot34	Formant
Slot35	Formula
Slot36	Harmonic 1
Slot37	Harmonic 2
Slot38	BELL+SIN
Slot39	Saw+Sin-Sea
Slot40	Random

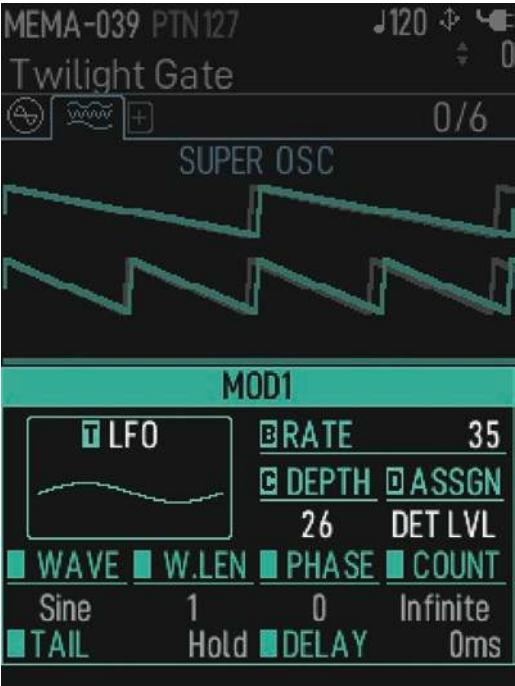
Selecting synth engines and editing parameters

Modulation of synth engine parameters

Each synth engine has parameters that can be modulated using an LFO or Envelope.

Press **[Fn] + [X/Y]** to display the MOD screen.

Set the MOD TYP parameter to LFO, Envelope, or Key Trk, then adjust the parameters that follow MOD TYP.



MODULATION		
PRM1	MOD TYP	Off、LFO、Envelope、Key Trk : Selects Modulation type
PRM2	ASSGN	Selects the modulation target. Modulation targets vary by synth engine

The parameters following ASSGN differ for LFO, Envelope, and Key Trk.

Selecting synth engines and editing parameters

MODULATION (WITH PRM1:MOD TYP IS LFO) ①		
PRM3	DELAY	0 ~ 2000ms: delay before modulation starts
PRM4	WAVE	Sine, Square, Triangle, U.Saw, D.Saw, Random, U.Log, D.Log: waveform used to modulate target
PRM5	RATE	1 ~ 100: modulation speed
PRM6	DEPTH	0 ~ 100: modulation depth
PRM7	COUNT	Infinite, 1 ~ 50: Count of LFO cycles
PRM8	W.LEN	1 ~ 1/8: Active range of LFO waveform
PRM9	PHASE	0, 180: LFO waveform phase

MODULATION (WITH PRM1:MOD TYP IS LFO) ②		
PRM10	TAIL	Hold: Holds the current value of the LFO after the specified number of times when COUNT is not Infinite Origin: the current value of LFO is reset to 0 after the specified number of times when COUNT is not Infinite

Selecting synth engines and editing parameters

modulation (WITH PRM1:MOD TYP IS Envelope)		
PRM3	DELAY	0 ~ 2000 (msec) : delay before modulation starts
PRM4	INVRT	Off, On: inverts modulation
PRM5	DEPTH	0 ~ 100: modulation depth
PRM6	ATTCK	0 ~ 5000 (msec)
PRM7	DECAY	0 ~ 5000 (msec)
PRM8	SUSTN	0 ~ 100%
PRM9	RELEAS	0 ~ 5000 (msec)

modulation (WITH PRM1:MOD TYP IS Key Trk)		
PRM3	DEPTH	0 ~ 127
PRM4	POL	+、- : Key Tracking Direction With +, modulation becomes stronger (positive direction) for higher notes relative to C4, and weaker (negative direction) for lower notes. With -, the behavior is reversed.

Selecting and editing envelopes

- 1 Press the  button to activate envelope mode.
- 2 Turn the θ_{TYPE} knob to select the envelope type.
- 3 Turn knobs $\theta^A \sim \theta^D$ to adjust the corresponding parameters on the screen.

POINT!

- If there are five or more parameters, press the   buttons to show additional parameters that can be adjusted.

Selecting and editing envelopes

Envelope types and parameters

ADSR ENVELOPE		
This is a standard ADSR envelope.		
Special operations	-	
PRM1	ATTACK	0 ~ 5000ms
PRM2	DECAY	0 ~ 5000ms
PRM3	SUSTAIN	0 ~ 100%
PRM4	RELEASE	0 ~ 5000ms

ADSR ENVELOPE (CURVE)		
ADSR envelope with curves for ATTACK, DECAY, and RELEASE parameters.		
Special operations	-	
PRM1	ATTACK	0 ~ 5000ms
PRM2	A CURVE	-10 ~ 10: ATTACK curve
PRM3	DECAY	0 ~ 5000ms
PRM4	D CURVE	-10 ~ 10: DECAY curve
PRM5	SUSTAIN	0 ~ 100%
PRM6	RELEASE	0 ~ 5000ms
PRM7	R CURVE	-10 ~ 10: RELEASE curve (+ values create a C curve and – values create an A curve)

Selecting and editing envelopes

ADS-RA-R ENVELOPE		
This release attack envelope has an additional attack when a key is released.		
Special operations	-	
PRM1	ATTACK	0 ~ 5000ms
PRM2	DECAY	0 ~ 5000ms
PRM3	SUSTAIN	0 ~ 100%
PRM4	R ATTCK	0 ~ 5000ms
PRM5	RA LVL	0 ~ 100%
PRM6	RELEASE	0 ~ 5000ms

Selecting and editing envelopes

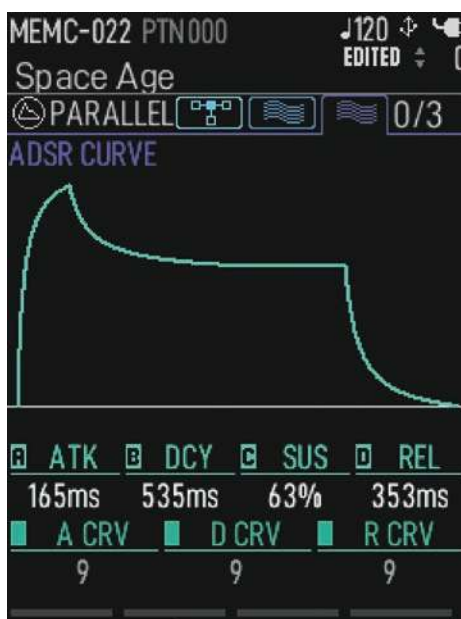
ADS-RA-R ENVELOPE (CURVE)		
Special operations	-	
PRM1	ATTACK	0 ~ 5000ms
PRM2	A CURVE	-10 ~ 10: ATTACK curve
PRM3	DECAY	0 ~ 5000ms
PRM4	D CURVE	-10 ~ 10: DECAY curve
PRM5	SUSTAIN	0 ~ 100%
PRM6	R ATTCK	0 ~ 5000ms
PRM7	RA LVL	0 ~ 100%
PRM8	RA CRV	-10 ~ 10: RELEASE ATTACK curve
PRM9	RELEASE	0 ~ 5000ms
PRM10	R CURVE	-10 ~ 10: RELEASE curve (+ values create a C curve and – values create an A curve)

Envelope Selection and Editing

Use separate envelopes for all layers

By using PARALLEL Mode, you can assign separate envelopes to all layers.

- 1 Press the  key.
- 2 Press  + .
- 3 Change from SERIAL to PARALLEL.



ENVELOPE LAYER MODE	
SERIAL	Set all layers to use a common envelope.
PARALLEL	Set envelopes individually for each layer.

POINT!

- When SERIAL Mode is used, the parameters of the first layer are applied.
- In PARALLEL Mode, pressing the  key allows you to switch between layers.
- In PARALLEL Mode, pressing **【Play】**  +  / **【Core】**  +  allows you to mute any layer.

Selecting filters and editing parameters

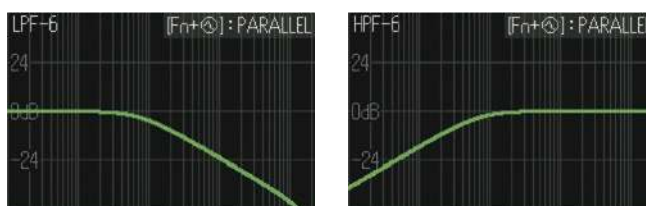
- 1 Press the  button to activate filter mode.
- 2 Turn the θ_{TYPE} knob to select the filter type.
- 3 Turn knobs $\theta^A \sim \theta^D$ to adjust the corresponding parameters on the screen.

POINT!

- If there are five or more parameters, press the   buttons to show additional parameters that can be adjusted.

Selecting filters and editing parameters

LPF-6 / HPF-6

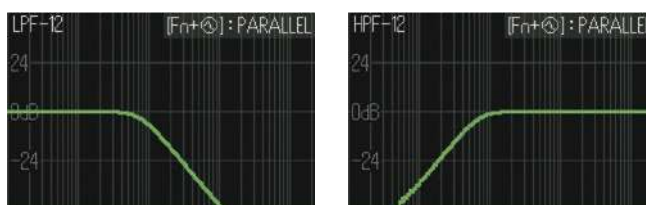


LPF-6: This is a -6dB/octave low-pass filter.

HPF-6: This is a -6dB/octave high-pass filter.

Special operations	-	
PRM1	FREQ	1 ~ 128
PRM2	PRE GAIN	-24 ~ 24
PRM3	-	-
PRM4	-	-
$\text{Fn} + \text{X} / \text{Y}$	MOD TYP	See Filter modulation (→ P.50)

LPF-12 / HPF-12



LPF-12: This is a -12dB/octave low-pass filter.

HPF-12: This is a -12dB/octave high-pass filter.

Special operations	-	
PRM1	FREQ	1 ~ 128
PRM2	Q	1 ~ 100
PRM3	PRE GAIN	-24 ~ 24
PRM4	-	-
$\text{Fn} + \text{X} / \text{Y}$	MOD TYP	See Filter modulation (→ P.50)

Selecting filters and editing parameters

BPF / NOTCH

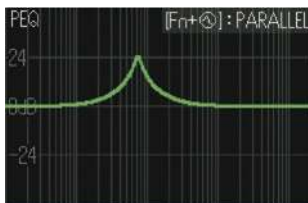


BPF: This is a band-pass filter.

NOTCH: This is a notch filter.

Special operations	-	
PRM1	FREQ	1 ~ 128
PRM2	B.WIDTH	1 ~ 20
PRM3	PRE GAIN	-24 ~ 24
PRM4	-	-
$\text{Fn} + \text{X} / \text{Y}$	MOD TYP	See Filter modulation (→ P.50)

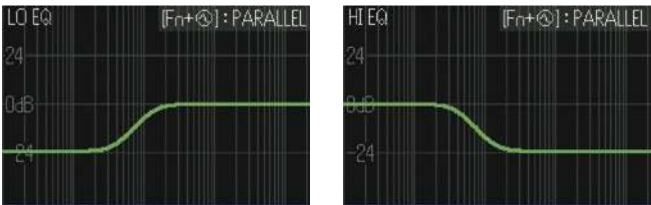
PEQ



PEQ: This is a peaking EQ.

Special operations	-	
PRM1	FREQ	1 ~ 128
PRM2	B.WIDTH	1 ~ 20
PRM3	GAIN	-24 ~ 24
PRM4	PRE GAIN	-24 ~ 24
$\text{Fn} + \text{X} / \text{Y}$	MOD TYP	See Filter modulation (→ P.50)

Selecting filters and editing parameters

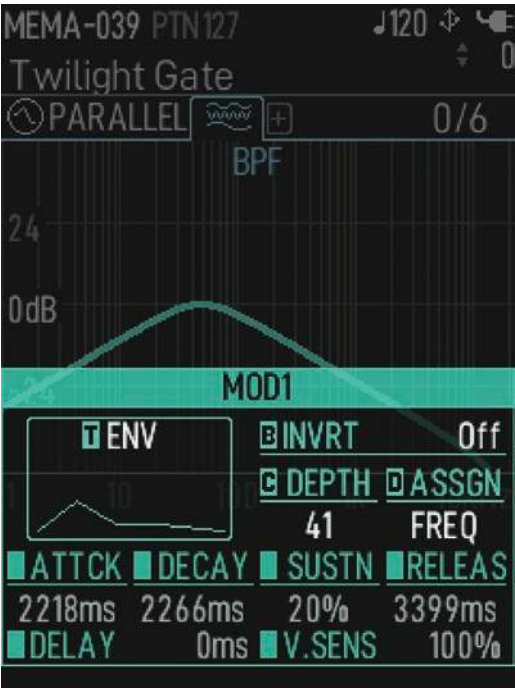
LO EQ / HI EQ		
		
LO EQ: This EQ adjusts low frequencies. HI EQ: This EQ adjusts high frequencies.		
Special operations	-	
PRM1	FREQ	1 ~ 128
PRM2	Q	1 ~ 100
PRM3	GAIN	-24 ~ 24
PRM4	PRE GAIN	-24 ~ 24
$\text{Fn} + \text{X} / \text{Y}$	MOD TYP	See Filter modulation (→ P.50)

Selecting filters and editing parameters

Filter modulation

Each filter has parameters that can be modulated with an LFO or envelope.

Set the MOD TYP parameter to LFO, Envelope, or Key Trk, and then adjust the parameters following MOD TYP.



FILTER MODULATION		
PRM1	MOD TYP	Off, LFO, Envelope, KeyTrk: Selecting modulation type
PRM2	ASSGN	Selects the modulation target. Modulation targets vary by filter type

Parameters in additional pages vary by MOD TYP whether set to LFO or Envelope.

Selecting filters and editing parameters

FILTER MODULATION (WITH PRM1:MOD TYP IS LFO)		
PRM3	WAVE	Sine, Square, Triangle, U.Saw, D.Saw, Random, U.Log, D.Log: waveform used to modulate target
PRM4	RATE	1 ~ 100: modulation speed
PRM5	DEPTH	0 ~ 100: modulation depth
PRM6	COUNT	Infinite, 1 ~ 50: Count of LFO cycles
PRM7	W.LEN	1, 7/8, 6/8, 5/8, 4/8, 3/8, 2/8, 1/8: Active range of LFO waveform
PRM8	PHASE	0, 180: LFO waveform phase
PRM9	TAIL	Hold: Holds the current value of the LFO after the specified number of times when COUNT is not Infinite Origin: the current value of LFO is reset to 0 after the specified number of times when COUNT is not Infinite

Selecting filters and editing parameters

FILTER modulation (With PRM1:MOD TYP is Envelope)		
PRM3	DELAY	0 ~ 2000ms: delay before modulation starts
PRM4	INVRT	Off, On: inverts modulation
PRM5	DEPTH	0 ~ 100: modulation depth
PRM6	ATTCK	0 ~ 5000ms
PRM7	DECAY	0 ~ 5000ms
PRM8	SUSTN	0 ~ 100%
PRM9	RELEAS	0 ~ 5000ms
PRM10	V.SENS	0 ~ 100%: Velocity Range Affecting DEPTH At 0%, velocity has no effect on filter modulation.

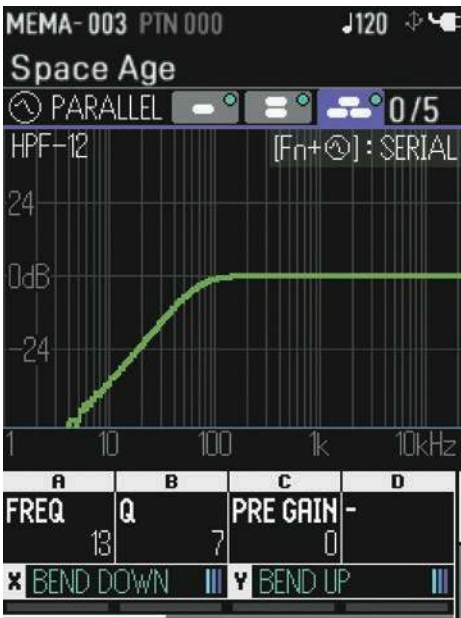
FILTER modulation (WITH PRM1:MOD TYP IS Key Trk)		
PRM3	DEPTH	0 ~ 127
PRM4	POL	+, -: Key Tracking Direction With +, modulation becomes stronger (positive direction) for higher notes relative to C4, and weaker (negative direction) for lower notes. With -, the behavior is reversed.

Filter Selection and Editing

Use separate filters for all layers

You can process all layers with separate filters.
In SERIAL Mode, the signal is filtered after passing through the DRIVE/MOD effects (→ P.55),
while in PARALLEL Mode, the signal is filtered before the effects.

- 1 Press the  key.
- 2 Press  + .
- 3 Change from SERIAL to PARALLEL.



FILTER LAYER MODE	
SERIAL	Process all layers with a single common filter.
PARALLEL	Process filters individually for each layer.

- POINT!**
- When SERIAL Mode is used, the parameters of the first layer are applied.
 - In PARALLEL Mode, pressing the  key allows you to switch between layers.
 - In PARALLEL Mode, pressing **【Play】**  +  / **【Core】**  +  allows you to mute any layer.

Editing effects



- 1 Press the  button to activate effects mode.
- 2 Press the  button to select different modules to edit.
- 3 Turn the θ_{TYPE} knob to select the type for the current effect module.
- 4 Turn knobs $\theta_A \sim \theta_D$ to adjust the corresponding parameters on the screen.

POINT!

- To turn a module off, turn the θ_{TYPE} knob to select OFF.

Editing effects

Effect types and parameters

INSERT MODULE		
OVER DRIVE		
DISTORTION		
FUZZ		
PRM1	GAIN	0 ~ 100
PRM2	TONE	0 ~ 100
PRM3	LEVEL	0 ~ 100
CHORUS		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	MIX	0 ~ 100
PRM4	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)

Editing effects

VIBRATO		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)
PHASER		
PRM1	RATE	0 ~ 100
PRM2	STAGE	4、 8
PRM3	INVERT	Off、 On
PRM4	MIX	0 ~ 100

Editing effects

TREMOLO		
PRM1	TYPE	Sine、Square、Triangle、 U.Saw、D.Saw、Random、 U.Log、D.Log
PRM2	RATE	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)
FLANGER		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	MIX	0 ~ 100
PRM4	F.B	-100 ~ 100

Editing effects

RING MODULATOR		
PRM1	MOD TYP	Sine、Square、Triangle、 U.Saw、D.Saw、Random、 U.Log、D.Log
PRM2	RATE	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	MIX	0 ~ 100
AUTO WAH		
PRM1	TYPE	LPF、HPF、BPF、BRF
PRM2	SENS	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	Q	0~100

Editing effects

CRUSHER		
PRM1	BALANCE	0 ~ 100
PRM2	BIT CRSH	Off、8bit、4bit、2bit
PRM3	FREQ	1 ~ 100
PRM4	FINE	0 ~ 20
4 POLE FILTER		
PRM1	TYPE	LPF、HPF、BPF、NOTCH、LSF、HSF、PEAK
PRM2	FREQ	0 ~ 127
PRM3	RESO	0 ~ 127
PRM4	GAIN	-63 ~ 63
TRIM FILTER		
PRM1	LO CUT	0 ~ 127
PRM2	HI CUT	0 ~ 127
PRM3	GAIN	-63 ~ 63

Editing effects

FORMANT		
PRM1	TYPE	TYPE1、TYPE2
PRM2	LO CUT	0 ~ 127
PRM3	RESO	0 ~ 127
PRM4	FRMNT	0 ~ 127
RACK COMP		
PRM1	ATTCK	0 ~ 127
PRM2	RELS	0 ~ 127
PRM3	RATIO	0 ~ 127
PRM4	THRES	0 ~ 127
ISOLATOR		
PRM1	FREQ	0 ~ 127
PRM2	BLNC	-63 ~ 63

POINT!

- The DRIVE/MOD module applies effects before the filter when in SERIAL mode, and after the filter when in PARALLEL mode.

Editing effects

EFX1 MODULE		
STEREO CHORUS		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	MIX	0 ~ 100
PRM4	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)
VIBRATO		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)

Editing effects

PHASER		
PRM1	RATE	0 ~ 100
PRM2	STAGE	4、 8
PRM3	INVERT	Off、 On
PRM4	MIX	0 ~ 100
TREMOLO		
PRM1	TYPE	Sine、 Square、 Triangle、 U.Saw、 D.Saw、 Random、 U.Log、 D.Log
PRM2	RATE	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)

Editing effects

FLANGER		
PRM1	RATE	0 ~ 100
PRM2	DEPTH	0 ~ 100
PRM3	MIX	0 ~ 100
PRM4	F.B	-100~100
AUTO PAN		
PRM1	MOD TYP	Sine、Square、Triangle、 U.Saw、D.Saw、Random、 U.Log、D.Log
PRM2	RATE	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)

Editing effects

RING MODULATOR		
PRM1	MOD TYP	Sine、Square、Triangle、 U.Saw、D.Saw、Random、 U.Log、D.Log
PRM2	RATE	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	MIX	0~100
AUTO WAH		
PRM1	TYPE	LPF、HPF、BPF、BRF
PRM2	SENS	0 ~ 100
PRM3	DEPTH	0 ~ 100
PRM4	Q	0~100

Editing effects

EFX2 MODULE		
DELAY		
TAPE ECHO		
REVERSE DELAY		
PINGPONG DELAY		
PRM1	TIME	1 - 2000ms (1 - 1000ms for REVERSE DELAY)
PRM2	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)
PRM3	F.B	0 ~ 100
PRM4	MIX	0~100
REVERB		
PRM1	MIX	0 ~ 127
PRM2	DECAY	0 ~ 127

Editing effects

GRAIN FX		
GRAIN PAD		
GRAIN PARTICLE		
GRAIN SHIFT DOWN		
GRAIN UNCERTAIN		
PRM1	GRAIN	0 ~ 127
PRM2	TIMING	0 ~ 127
PRM3	F.B	0 ~ 127
PRM4	MIX	0 ~ 127

Editing effects

MASTER MODULE		
ROOM		
HALL		
PLATE		
PRM1	MIX	0 ~ 100
PRM2	SHIMMER	0 ~ 127
CUSTOM REVERB		
PRM1	PREDLY	0 ~ 100
PRM2	DECAY	0 ~ 100
PRM3	HI DAMP	0 ~ 100
PRM4	MIX	0 ~ 100
ARENA		
PRM1	MIX	0 ~ 100
PRM2	SHIMMER	0 ~ 127
VINYL RECORD		
PRM1	B.WIDTH	1 ~ 100
PRM2	NOISE	0 ~ 100
PRM3	FLUTTER	1~100
PRM4	SATRTN	1 ~ 100

Editing effects

CASSETTE TAPE		
PRM1	CUTOFF	0 ~ 127
PRM2	NOISE	0 ~ 127
PRM3	FLUTTER	0~127
PRM4	GAIN	0 ~ 127
CRUSHER		
PRM1	BALANCE	0 ~ 100
PRM2	BIT CRSH	Off、8bit、4bit、2bit
PRM3	FREQ	1~100
PRM4	FINE	0 ~ 20
TUNNEL		
INFINITY		
PRM1	MIX	0 ~ 100
PRM2	SHIMMER	0 ~ 127

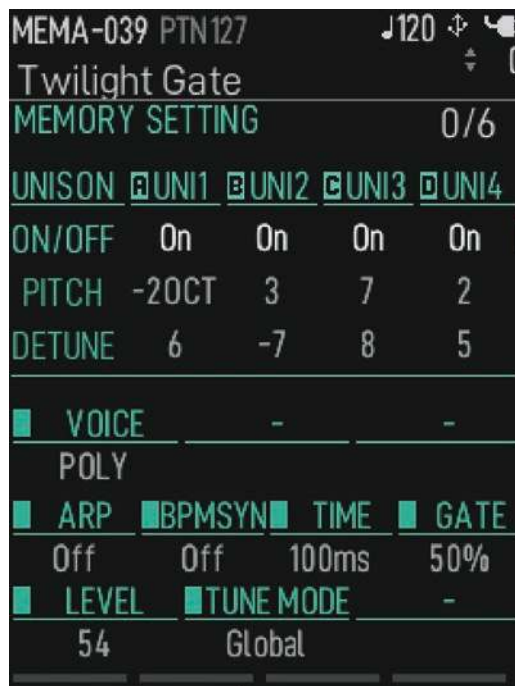
Editing effects

AMBIENT ROOM		
AMBIENT HALL		
AMBIENT INF		
PRM1	LO CUT	0 ~ 127
PRM2	HI DUMP	0 ~ 127
PRM3	BALANCE	-63 ~ 63
PRM4	SHIMMER	0 ~ 127
MIRAGE		
PRM1	LO CUT	0 ~ 127
PRM2	BALANCE	-63 ~ 63
MASTER COMP		
PRM1	ATTCK	0 ~ 127
PRM2	RELS	0 ~ 127
PRM3	RATIO	0 ~ 127
PRM4	THRES	0 ~ 127

POINT!

- When the AUX IN EFX Send setting is Off, the sound from AUX IN will not be played through the master effects section and will be output as dry sound.
- When the EFX Send setting is other than Off, the AUX IN dry sound is muted and the sound that has passed through the master effect is output. At this time, regardless of the EFX Send amount, the AUX IN sound will always be sent to the master effect at 0dB.

Selecting and editing settings



- 1 Press the button to activate setting mode.
- 2 Press the button to select settings to edit.
- 3 Turn the θ_{TYPE} knob to select the setting parameters to edit .
- 4 Turn knobs $\theta_A \sim \theta_D$ to adjust the corresponding parameters on the screen.

Selecting and editing settings

Voice mode

VOICE MODE		
POLY		
Polyphonic mode		
MONO		
The envelope is triggered whenever a key is pressed in this monophonic mode		
LEGATO		
The envelope is not retriggered when another key is pressed in this monophonic mode		
PRM1	PRIORITY	Which key is prioritized when multiple keys are pressed Low: The key with the lowest note will sound High: The key with the highest note will sound Last: The key with last pressed note will sound
PRM2	GLIDE	0~100: Glide speed

Selecting and editing settings

Unison

UNISON		
Up to 4 UNISONS can be used by using the oscillator's MAX polyphony. As the number of UNISONS increases, the maximum polyphony decreases. When using layers, if the total number of unison voices across all layers exceeds the oscillator' s polyphony, no sound will be produced.		
ON/OFF		
PRM1	UNISON1	On/Off
PRM2	UNISON2	
PRM3	UNISON3	
PRM4	UNISON4	
PITCH		
PRM1	UNISON1	-4OCT ~ -1OCT、 -11 ~ 11、 +1OCT ~ +4OCT
PRM2	UNISON2	
PRM3	UNISON3	
PRM4	UNISON4	
DETUNE		
PRM1	UNISON1	-63 ~ 63
PRM2	UNISON2	
PRM3	UNISON3	
PRM4	UNISON4	

Selecting and editing settings

Arpeggiator

ARPEGGIATOR		
UP		
DOWN		
UP DOWN		
DOWN UP		
UP & DOWN		
DOWN & UP		
RANDOM		
UP +1OCT、UP +2OCT、DOWN - 1OCT、DOWN -2OCT		
PLAY ORDER		
When multiple keys are pressed on the keyboard, the arpeggiator plays one note at a time in order according to the speed and sequence type set. When the type is PLAY ORDER, the sequence will repeat in the order the keys were played. When the BPM SYNC parameter is set to anything other than Off, the TIME parameter is ignored and the arpeggiator operates in sync with the current BPM.		
Special operations	-	
PRM1	BPM SYN	Off 1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)
PRM2	TIME	20 ~ 1000ms(enabled with BPM Sync is Off)
PRM3	GATE	10 ~ 90%

Selecting and editing settings

Level and Tune

LEVEL/TUNE		
LEVEL		
PRM1	LEVEL	0 ~ 127
TUNE		
PRM1	MODE	Memory : Use the TUNE setting saved in current Memory. Global : Use the MASTER TUNE setting. See Setting MASTER TUNE for details (→ P.109)
PRM2 (available with PRM1:MODE is set to Memory)	TUNE	-75cent ~ 75cent

Editing Sequencer

Up to 128 patterns can be created in the step sequencer.

In addition to step input recording, sequences can be built up through real-time performance using the real time recording function.

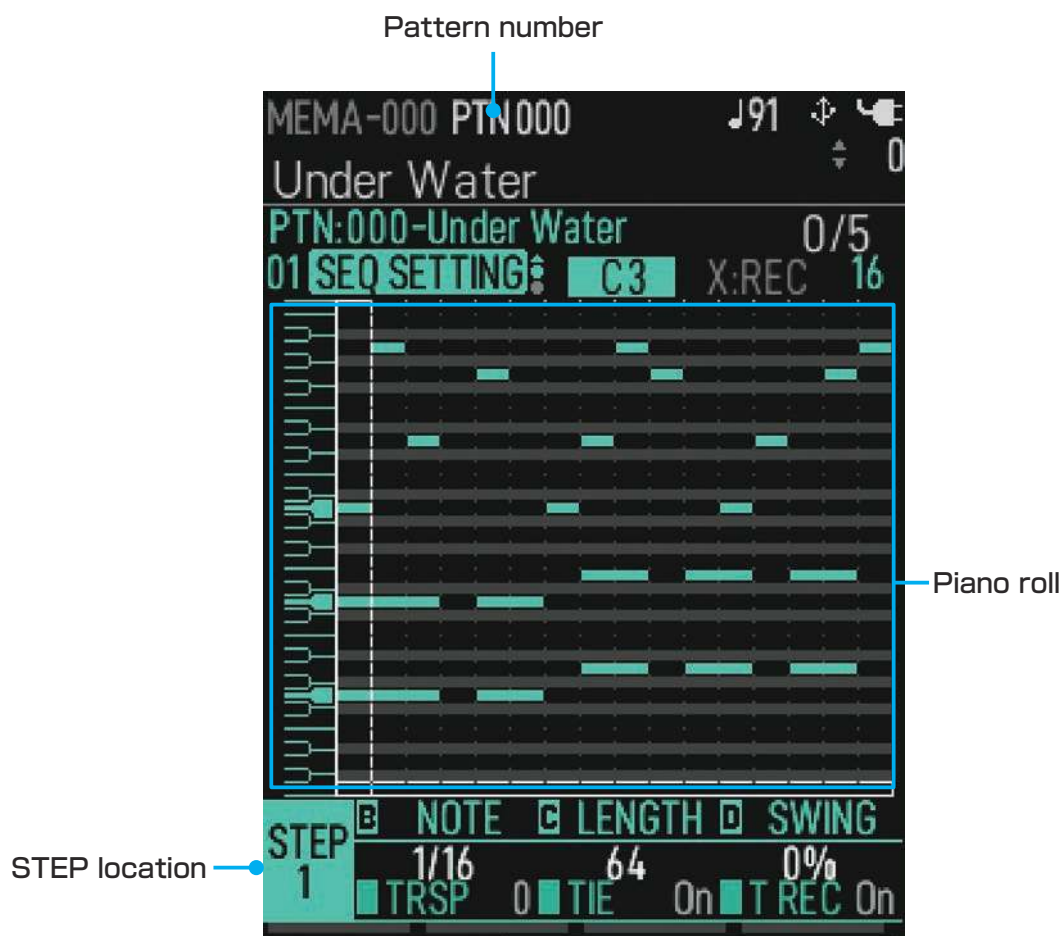
1 Press the  button to activate SEQ mode. (on the **[Core]**, the edit target automatically switches to PATTERN when you enter this mode)

2 **[Play]** Press the  button and press   button to select PATTERNS to edit.

Turn knobs $\theta_A \sim \theta_D$ to adjust the corresponding parameters on the screen.

[Core] Select the PATTERN with the  - / + buttons.

Edit the parameters at the bottom of the screen with the $\theta_A \sim \theta_D$ knobs.



Editing Sequencer

Main operations in sequencer mode

SEQUENCER	
	Start/stop sequence playback
	Enable/disable recording standby for sequencer
 +  buttons simultaneously	Clear all notes in the current pattern
 +  buttons simultaneously	Awaiting LOOPER Recording By pressing any     buttons, you can play the sequencer at the same time as LOOPER recording starts.

POINT!

- By sending a SONG SELECT message to the SYNTH/PTN MIDI Ch or MIDI CC: 60 to the SOUND SETTING MIDI Ch, you can select a pattern.
During sequencer playback, the current pattern will play and then the new pattern will start.
- When the OSC of the selected layer is STK DRUMMER and the drum pattern selected on the STK DRUMMER side is other than NONE, the TYPE title on the SEQ edit screen shows "DRUM PTN:<drum pattern name>" instead of "PTN:<number>" (common to both models).
- To start recording from LOOPER recording standby mode, enable the LOOPER. (→ P.86)

Step Sequencer

Step recording

In this mode, notes can be input step-by-step at any pace.

On the **[Play]**, you enter notes from the unit's keyboard; on the **[Core]**, notes are entered using the ☐ OK or ☐ TRIG button. Notes received via external MIDI or USB MIDI can also be recorded.

- 1** When Sequencer is stopped, press the ☐ button to start recording.
- 2** Use the STEP parameter to select the desired STEP.
- 3** Enter the note you want to input (**[Play]** : keyboard; **[Core]** : ☐ OK button, or external / USB MIDI note).
- 4** Repeat steps 2 and 3 to create the pattern.
- 5** When you've finished inputting notes, press the ☐ button to stop recording.
- 6** Press the ☐ button to save PATTERN.

Step Sequencer

POINT!

- To remove a note that was mistakenly recorded, select the step you want to remove the note from and press the same note on the keyboard while in record mode.
- Multiple steps can be input quickly by changing the STEP while holding down a key or keys.
- Starting playback during step recording will switch the mode to realtime recording.
- **【Core】 Step input (without a keyboard):** During step recording, select the note position with the θ_{TYPE} knob and enter a note at the cursor position with the $\square$ OK button. Press $\square$ OK again on the same note to delete it. When AUTO ST is On, the STEP advances by one automatically after input. Pressing $\square$ CLR during recording clears the pending (in-progress) note.
- **【Core】 SEQ display octave :** In SEQUENCER mode, press $\square$ Fn + $\square$ - / + to switch the sequencer's display octave to - 1 / +1, moving the note range selectable with the θ_{TYPE} knob (the displayed octave). Outside SEQ mode, $\square$ Fn + $\square$ - / + switches the MEMORY bank as before.

Step Sequencer

Parameters when stopped/step recording

STEP RECORDING ①			
⑧ TYPE	Moving cursor horizontal positions on the piano roll	C1 ~ C8	Note numbers in the displayed octave range
PRM1	STEP	1 ~ 128	Current step number
PRM2	NOTE	1/1 (whole note) 1/2 (half note) 1/4 (quarter note) 1/8 (8th note) 1/16 (16th note) 1/32 (32nd note) 1/4(3) (quarter note triplet) 1/4(3) (half note triplet) 1/4. (dotted quarter note) 1/8. (dotted 8th note) 1/16. (dotted 16th note)	Length of one step
PRM3	LENGTH	1~128	Number of STEPs in the Selected Pattern
PRM4	SWING	0 ~ 75%	Amount of SWING throughout current PATTERN
PRM5	STEP	Same as PRM1	-
PRM6	TRANSP	-24 ~ 24	Transpose sequencer playback

Step Sequencer

STEP RECORDING ②			
PRM7	-	-	-
PRM8	-	-	-
PRM9	STEP	Same as PRM1	-
PRM10	VELO	0 ~ 127	Velocity strength
PRM11	ON TIM	-99% ~ 99%	Timing of when sound starts
PRM12	OFF TIM	-99% ~ 99%	Timing of when sound stops
PRM13	STEP	Same as PRM1	-
PRM14	TIE	Off, On	Setting whether or not to tie the same notes inputting together
PRM15	TIM REC	Off, On	Setting whether to quantize notes input in real time
PRM16	AUTO ST	Off, On	Setting whether or not the STEP number automatically advances by one after inputting a note using the step recording.

POINT!

- When MIDI TRANSPOSE=PATTERN, this also becomes the source for KEY TRANSPOSE
- AUTO ST v3.0.128 : automatic step advance works not only for the unit's keyboard and ☐ OK, but also for external MIDI / USB MIDI note input

Step Sequencer

Real-time recording

In this mode, notes are input in real time.

- 1 During playback, press the  button to start recording in real time.
- 2 Play the keyboard (**[Core]** : external / USB MIDI)
- 3 When done playing notes in real time, press the  button to stop recording.

POINT!

- When playback is stopped during real-time recording, it will switch the mode to step recording.

REALTIME RECORDING			
PRM1	-	-	-
PRM2	TRANSP	-24 ~ 24	Transpose sequencer playback
PRM3	-	-	-
PRM4	SWING	0 ~ 75%	Amount of SWING throughout current PATTERN
PRM5	-	-	-
PRM6	TIE	Off, On	Setting whether or not to tie the same notes inputting.
PRM7	TIM REC	Off, On	Setting whether to quantize notes input in real time
PRM8	-	-	-

Selecting and editing MIXER

- 1** **[Play]** Press the  button to activate MIXER mode.
[Core] Press the  MENU button, select MIXER, and then press the  OK button.
- 2** **[Play]** Press   button to select setting to edit.
- 3** **[Play]** Turn θ_{TYPE} $\theta_A \sim \theta_D$ knobs to adjust the corresponding parameters on the screen.

MIXER SETTING ①



Special operations

[play]  +  /  | Switch to the LOOPER Track MIXER

TYPE

MASTER LEVEL

0 ~ 127

MIXER SETTING (AUX/USB/SYNTH) ①

MIXER : EFX SEND POSITION

PRM1	AUX SN.P (A.L SN.P)	EFX1、EFX2
PRM2	(A.R SN.P) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB SN.P	
PRM4	-	-

Selecting and editing MIXER

MIXER SETTING (AUX/USB/SYNTH) ②		
MIXER : EFX SEND LEVEL		
PRM1	AUX SN.L (A.L SN.L)	0 ~ 127
PRM2	(A.R SN.L) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB SN.L	
PRM4	-	-
MIXER : PAN		
PRM1	AUX PAN (A.L PAN)	L63 ~ CENTER ~ R63
PRM2	(A.R PAN) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB PAN	
PRM4	SYN PAN	
MIXER : LEVEL		
PRM1	AUX LVL (A.L LVL)	0 ~ 127
PRM2	(A.R LVL) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB LVL	
PRM4	SYN LVL	
MIXER : MUTE		
PRM1	AUX MUT	Off、 On
PRM2	A.MODE	Stereo、 D.MONO
PRM3	USB MUT	Off、 On
PRM4	SYN MUT	Off、 On

Selecting and editing MIXER

MIXER SETTING (LOOPER) ①		
MIXER : EFX SEND POSITION		
PRM1	AUX SN.P (A.L SN.P)	EFX1、EFX2
PRM2	(A.R SN.P) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB SN.P	
PRM4	-	-
MIXER : EFX SEND LEVEL		
PRM1	AUX SN.L (A.L SN.L)	0 ~ 127
PRM2	(A.R SN.L) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB SN.L	
PRM4	-	-
MIXER : PAN (LOOPER)		
PRM1	LP1 PAN	L63 ~ CENTER ~ R63
PRM2	LP2 PAN	
PRM3	LP3 PAN	
PRM4	LP4 PAN	
MIXER : LEVEL (LOOPER)		
PRM1	LP1 LVL	0 ~ 127
PRM2	LP2 LVL	
PRM3	LP3 LVL	
PRM4	LP4 LVL	

Selecting and editing MIXER

MIXER SETTING (LOOPER) ②		
MIXER : MUTE (LOOPER)		
PRM1	LP1 MUTE	Off、On
PRM2	LP2 MUTE	
PRM3	LP3 MUTE	
PRM4	LP4 MUTE	

Using LOOPER [play]

The looper is a feature exclusive to the ELZ_1 play.

The LOOPER MODE allows you to create 4 LOOP tracks up to about 70 seconds in length.

Not only real-time performances with the internal synth engines but also external AUX IN and USB input audio can be recorded simultaneously.

Easily record, play, and overdub with just one button, making it a great addition to your live performances.

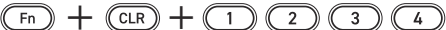
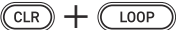
Additionally, by using an external storage card, you can save audio data recorded with LOOPER.

There are boundless ways to use it, such as memoing ideas and creating materials for granular synths.



Using LOOPER [play]

Main operations for LOOPER

LOOPER	
	Start LOOPER Mode
	Playing LOOPER tracks, starting or stopping recording
	Play/stop all LOOPER tracks
 buttons simultaneously	Stop LOOPER tracks
 buttons simultaneously	Mute LOOPER tracks
 buttons simultaneously	Clear LOOPER tracks
 buttons simultaneously	Deletes the recorded audio data of the track number pressed and initializes the track settings.
 buttons simultaneously	Deletes all track audio data and initializes LOOPER settings
	Exit LOOPER Mode

POINT!

- The ELZ_1 core has no looper function and no LOOP button.

Using LOOPER [play]

Record to LOOPER

New recording to the LOOPER track in real time.

- 1** Press the  button to select the LOOPER.
- 2** Press a LOOPER track button     to start recording.
- 3** Play what you'd like to record, the audio will recorded to the selected LOOPER track.
- 4** When you've finished playing, press the same LOOPER track button     to end recording.

POINT!

- The LOOPER is turned off by default.
- In LOOPER Mode, pressing  +     keys gives you access to Memory Banks A, B, C, D.
- If you exit without saving, the configured data will be discarded.
- Recording start behavior follows to REC TRIG setting. (→ P.93)
- During LOOPER recording, you can record continuously by pressing different buttons.
- You can record to LOOPER tracks even if you are not using an external storage card.
If you want to save the recorded audio data, please insert an external storage card into the ELZ_1 play.

Using LOOPER [play]

Queuing up another looper track while recording

- 1** While recording to a looper track, press a track button     that is empty to queue it up for recording (flashes red).
- 2** Press the looper track button     you are currently recording to. This will end recording on the current track and automatically start recording on the queued track.
- 3** Play what you'd like to record, the audio will be recorded to the new LOOPER track.
- 4** When you've finished playing, press the new LOOPER track button again to end recording.

POINT!

- Tracks set to Free in the BAR setting of the Loop Settings will start recording in sync with the tempo ignoring the REC TRG setting when other LOOPER tracks are playing.

Using LOOPER [play]

Recording to another Looper track that set to BAR setting Free while a Looper track is in playback or overdub mode

- 1** Press a LOOPER track button     that is set to BAR setting Free. The track that set to bar setting Free starts recording on the first beat of the bar.
- 2** Play what you'd like to record, the audio will recorded to the selected LOOPER track.
- 3** When you've finished playing, press the same LOOPER track button to end recording.

Recording to the other Looper tracks that are set to a BAR settings of AUTO or 1 ~ 64, while a Looper track is in playback or overdub mode

- 1** Press a LOOPER track button     that is set to a BAR setting of AUTO or 1 ~ 64. The track starts recording immediately.
- 2** Play what you'd like to record, the audio will recorded to the selected LOOPER track.
- 3** When you've finished playing, press the same LOOPER track button to end recording.

Using LOOPER [play]

Editing Looper setting

- 1 On the LOOPER screen, use the   button to select LOOPER SETTING.
- 2 Turn the $\theta^A \sim \theta^D$ knobs that correspond to the parameter you want to adjust on the screen.

LOOP SETTING ①			
			
Special operations	After LOOPER recording, you will able to use UNDO and REDO function by pressing  button.		
LOOP SETTING : BAR			
PRM1	LOOP1	Auto、Free、1 ~ 64	Setting the LOOPER recording length
PRM2	LOOP2		
PRM3	LOOP3		
PRM4	LOOP4		Auto : Automatically adjust loop length to the length of other LOOPER tracks. Free : Start and end recording at any timing for up to about 70 seconds 1 ~ 64 (1 ~ 72) : Number of measures relative to current tempo The maximum number of bars that can be recorded is shown in parentheses.

Using LOOPER [play]

LOOP SETTING ②			
LOOP SETTING : REVERSE			
PRM1	LOOP1	Off、 On	Sets whether to play the recorded LOOP in reverse during playback
PRM2	LOOP2		
PRM3	LOOP3		
PRM4	LOOP4		
LOOP SETTING : 1SHOT			
PRM1	LOOP1	Off、 Gate、 Latch	Off： Play LOOPER repeatedly. Gate： Plays only while the LOOPER TRACK button is pressed. Latch： Plays the recorded LOOPER track recording once without repeating.
PRM2	LOOP2		
PRM3	LOOP3		
PRM4	LOOP4		

Using LOOPER [play]

LOOP SETTING ③			
LOOP SETTING : REC			
PRM1	REC TRIG	Immedi, Key	Sets the recording start behavior when the LOOPER and sequencer are stopped. Immedi: Press the (1) (2) (3) (4) buttons to start recording immediately. Key: Press the (1) (2) (3) (4) buttons to enter standby recording, then play the keyboard to start recording.
PRM2	REC END	Play, Overdub	Sets whether to start playback or overdub after LOOPER recording has ended.
PRM3	-	-	-
PRM4	-	-	-

Exiting the LOOPER

By exiting the LOOPER, the DSP power consumed by the LOOPER can be reallocated to the synthesizer engine.

1 Press the (LOOP) key to display the LOOPER SETTING screen.

2 Press the (X) key to execute LOOPER DISABLE.

3 Press (OK) to exit the LOOPER.

If there is unsaved data, select a destination and execute SAVE.
If you exit the LOOPER without saving, any unsaved data will be lost.

TRIG Function [core]

TRIG (trigger chord) is a feature exclusive to the ELZ_1 core. When you press the  TRIG button, it sends the MIDI notes of a preset chord (trigger chord). It sends Note On the moment you press the button and Note Off the moment you release it, so even the keyless ELZ_1 core can play chords or drive an external sound source.

- 1** Press  Fn +  TRIG to open the TRIG SETTING dialog.
- 2** Set the OCTAVE, ROOT, and chord tones (intervals II-IV) with the encoders.
- 3** Press the  TRIG button once to audition the chord you are setting.
The chord sounds as set so you can check it.

TRIG SETTING		
OCTAVE	Octave of the chord to send. When OCTAVE=8, ROOT is fixed to C.	1 ~ 8
ROOT	Root note of the chord.	-
Chord tones II ~ IV	Interval of each chord tone relative to the root. Up to 4 notes.	interval

POINT!

- Notes auditioned with  TRIG while the TRIG SETTING dialog is shown are not recorded to the sequencer, even while a PATTERN track is recording.

TRIG Function [core]

DRUM TRIG SETTING (with an STK DRUMMER layer)

When the OSC of the selected layer is STK DRUMMER, the  Fn +  TRIG dialog switches to a dedicated "DRUM TRIG SETTING". Selecting PAD1-PAD15 with the θ^A knob (ROOT) changes the drum pad sound (note) that  TRIG plays / sends.

DRUM TRIG SETTING		
PAD (θ^A knob / ROOT)	The drum pad sound that  TRIG plays / sends	PAD1 ~ PAD15

POINT!

- Default PAD1. Shown in "PADn (note name)" form (e.g., PAD1(C2)), drawn as a grid of 15 pads. The setting is saved in the system.
- The ELZ_1 play has no  TRIG button. TRIG / trigger chord is a feature exclusive to the ELZ_1 core. For the destination MIDI channel and forwarding to the USB Host, see "MIDI / USB / AUX".

TEMPO Setting

The arpeggiator, Sequencer, LOOPERS and some effects can be synchronized to the tempo.

Display the TEMPO screen and set the performance tempo for the entire unit.

1 Display the TEMPO screen (**[Play]**  keys / **[Core]**  **BPM** keys).

2 Tap TEMPO button several times at the desired tempo.

3 The current tempo will be shown as the BPM on the TEMPO screen.

The TEMPO LED will also blink at the set tempo.

POINT!

- The tempo can be saved to the current LOOPER and will then be recalled when the LOOPER is reloaded. The tempo will be applied to the current MEMORY and PATTERN settings.
- If OFF is selected in the TEMPO LED item within the MENU, the flashing of the key LEDs can be turned off.

Setting metronome

TEMPO		
 TYPE or TAP	BPM	40 ~ 250
 A	VOL	OFF, 1 ~ 15 Metronome volume
 B	PRECNT	OFF, 1 ~ 16 Number of pre-count

POINT!

- VOL and PRECNT are saved in the ELZ_1 play/core and are common to all PATTERNS and LOOPERS.

MIDI functions

Setting MIDI Channels

You can change the NOTE ON/OFF, PROGRAM CHANGE, and CONTROL CHANGE transmit/receive channels for each track.

For information on each parameter that corresponds to CC numbers, please refer to the separate MIDI implementation guide.

- 1** Press the  button.
- 2** Use the   buttons to select "MIDI" on the menu, and press the OK button to open the MIDI screen.
- 3** Use the   buttons to select CHANNEL, and press the  button.
- 4** Use the   buttons to select the desired Track and press the  button.
- 5** Use the   buttons to select MIDI Channel, and press the  button.

MIDI functions

CHANNEL		
SYNTH/PTN	NOTE ON/OFF, MIDI CC : MIXER, PROGRAM CHANGE, SONG SELECT	Default value : 01
LOOPER TRACK1	MIDI CC : MIXER	Default value : 02
LOOPER TRACK2	MIDI CC : MIXER	Default value : 03
LOOPER TRACK3	MIDI CC : MIXER	Default value : 04
LOOPER TRACK4	MIDI CC : MIXER	Default value : 05
AUX IN	MIDI CC : MIXER	Default value : 06
AUX IN1 ※ Available when AUX IN MODE is set to Dual Mono	MIDI CC : MIXER	Default value : 07
AUX IN2 ※ Available when AUX IN MODE is set to Dual Mono	MIDI CC : MIXER	Default value : 08
USB	MIDI CC : MIXER	Default value : 09
MASTER	MIDI CC : MIXER	Default value : 10
SOUND LAYER1	MIDI CC:SOUND LAYER1	Default value : 13
SOUND LAYER2	MIDI CC:SOUND LAYER2	Default value : 14
SOUND LAYER3	MIDI CC:SOUND LAYER3	Default value : 15
SOUND SETTING	MIDI CC : SOUND SETTING	Default value : 12

POINT!

- You can select the MIDI transmit/receive channel from 01 to 16 or Off.
- When set to Off, MIDI message transmission and reception will be disable.

MIDI functions

Using the MIDI THRU function

MIDI messages input through the ELZ_1 play/core MIDI IN can be passed THRU as is from its MIDI OUT.

- 1 Press the  button.
- 2 Use the   buttons to select "MIDI" on the menu, and press the  button.
- 3 Use the   buttons to select CLOCK OUT, and press the  button.
- 4 Use the   buttons to select On and press the  button.

MIDI TRNSPOSE Settings

Changes the target to which transposition is applied.

- 1 Press the  button.
- 2 Use the   buttons to select "MIDI" on the menu, and press the  button.
- 3 Press the   buttons to select MIDI TRNSPOSE, and then press the  button.
- 4 Press the   buttons to select the item you want to change, and then press the  button.

MIDI TRNSPOSE	
KEYBOARD	Transposition is applied to the KEYBOARD. NOTE messages received via external MIDI input are also transposed. Set Key Transpose. (→ P.20)
PATTERN	Only the transposition set on the SEQ page (→ P.79) is applied.

MIDI functions

Setting CLOCK OUT

MIDI clock can be transmitted.

- 1** Press the  button.
- 2** Use the   buttons to select "MIDI" on the menu, and press the  button.
- 3** Press the   buttons to select CLOCK OUT, and then press the  button.
- 4** Use the   buttons to select On and press the  button.

SYNC functions

Synchronizing with external clock (CLOCK menu)

arpeggiator, sequencer, LOOPER and some of effects can be synchronized with an external clock source.

Use the CLOCK menu to select the clock source.

Since the **[Core]** has no SYNC IN / OUT jacks, the selectable clock sources are Internal / MIDI / AUX IN (AUDIO SYNC).

- 1 Press the  button.
- 2 Use the   buttons to select "CLOCK" on the menu, and press the  button.
- 3 Use the   buttons to select SOURCE, and press the  button.
- 4 Press the  button to open SOURCE screen.
- 5 Use the   buttons to select the CLOCK source to use and press the  button.

CLOCK	
Internal	ELZ_1 play built-in clock
MIDI	Clock from external MIDI device
SYNC IN	External clock pulse input through SYNC IN
AUX IN	External clock pulse input through AUX IN. (See AUDIO SYNC function for details.)

AUDIO SYNC functions [play]

< Important >

Proper connection with all SYNC devices is not guaranteed. Never input voltage higher than **5V through the ELZ_1 play/core AUX IN jack. Doing so could cause damage.**

Clock pulses output from ELZ_1 and Teenage Engineering Pocket Operators, for example, can be input through the ELZ_1 play AUX IN jack to synchronize the tempo of its step sequencer and arpeggiator. Moreover, by connecting with a stereo mini pin cable, a clock pulse and a mono audio signal can be simultaneously input through the AUX IN.

Connecting an external clock source to the ELZ_1 play AUX IN jack

PO series	Use a stereo mini pin cable to connect the Pocket Operator headphone jack to the ELZ_1 play AUX IN jack. Set the Pocket Operator sync mode to SY1, SY3 or SY5. The volume of the Pocket Operator can be adjusted on the device itself or using the ELZ_1 play AUX IN GAIN MENU item.
ELZ_1	Use a stereo mini pin cable to connect the headphone jack of the sending ELZ_1 to the AUX IN jack of the receiving ELZ_1 play. Set the clock source of the receiving ELZ_1 play to AUX IN.

AUDIO SYNC functions [play]

AUDIO SYNC OUT function

Outputs the SYNC signal from the L side of the headphone jack.

- 1 Press the  button.
- 2 Use the   buttons to select "CLOCK" on the menu, and press the  button.
- 3 Use the   buttons to select AUDIO SYNC OUT.
- 4 Press the  button to open AUDIO SYNC OUT screen.
- 5 Use the   buttons to select On and press the  button.

POINT!

- When set AUDIO SYNC OUT to On , the clock pulse is output from the left channel and mono audio is output from the right channel of the headphone jack.
- If the device receiving the AUDIO SYNC signal is not synchronizing properly, try adjusting the ELZ_1 play headphone volume.

Keyboard Settings

Adjusting VELOCITY [play]

- 1 Press the  button.
- 2 Use the   buttons to select "KEYBOARD" on the menu, and press the  button.
- 3 Use the   buttons to select "VELOCITY" on the menu, and press the  button.
- 4 Use the  knob or   buttons to select parameters, and press the  or  buttons.

VELOCITY	
1 ~ 127	Fixed value velocity
Curve01 ~ 10	The volume changes depending on how strongly you press the key. The higher the value, the harder you have to play to get the loudest volume.

Keyboard Settings

Changing the Transpose Value

Changes the keyboard transpose value.

This can also be changed outside the MENU screen using **[play]**  +   or **[core]**  **Fn+**  .

- 1 Press the  button.
- 2 Use the   buttons to select "KEYBOARD" on the menu, and press the  button.
- 3 Use the   buttons to select "TRANSPOSE" on the menu, and press the  button.
- 4 Use the  knob or   buttons to select parameters, and press the  or  buttons.

TRANSPOSE	
-24 ~ +24	Sets the KEY TRANSPOSE value. Edits the same value as the shortcut ([Play]  +   / [Core]  Fn+  )

POINT!

- On the **[Core]** , the KEYBOARD menu has only TRANSPOSE / PITCH BEND and no VELOCITY item (velocity depends on external MIDI / USB MIDI input).

Keyboard Settings

Setting the Pitch Bend Range

- 1 Press the  button.
- 2 Press the   buttons to select KEYBOARD, and then press the  button.
- 3 Press the   buttons to select PITCH BEND, and then press the  button.
- 4 Turn the  TYPE knob or press the   buttons to change the setting, and then press the  or  button.

PITCH BEND	
1 ~ 12	The pitch bend range changes in semitone increments.

DUAL MONO mode

You can input external audio as two monaural channels by connecting a stereo mini plug to a monaural LR cable to the AUX IN.

- 1 Press the  button.
- 2 Use the   buttons to select "AUX IN" on the menu, and press the  button.
- 3 Use the   buttons to select AUX IN MODE, and press the  button.
- 4 Use the   buttons to select Dual Mono to use and press the  button.

POINT!

- Select the following parameters for AUX IN 1/2 in the AUX IN menu, press  , and adjust by pressing the   button or turning one of the knobs.
- AUX IN MODE can be changed even in MIXER mode. (→ P.82)

DUAL MONO MODE	
AUX IN PAN 1	0 ~ 127
AUX IN PAN 2	L63 ~ Center ~ R63

Adjusting AUX IN GAIN

You can adjust the volume of external audio connected to AUX IN.

- 1** Press the  button.
- 2** Use the   buttons to select "AUX IN" on the menu, and press the  button.
- 3** Use the   buttons to select AUX IN GAIN, and press the  button.
- 4** Use the   buttons or one of the knobs to adjust AUX IN GAIN, and press the  button.

POINT!

- AUX IN GAIN can greatly amplify the AUX IN volume , but when trying to amplify a small audio signal, noise will also increase. So, please raise to a level that does not cause distortion on the external audio device, and use AUX IN GAIN if necessary.

Adjusting MASTER TUNE

Adjust the ELZ_1 play/core Global tuning setting.

- 1 Press the  button.
- 2 Use the   buttons to select "MASTER TUNE" on the menu, and press the  button.
- 3 Use the   buttons or one of the knobs to adjust MASTER TUNE, and press the  button.

POINT!

- This is enabled when the MODE of the LEVEL/TUNE parameter is set to Global in the setting mode.

Retaining Effect Sounds When Changing MEMORY

Allows you to change MEMORY's without cutting off lingering reverb and other effect sounds.

- 1 Press the  button.
- 2 Press the   buttons to select MASTER EFX RESET, and then press the  button.
- 3 Press the   buttons to select OFF, and then press the  button.

POINT!

- If there is a large LEVEL difference between the current MEMORY and the destination MEMORY, the effect sounds will also become louder to match the destination MEMORY. Be careful, as this may result in a sudden increase in volume.

Adjusting PLAYMODE SCROLL

In Play Mode, you can invert the knob operation direction when selecting MEMORY.

- 1** Press the  button.
- 2** Use the   buttons to select PLAYMODE SCROLL, and press the  button.
- 3** Turn the knob or press the   button to change the setting, then press the  button.

MEMORY management

Use the MEMORY menu to manage MEMORY in the ELZ_1 play/core.

- 1** Press the  button.
- 2** Use the   buttons to select MEMORY.
- 3** Press the  button to open the MEMORY menu.

MEMORY management

Selecting MEMORY

The currently selected MEMORY can be changed.

- 1 Use the   buttons to select the MEMORY to use.
- 2 Press the  button.
- 3 Use the   buttons to choose Select.
- 4 Press the  button.

POINT!

- **[play]** Hold down the  button and press the , , , or  button to access Memory Banks A, B, C, or D, respectively.
- **[play/core]** Press  +  /  to access Memory Banks A, B, C, or D.

MEMORY management

MEMORY TAG Settings

Edit the TAGs assigned to a MEMORY.

- 1** Press the   buttons to select the desired MEMORY, and then press the  button.
- 2** Press the   buttons to select TAG, and then press the  button.
The TAG SET screen appears.
- 3** Press the   buttons to select the TAG you want to assign, and then press the  button.
A red indicator appears to the left of each assigned TAG name.
Press the  button again to remove the TAG assignment.

POINT!

- Up to four TAGs can be assigned to a single MEMORY.
- TAG information is automatically saved to the MEMORY.
- On the TAG SET screen, press the   buttons to switch the MEMORY whose TAGs you want to edit.

MEMORY management

Changing MEMORY names

The selected MEMORY names can be changed.

- 1 Use the   buttons to select the MEMORY to use and press the  button.
- 2 Use the   buttons to select Rename and press the  button.
- 3 Use the  TYPE and  A ~  D knobs to edit the name.

 TYPE	Move cursor left and right
 A	Change character
 B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 4 Press the  button to open a confirmation screen.

POINT!

- Changes can be canceled by pressing the  or  button.
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!"#\$%&'()*+,-./:;<=>?@[\]^_`{|}~(space)

MEMORY management

Initializing the settings of one MEMORY

The selected MEMORY can be initialized to basic settings.

- 1** Use the   buttons to select the desired MEMORY, and press the  button.
- 2** Use the   buttons to select Initialize, and press the  button to open a confirmation screen.
- 3** Use the   buttons to select Yes, and press the  button.

POINT!

- Please do this operation carefully.
Once initialized, MEMORY cannot be returned to the status before initialization.

MEMORY management

Exporting MEMORY settings

The selected MEMORY can be exported.

The exported MEMORY is saved in the external card storage and can be accessed using a PC/Mac.

- 1 Use the   buttons to select the desired MEMORY, and press the  button.
- 2 Use the   buttons to select Export, and press the  button.
- 3 Use the θ_{TYPE} and $\theta_A \sim \theta_D$ knobs to edit the name of the exported file.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 4 Press the  button to open a confirmation screen.
- 5 Use the   buttons to select Yes, and press the  button.

POINT!

- Changes can be canceled by pressing the  or  button.
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!#\$%&'() +,-.:=@[]^_`{|}~(space)

MEMORY management

Importing MEMORY settings

A MEMORY file saved in the external card storage can be imported to the selected MEMORY slot.

- 1** Use the   buttons to select the desired MEMORY slot, and press the  button.
- 2** Use the   buttons to select Import, and press the  button to open a list of files in the MEMORY folder in the external card storage.
- 3** Use the   buttons to select the file to import, and press the  button to open a confirmation screen.
- 4** Use the   buttons to select Yes, and press the  button.

POINT!

- Only MEMORY files stored in the Memory folder in the external card storage are shown on the list .

Pattern management

Use the PATTERN menu to manage PATTERNS in the ELZ_1 play.

- 1** Press the  button.
- 2** Use the   buttons to select PATTERN on the menu.
- 3** Press the  button to open the PATTERN menu.

Pattern management

Changing PATTERN name

Pattern names can be changed.

- 1 Use the   buttons to select the pattern to use and press the  button.
- 2 Use the   buttons to select Rename and press the  button.
- 3 Use the θ_{TYPE} $\theta_A \sim \theta_D$ knobs to edit the name.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 4 Press the  button to end editing.

POINT!

• Changes can be canceled by pressing the  or  button.

• The following characters and symbols can be used.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

!"#\$%&'()*+,-./:;<=>?@[\] ^ _ `{|}~(space)

Pattern management

Initializing the settings of one Pattern

The selected PATTERN can be initialized to basic settings.

- 1** Use the   buttons to select the desired pattern, and press the  button.
- 2** Use the   buttons to select Initialize, and press the  button to open a confirmation screen.
- 3** Use the   buttons to select Yes, and press the  button.

POINT!

- Please do this operation carefully.
Once initialized, MEMORY cannot be returned to the status before initialization.

Pattern management

Exporting Pattern settings

The selected Pattern can be exported.

The exported Pattern is saved in the external card storage and can be accessed using a PC/Mac.

- 1 Use the   buttons to select the desired PATTERN, and press the  button.
- 2 Use the   buttons to select Export, and press the  button.
- 3 Use the θ_{TYPE} and $\theta_A \sim \theta_D$ knobs to edit the name of the exported file.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 4 Press the  button to open a confirmation screen.
- 5 Use the   buttons to select Yes, and press the  button.

POINT!

- Changes can be canceled by pressing the  or  button.
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!#\$%&'() +,-.:=@[]^_`{|}~(space)

Pattern management

Importing Pattern settings

A PATTERN file saved in the external card storage can be imported to the selected PATTERN slot.

- 1** Use the   buttons to select the desired Pattern slot, and press the  button.
- 2** Use the   buttons to select Import, and press the  button to open a list of files in the PATTERN folder in the external card storage.
- 3** Use the   buttons to select the file to import, and press the  button to open a confirmation screen.
- 4** Use the   buttons to select Yes, and press the  button.

POINT!

- Only PATTERN files stored in the Pattern folder in the external card storage are shown on the list.

LOOPER management [play]

Use the LOOPER menu to manage LOOPERS in the external card storage.

- 1** Press the  button.
- 2** Use the   buttons to select LOOPER on the menu.
- 3** Press the  button to open the PATTERN menu.

Selecting LOOPER

The currently selected LOOPER can be changed.

- 1** Use the   buttons to select the LOOPER to use.
- 2** Press the  button.
- 3** Use the   buttons to choose Select.
- 4** Press the  button.

LOOPER management [play]

Changing LOOPER names

The selected LOOPER names can be changed.

- 1 Use the ▲ ▼ buttons to select the LOOPER to use and press the  button.
- 2 Use the ▲ ▼ buttons to select Rename and press the  button.
- 3 Use the TYPE and 1 - 4 knobs to edit the name.

 TYPE	Move cursor left and right
 A	Change character
 B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 4 Press the  button to end editing.

POINT!

- Changes can be canceled by pressing the  or  button.
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!"#\$%&'()*+,-./:;<=>?@[\]^_`{|}~(space)

LOOPER management [play]

Deleting one LOOPER file

The selected LOOPER files can be Deleted

- 1** Use the ▲ ▼ buttons to select the desired LOOPER, and press the  button.
- 2** Use the ▲ ▼ buttons to select "Delete Files", and press the  button to open a confirmation screen.
- 3** Use the ▲ ▼ buttons to select Yes, and press the  button.

POINT!

- Please do this operation carefully.
Once Deleted, all track audio data contained in selected LOOPER are permanently deleted and cannot be restored.

WAVEDATA management

Exporting waveforms for the 8BIT WAVEMEM SYNTH/8BIT WAVEMEM SYNTH (FM MODE)

You can export waveform data you have created and save it as WAV files to the external card storage.

The exported WAV files are saved in the WaveData folder in the external card storage and can be accessed using a PC/Mac.

- 1 Press the  button.
- 2 Use the   buttons to select "WAVEDATA" on the menu, and press the  button to open the WAVEDATA screen.
- 3 Use the   buttons to select the synth engine that you want to export from (8BIT WAVEMEM SYNTH or 8BIT WAVEMEM SYNTH (FM)), and press the  button.
- 4 Use the   buttons to select Bank01 - 50 or FM01 - 20, and press the  button.
- 5 Use the   buttons to select Export, and press the  button.
- 6 Use the θ_{TYPE} and $\theta_A \sim \theta_D$ knobs to edit the name of the exported file.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 7 Press the  button to open a confirmation screen.

WAVEDATA management

8 Use the   buttons to select Yes.

9 Press the  button.

POINT!

- Changes can be canceled by pressing the  or  button.
- Waveform data is saved in the WAV file format (8-bit, 48kHz, mono, 32 samples).
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!#\$%&'() +,-.:=@[]^_`{|}~(space)

WAVEDATA management

Importing waveform data for use by the 8BIT WAVEMEM SYNTH/8BIT WAVEMEM SYNTH (FM MODE)

WAV files saved in the WaveData folder in the external card storage can be imported to Bank01 – 50 or FM01 – 20 for use in the 8BIT WAVEMEM SYNTH.

- 1** Press the  button.
- 2** Use the   buttons to select "WAVEDATA" on the menu, and press the  button to open the WAVEDATA screen.
- 3** Use the   buttons to select the synth engine that you want to import to (8BIT WAVEMEM SYNTH or 8BIT WAVEMEM SYNTH (FM)), and press the  button.
- 4** Use the   buttons to select Bank01 – 50 or FM01 – 20, and press the  button.
- 5** Use the   buttons to select Import, and press the  button to open a list of files in the WAVEDATA folder in the external card storage.
- 6** Use the   buttons to select the WAV file to import, and press the  button to open a confirmation screen.
- 7** Use the   buttons to select Yes, and press the  button.

WAVEDATA management

POINT!

- Only files stored in the WaveData folder in the external card storage are shown in the list.
- The first 32 samples are imported as waveform data in WAV file format (8-bit, 48kHz, mono).
- Only files exported from 8BIT WAVE MEMORY (FM MODE) can be imported to FM01 – 20.
- If you try to import an unsupported or corrupted file, a WARNING ("Invalid Audio Format", "Invalid File", etc.) is shown and the import is aborted. The warning stays on screen for about 3 seconds, or until the next button press.

WAVEDATA management

Exporting waveform data used with DNA EXPLORER /SiGRINDER

Waveform data used with DNA EXPLORER/SiGRINDER can be exported in WAV files.

Exported WAV files are saved in the WAVEDATA folder in the external card storage and can be accessed using a PC/Mac.

- 1** Press the  button.
- 2** Use the   buttons to select "WAVEDATA" on the menu, and press the  button to open the WAVEDATA screen.
- 3** Use the   buttons to select DNA EXPLORER or SiGRINDER, and press the  button.
- 4** Use the   buttons to select the desired WAVEDATA and press the  button.
- 5** Use the   buttons to select Export, and press the  button.
- 6** Use the θ_{TYPE} and $\theta_A \sim \theta_D$ knobs to edit the name of the exported file.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 7** Press the  button to open a confirmation screen.

WAVEDATA management

8 Use the   buttons to select Yes, and press the  button.

POINT!

- Changes can be canceled by pressing the  or  button.
- Waveform data is saved in the WAV file format (16-bit, 48kHz, mono).
- The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!#\$%&'() +,-.:=@[]^_`{|}~(space)

WAVEDATA management

Importing waveform data for use with DNA EXPLORER/SIGRINDER

WAV files saved in the WAVEDATA folder in the external card storage can be imported to selected one of the three WAVEDATA slots used by DNA EXPLORER and SIGRINDER.

- 1 Press the  button.
- 2 Use the   buttons to select "WAVEDATA" on the menu, and press the  button to open the WAVEDATA screen.
- 3 Use the   buttons to select DNA EXPLORER or SIGRINDER, and press the  button.
- 4 Use the   buttons to select the desired WAVEDATA and press the  button.
- 5 Use the   buttons to select Import, and press the  button to open a list of WAV files in the WAVEDATA folder in the external card storage.
- 6 Use the   buttons to select the WAV file to import, and press the  button to open a confirmation screen.
- 7 Use the   buttons to select Yes, and press the  button.

POINT!

- Only WAV files stored in the WaveData folder in the external card storage are shown in the list.
- To be imported into ELZ_1 play WAVEDATA1 – 3 slots, waveform data files must be WAV format (16-bit, 48kHz, mono).
- If a WAV file is longer than five seconds, the first five seconds will be imported.

CARD functions

Accessing the ELZ_1 play/core card from PC/Mac (USB mass storage mode)

You can access exported MEMORY files, waveform files, user backup files, etc. from your PC/Mac.

It is also used when updating firmware.

< Important >

Recognition of the ELZ_1 play/core, it could take about 10-30 seconds the first time it is connected, depending on the type of PC/Mac. Do not disconnect the USB cable or turn the power off before it is recognized.

- 1** Use a USB cable to connect the ELZ_1 play/core to a PC/Mac.
- 2** Press the  button.
- 3** Use the   buttons to select "CARD" on the menu, and press the  button.
- 4** Use the   buttons to select USB MASS STORAGE MODE, and press the  button. (The card storage being used by ELZ_1 play/core is displayed on the PC/Mac.)

POINT!

- To exit USB mass storage mode, press the  button on the main unit after safely removing the ELZ_1 play/core drive on your PC/Mac
- The product root folder name on the card is common to both models: "ELZ_1 series" (with Memory / Pattern / WaveData / WaveTableData / Noise / Kit / Looper / Backup created under it). If an "ELZ_1 play" folder created by an older version exists on the card, it continues to be used for compatibility. No "ELZ_1 core" folder exclusive to the ELZ_1 core is created. The preset Wavetable is also read from "ELZ_1 series Contents.bin" (formerly "ELZ_1 play Contents.bin")

CARD functions

Using user waveforms with ZTRINGS

You can save a custom WAV file on the ELZ_1 play/core storage card to use with the ZTRINGS engine.

- 1** Connect your PC or MAC and ELZ_1 play/core.
- 2** Press the  button.
- 3** Press the   buttons, select CARD, and press the  button (the CARD screen will be displayed).
- 4** Press the   buttons to select USB MASS STORAGE MODE and press the  button.
- 5** Open the "USB Drive:\ELZ_1 play\Noise" address on the PC (If the Noise folder does not exist, create a new one.)
- 6** Copy any WAV data into the Noise folder.
- 7** Press the  button to exit USB MASS STORAGE MODE.

POINT!

- Waveform data that can be used with ELZ_1 play is WAV file format (16Bit, 48kHz, monaural).

CARD functions

Using user waveforms with Wavetable

You can save a custom WAV file on the ELZ_1 play/core storage card to use with the Wavetable engine.

- 1 Connect your PC or MAC and ELZ_1 play/core.
- 2 Press the  button.
- 3 Press the   buttons, select CARD, and press the  button (the CARD screen will be displayed).
- 4 Press the   buttons to select USB MASS STORAGE MODE and press the  button.
- 5 Open the "USB Drive:\ELZ_1 play\WaveTableData" address on the PC (If the WaveTableData folder does not exist, create a new one.)
- 6 Copy any WAV data into the WaveTableData folder.
- 7 Press the  button to exit USB MASS STORAGE MODE.

POINT!

- When using user data in Wavetable OSC, the recommended data format is WAV file (mono, 44.1 kHz, 16-bit int or 32-bit float, 2048 samples × 256 tables).
- Press  +  to switch the reference source between INT and CARD.(OK: CARD / OK: SLOT is shown in the footer. If the target data cannot be found, NOT FOUND is shown; for an unsupported file, UNSUPPORTED FILE is shown)
- While the card reference (OK: CARD) is active or while selecting a slot (WT list), you can step back one level at a time with  CLR (exit slot selection → clear the card reference and return to the normal WAVE TABLE display; except when pressed together with  OK).

CARD functions

Using a Drum Kit created on the SmpITrek with STK DRUMMER

You can use your own drum kits with the STK DRUMMER engine by saving the STK data created with SmpITrek into the ELZ_1 play/core card.

- 1** Connect your PC or MAC and ELZ_1 play/core.
- 2** Press the  button.
- 3** Press the   buttons, select CARD, and press the  button (the CARD screen will be displayed).
- 4** Press the   buttons to select USB MASS CARD MODE and press the  button.
- 5** Open the "USB Drive:\ELZ_1 play\Kit" address on the PC (If the Kit folder does not exist, create a new one.)
- 6** Copy any STK data into the Kit folder.
- 7** Press the  button to exit USB MASS STORAGE MODE.

CARD functions

Delete files in the external card storage

Delete the files in the card generated by ELZ_1 play/core by exporting etc.

- 1 Press the  button.
- 2 Press the   buttons, select CARD, and press the  button.
- 3 Press the   buttons, select DELETE, and press the  button.
- 4 Press the   buttons, select the type of file you want to delete from Memory, WaveData, Pattern, and Backup, and press the  button (a list of files will be displayed).
- 5 Press the   buttons, select the type of files you want to delete, and press the  button (a confirmation screen will appear).
- 6 Press the   buttons, select Yes, and press the  button.

POINT!

- Only files generated with ELZ_1 play/core can be deleted.
- Deleted files cannot be recovered. Please work carefully.

CARD functions

Backing up user data in the ELZ_1 play/core

The user data in the ELZ_1 play/core can be exported to its external storage card.

The following data is backed up.

- MEMORY A-0 ~ 127, B-0 ~ 127, C-0 ~ 127, D-0 ~ 127
- Bank01 ~ 50 and FM01 ~ 20 waveforms used by 8BIT WAVE MEMORY
- WAVEDATA1 ~ 3 waveforms used by DNA EXPLORER and SiGRINDER
- PTN 0 ~ 127

- 1 Press the  button.
- 2 Press the   buttons, select CARD, and press the  button.
- 3 Press the   buttons, select Backup, and press the  button.
- 4 Press the   buttons, select Export, and press the  button.
- 5 Use the  TYPE knobs to select the data to backup.

BACKUP		
ALL	All user data	ELZ_1_USERDATA
MEMORY A	All Memories data in Bank A.	ELZ_1_MEMORY_A
MEMORY B	All Memories data in Bank B.	ELZ_1_MEMORY_B
MEMORY C	All Memories data in Bank C.	ELZ_1_MEMORY_C
MEMORY D	All Memories data in Bank D.	ELZ_1_MEMORY_D
PATTERN	All Pattern data	ELZ_1_PATTERN

CARD functions

BACKUP		
WAVEDATA	WAVEDATA1 ~ 3 waveforms used by DNA EXPLORER and SiGRINDER	ELZ_1_WAVEDATA
8bit WAVEMEM	Bank01 ~ 50 and FM01 ~ 20 waveforms used by 8BIT WAVE MEMORY	ELZ_1_8WAVEMEM
PREFERENCES	System settings saved in ELZ_1 play/ core	ELZ_1_PREF

- 6** Use the θ_{TYPE} and $\theta_A \sim \theta_D$ knobs to edit the name of the exported file.

θ_{TYPE}	Move cursor left and right
θ_A	Change character
θ_B	Change the character type (uppercase letters → lowercase letters → numbers → symbols)

- 7** Press the  button to open a confirmation screen.

- 8** Use the   buttons to select Yes, and press the  button.

POINT!

- We recommend that you copy the backed up data to your PC/ Mac. Please refer to Accessing the ELZ_1 play/core card from PC/Mac (USB mass storage mode (→ P.134)
- Backup files are stored in the Backup folder on the card.
- The characters/symbols that can be used in backup files are as follows.
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789
 !#\$%&' () +,-.:=@[]^_`{|}~(space)

CARD functions

Restoring backup user data to the ELZ_1 play/core

When restoring from backup data, the following items are overwritten by that data.

- MEMORY A-0 ~ 127, B-0 ~ 127, C-0 ~ 127, D-0 ~ 127
- Bank01 ~ 50 and FM01 ~ 20 waveforms used by 8BIT WAVE MEMORY
- WAVEDATA1 ~ 3 waveforms used by DNA EXPLORER and SiGRINDER
- PTN 0 ~ 127

- 1 Press the  button.
- 2 Press the   buttons, select CARD, and press the  button.
- 3 Press the   buttons, select Backup, and press the  button.
- 4 Press the   buttons, select Import, and press the  button to open a list of backup files.
- 5 Use the   buttons to select the backup file with the state you want to restore, and press the  button to open a confirmation screen.
- 6 Press the   buttons, select Yes, and press the  button.

POINT!

- Conduct this operation with care, because the backup data will overwrite the current MEMORY settings and waveform data.
- If you want to restore from a backup file on your PC/Mac, connect ELZ_1 play/core to your PC/Mac and copy the backup file to the Backup folder on the card in advance.
Please refer to Accessing the ELZ_1 play/core card from PC/Mac (USB mass storage mode (→ P.134))

CARD functions

Formatting the external card storage

This formats the external storage card that can be accessed from a PC/Mac. This does not initialize the MEMORY settings or waveform data stored in the internal memory of the EZL_1 play/core.

< Warning! >

This operation will initialize all the data in the external card storage. Copy any needed data to the PC/Mac in advance.

- 1** Press the  button.
- 2** Press the   buttons, select CARD, and press the  button.
- 3** Press the   buttons, select Format, and press the  button to open a confirmation screen.
- 4** Press the   buttons, select Yes, and press the  button.

Changing POWER settings

Setting AUTO POWER OFF

The time until automatic shutdown can be set.

- 1 Press the  button.
- 2 Press the   buttons, select AUTO POWER OFF, and press the  button.
- 3 Use the   buttons to select a time between 20 minutes and 6 hours (or Off to disable the AUTO POWER OFF function), and press the  button.

Changing Battery type [play]

By changing the type of batteries used in ELZ_1 play, the battery icon on the screen will be displayed correctly.

- 1 Press the  button.
- 2 Press the   buttons, select BATTERY TYPE, and press the  button.
- 3 Use the   buttons to select Battery Type, and press the  button.

BATTERY TYPE	
Alkaline	Alkaline battery
NiMH	Nickel metal hydride battery
Lithium	Lithium battery

Changing LCD brightness setting

This adjusts the LCD screen brightness.

- 1 Press the  button.
- 2 Press the   buttons, select BRIGHTNESS, and press the  button.
- 3 Use the knobs to adjusting the LCD brightness.

LCD BRIGHTNESS	
1 ~ 10	Higher numbers increase brightness.

Other Settings

Displaying a Warning Dialog When Changing an Edited MEMORY

Displaying an alert prevents you from accidentally switching to another MEMORY before saving your edits.

- 1** Press the  button.
- 2** Press the   buttons to select MEMORY CHANGE ALERT, and then press the  button.
- 3** Press the   buttons to select ON, and then press the  button.

Changing the PLAY Mode Background Display

You can reduce the CPU load by disabling the background OSC display in PLAY Mode.

- 1** Press the  button.
- 2** Press the   buttons to select PLAYMODE OSC VIEW, and then press the  button.
- 3** Press the   buttons to select OFF, and then press the  button.

Restoring the ELZ_1 play to factory default settings

The ELZ_1 play can be restored to its factory default settings.

< Warning! >

Performing this operation will erase user data. Proceed with care, and back up your user data beforehand as needed.

- 1** Press the  button.
- 2** Press the   buttons, select RESET, and press the  button to open a confirmation screen.
- 3** Use the   buttons to select Yes, and press the  button.

POINT!

- This does not erase the storage in the external card storage. To format the external card storage, see (→ P.142)

System information

Firmware versions can be checked on this screen.

- 1** Press the  button.
- 2** Press the   buttons, select SYSTEM INFORMATION, and press the  button.

Updating the ELZ_1 play firmware

The ELZ_1 play/core firmware can be updated by connecting the ELZ_1 play/core to a PC or Mac by USB and transferring an update file.

- 1 Download the latest firmware from the SONICWARE website and copy it to the external card storage. See “Accessing the ELZ_1 play/core card from PC/Mac (USB mass storage mode)”(→ P.134)
Copy to

【play】 "USB Drive:\ELZ_1 play.bin"

【core】 "USB Drive:\ELZ_1 core.bin"

- 2 Turn the ELZ_1 play/core power off.
- 3 Turn the power on while pressing the  button.
- 4 Use the   buttons to select SYSTEM UPDATE.
- 5 Press the  button.
- 6 If there are no problems in the firmware file check, press the  button to start the update.
- 7 When “Please restart” is shown, turn the ELZ_1 play/core off.
- 8 Turn the ELZ_1 play/core on again.

Updating the ELZ_1 play firmware

POINT!

- If operating on battery power, use new batteries.
- Do not interrupt the power supply during an update. Doing so could make the unit unable to start properly.
- Recognition of the ELZ_1 play/core could take about 10–30 seconds the first time it is connected, depending on the type of PC/Mac.
Do not disconnect the USB cable or turn the power off before it is recognized.
- The update .bin file name has traditionally differed by model (ELZ_1 play.bin / ELZ_1 core.bin). Since the product folder name on the card has been standardized to “ELZ_1 series,” please check the file name for the final firmware.

Troubleshooting

Check the following items before seeking repair.

There is no sound or it is very low

- Confirm that the VOL knob on the back of the unit is set properly
- Confirm that the MEMORY LEVEL is set properly
- If the volume of another MEMORY setting is sufficient, it is possible that the settings of the current synth engine, filter, envelope or effects could be making the volume low. Try setting the TYPE to OFF for the filter and effects.
- Check the envelope SUSTAIN value. If the SUSTAIN is set to 0% , the sound will be silent while the note is sustained.
- Confirm that synth engine LEVEL parameters are not set to 0.
- Check that MUTE is not turned on in MIXER, and that LEVEL is not set to 0.

The display is dark or blinking

- When the remaining battery charge is low, depending on the sound settings, playing sound from the speaker could cause the backlight to dim or blink. This is not a malfunction. Replace the batteries with new ones.

Troubleshooting

A PC/Mac does not recognize the ELZ_1 play/core

< Important >

Recognition of the ELZ_1 play/core could take about 10-30 seconds the first time it is connected, depending on the type of PC/Mac. Do not disconnect the USB cable or turn the power off before it is recognized.

- If you want to connect to a PC/Mac as mass storage, make sure ELZ_1 play/core is in USB mass storage mode. Please refer to ELZ_1 play/core Accessing the card used from a PC/Mac (USB mass storage mode) (→ P.134)
- Check if it can be recognized when connected to a different USB port.
- Check if it can be recognized when using a different USB cable.
- Check if it can be recognized when connected directly to the PC/Mac without using a USB hub or extension cable, for example.
- Check if the ELZ_1 play/core can be recognized when all other USB devices are disconnected.
- Check if it can be recognized when antivirus software, monitoring software and other background applications running on the PC/Mac are turned off.
- Restart the computer.
- If another PC/Mac is available, check if it can be recognized by that PC/Mac.
- When the ELZ_1 play/core is in mass storage mode, if it does not appear on a Mac desktop, open the Finder menu, and select “Preferences...” Open the General pane and put a check in the box next to “External disks” if it is not already filled. Then, restart the Mac, reconnect the ELZ_1 play/core, and check again.
- If an error appears when connected as mass storage, the mass storage data in the ELZ_1 play/core might have become corrupted. Referring to Formatting the storage, format the mass storage in the ELZ_1 play/core, and check again. (Be aware that this operation will erase the data in the mass storage.)

Oscillator List

Synth engines and parameters

The ELZ_1 play/core synth engines and their parameters are shown in the following tables.

WAVE TABLE

WAVE TABLE		
	A synthesizer engine that uses wavetables. The oscillator waveform changes with Position and SHAPER	
	Special operations	For instructions on loading user waveform data from the card, refer to “Using User Waveforms in Wavetable” (→ P.136).
	 	BEND DOWN/BEND UP
PRM1	WAVE	Slot 01 ~ 48
PRM2	POS	0 ~ 255 For Waldorf Original Wavetable 0-63
PRM3	SHAPER	OFF, CLIP, SYNC, QTZ, H-QTZ, LVL CM, CM NUM, THR RCT, PWM, ASYM, FLIP, BIT DPTH, BEND
PRM4	SHPR VAL	0 ~ 127
PRM5	PHASE	0 ~ 127
PRM6	PH RND	0 ~ 127
 +  / 	MOD 1-2	Refer to Synthesis Engine Parameter Modulation (→ P.38).

Oscillator List

SHAPER	
CLIP	Distortion is generated by clipping the signal once it exceeds a certain threshold.
SYNC	Recreates an oscillator sync sound using hard sync. Increasing the SHPR VAL value raises the pitch of the sync modulator.
QTZ	The sampling rate is reduced relative to the original waveform, transforming it into a downsampled waveform.
H-QTZ	The sampling rate is reduced only for the positive side of the original waveform, transforming it into a downsampled waveform.
LVL CM	The comb-shaped frequency characteristics are modulated, transforming the waveform as if a comb filter were applied.
CM NUM	Increasing the SHPR VAL value gradually adds comb-like distortion from the center of the waveform.
THR RCT	By changing the SHPR VAL value, signals above the set amplitude threshold are flattened, transforming the waveform into one similar to a square wave.

Oscillator List

SHAPER ②	
PWM	The original waveform is compressed and shifted to the left, transforming its shape.
ASYM	The closer the SHPR VAL value is to 0, the more the waveform narrows. As it approaches MAX, the waveform expands, transforming into an asymmetrical shape.
FLIP	You can invert the phase of the waveform. With SHPR VAL, you determine the position in the duty cycle where the inversion occurs.
BIT DPTH	The bit depth is reduced, transforming the waveform as if processed with a bit crusher.
BEND	By changing the SHPR VAL value, the entire waveform is transformed as if stretched to the left or right.

Oscillator List

Loading Wavetables from the Card

By saving wavetable data from the card into a slot, you can quickly recall the wavetable from the WAVE slot.

- 1** Press **Fn** + **OK** to display the wavetable data on the card.
- 2** Use the θ^A knob to select the wavetable you want to load.
- 3** Press the **OK** key (the load screen will be displayed).
- 4** Use the θ^{TYPE} knob to select the slot for load, then press the **OK** key.

POINT!

- While the load screen is displayed, you can modify the OSC parameters using the $\theta^A \sim \theta^D$ knobs.

Oscillator List

LOW-BIT OSC

LOW-BIT OSC		
	This low-bit oscillator outputs a sine, square, triangle or saw wave with a resolution of 2-8 bits.	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	BIT	8Bit ~ 2Bit
PRM2	OSC TYP	Sine, Square, Triangle, U.Saw, D.Saw
PRM3	DUTY	1 ~ 99%: ratio per cycle of the first half of the waveform
	MOD TYP	See "Synth engine parameter modulation" (→ P.38)

Oscillator List

STANDARD OSC

STANDARD OSC		
	This oscillator can output a sine, square, triangle or saw wave.	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	OSC TYP	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	DUTY	1 ~ 99%: ratio per cycle of the first half of the waveform
	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

CUSTOM OSC

CUSTOM OSC		
	OSC1 and OSC2 waveforms are blended cyclically over the PERIOD and output. For example, if PERIOD is 1.0, OSC1 is Sine and OSC2 is Square, the output waveform will change from sine to square and back to sine each period.	
	Special operations	-
	 	BEND DOWN/BEND UP
PRM1	OSC1	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	OSC2	Sine、Square、Triangle、U.Saw、D.Saw
PRM3	PERIOD	0.5 ~ 64.0: Timing in waveform periods of oscillator switching
PRM4	DUTY	1 ~ 99%
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

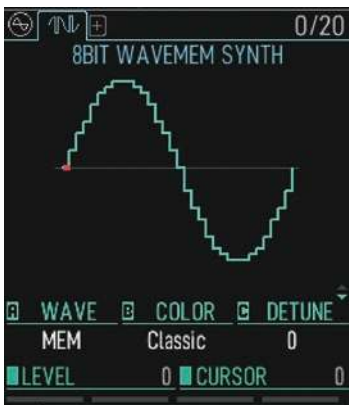
Oscillator List

SUPER OSC

SUPER OSC		
 The screenshot shows the SUPER OSC interface with two waveforms (upper and lower octaves) and a noise waveform. Parameters are set to: OSC TYPE: Sine, DETUNE: 43, LEVEL: 100. +8 DET: 85, +8 LVL: 100, -8 DET: 21, -8 LVL: 100. NOISE: White, NOISE LEVEL: 100.	This synth engine has 5 detunable sub-oscillators in each the upper and lower octaves. You can create enormous sounds freely like simple organs to thick synth leads.	
	Special operations	-
	 	BEND DOWN/BEND UP
PRM1	OSC TYP	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	DETUNE	0 ~ 127
PRM3	LEVEL	0 ~ 127
PRM4	+8 DET	0 ~ 127: Detune amounts of Upper OSC
PRM5	+8 LVL	0 ~ 127: Levels of Upper OSC
PRM6	-8 DET	0 ~ 127: Detune amounts of Lower OSC
PRM7	-8 LVL	0 ~ 127: Levels of Lower OSC
PRM8	NOISE	Selects Noise waveforms preinstalled in the ELZ_1 play White、Pink、Brown、Purple
PRM9	NOISE LV	0 ~ 127
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVENEM SYNTH

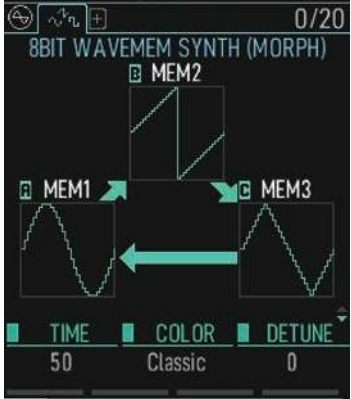
8BIT WAVEMEM SYNTH ①		
 The screenshot shows the '8BIT WAVEMEM SYNTH' screen. At the top, it says '0/20'. Below that, a green waveform is displayed on a black background. At the bottom, there are three rows of settings: 'WAVE' set to 'MEM', 'COLOR' set to 'Classic', and 'DETUNE' set to '0'. Below these, there are 'LEVEL' and 'CURSOR' indicators, both set to '0'.	This is an 8-bit waveform memory synthesizer engine. You can create your own waveforms in addition to using the sine and other preset waveforms.	
	Special operations	When the WAVE parameter is set to MEMORY, you can edit the waveform with PRM3 and PRM4. See Creating waveforms in the 8BIT WAVEMEM SYNTH for details. (→ P.170) Press the (Fn) + (OK) button to open a dialog for copying waveform data to and from banks. See Copying waveforms between MEMORY and banks for details. (→ P.171) POINT! The banks (Bank01 – Bank50) and FM banks (FM01 – FM20) are saved separately from the MEMORY data in the ELZ_1 and can be used with all MEMORY patches.
	(X) (Y)	BEND DOWN/BEND UP
PRM1	WAVE	MEM: Editable waveform saved in current memory Bank01 ~ Bank50: Waveforms shared within the ELZ_1 play/core
PRM2	COLOR	Classic, Modern
PRM3	DETUNE	-16 ~ 16 (CENT)

Oscillator List

8BIT WAVEMEM SYNTH ②		
PRM4	LEVEL	-128 ~ 127: Level at current position when editing waveform (available with PRM1:WAVE is set to MEM)
PRM5	CURSOR	0 ~ 31: Horizontal position when editing waveform (available with PRM1:WAVE is set to MEM)
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVEMEM SYNTH (MORPH)

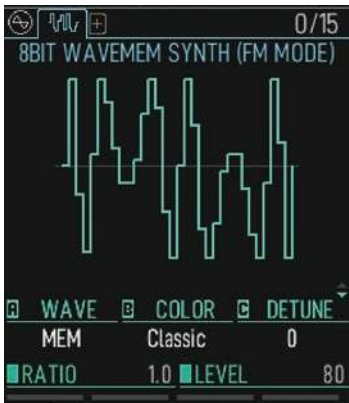
8BIT WAVEMEM SYNTH (MORPH) ①		
	This is the morphing mode of the 8-bit waveform memory synth. The waveform morphs from WAVE1 to WAVE2 to WAVE3 cyclically.	
	Special operations	-
	 	BEND DOWN/BEND UP
PRM1	WAVE1	MEM1 ~ MEM3: Waveforms saved in the current MEMORY Bank01 ~ Bank50: Bank waveforms shared within the ELZ_1 play FM01 ~ FM20: FM bank waveform shared within the ELZ_1 play POINT! • “None” can only be selected for WAVE3. When “None” is selected, the waveform will morph from WAVE1 to WAVE2 cyclically. • The bank (Bank01 - Bank50) and FM Bank (FM01 - FM20) waveforms cannot be edited.
PRM2	WAVE2	
PRM3	WAVE3	

Oscillator List

8BIT WAVEMEM SYNTH (MORPH) ②		
PRM4	TIME	50 ~ 4000ms : Waveform switching time
PRM5	COLOR	Classic、Modern
PRM6	DETUNE	-16 ~ 16 (CENT)
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVEMEM SYNTH (FM MODE)

8BIT WAVEMEM SYNTH (FM MODE) ①		
	This 8-bit waveform memory synth mode is an FM sound source.	
	Special operations	When the WAVE parameter is set to MEM, PRM3 and PRM4 can be used. See Creating waveforms in the 8BIT WAVEMEM SYNTH (FM MODE) details. (→ P.170) Press the Fn + OK button to open a dialog for copying the current waveform to and from FM banks. See Copying waveforms between MEMORY and banks details. (→ P.171) POINT! FM banks (FM01 – FM20) are saved separately from MEM data, so the same FM bank waveforms can be accessed from every MEM in the ELZ_1 play/core.
	X Y	BEND DOWN/BEND UP
PRM1	WAVE	MEM: Waveforms saved in the current MEMORY FM01 ~ FM20: FM bank waveform shared within the ELZ_1 play
PRM2	COLOR	Classic、Modern
PRM3	DETUNE	-16 ~ 16 (CENT)

Oscillator List

8BIT WAVEMEM SYNTH (FM MODE) ②		
PRM4	FM RATIO	0.5 ~ 32.0 (available with PRM1:WAVE is set to MEM)
PRM5	FM LEVEL	1 ~ 100 (available with PRM1:WAVE is set to MEM)
 +  / 	MOD 1-3	See “Synth engine parameter modulation” (→ P.38)

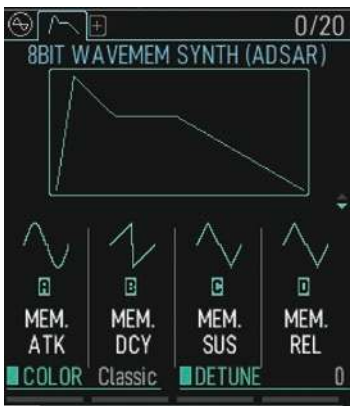
Oscillator List

8BIT WAVEMEM SYNTH (WARP)

8BIT WAVEMEM SYNTH (WARP)		
	This is the WARP mode of 8-bit waveform synth. It crossfades the waveforms of WAVE1 and WAVE2 to generate an intermediate waveform	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	WAVE1	MEM1、MEM2: Waveforms saved in the current MEMORY Bank01 ~ Bank50: Bank waveforms shared within the ELZ_1 play/core FM01 ~ FM20: FM bank waveform shared within the ELZ_1 play/core
PRM2	WAVE2	
PRM3	X-FADE	<100 ~ 0 ~ 100>
PRM4	COLOR	Classic、Modern
PRM5	DETUNE	-16 ~ 16 (CENT)
+ /	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVEMEM SYNTH (ADSAR)

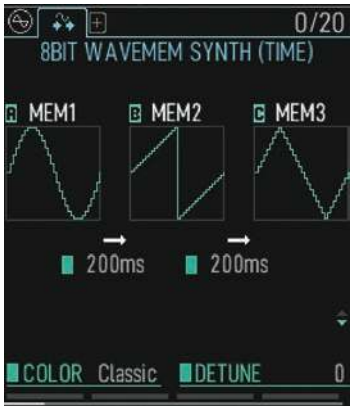
8BIT WAVEMEM SYNTH (ADSAR) - ADSAR ①		
	This is the ADSAR mode of the 8-bit waveform memory synth. The waveform changes according to the envelope position.	
	Special operations	-
	 	BEND DOWN/BEND UP
PRM1	ATTACK	MEM.ATK、MEM.DCY、MEM.SUS、M.R.ATK、MEM.REL: Waveforms saved in the current MEMORY Bank01 ~ Bank50: FM bank waveform shared within the ELZ_1 play/core FM01 ~ FM20: FM bank waveform shared within the ELZ_1 play/core
PRM2	DECAY	
PRM3	SUSTAIN	
PRM4	R ATTACK	
PRM5	RELEAS	
PRM6	COLOR	Classic、Modern
PRM7	DETUNE	-16 ~ 16 (CENT)
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVEMEM SYNTH (ADSAR) - ADSR ②		
PRM1	ATTACK	MEM.ATK、MEM.DCY、MEM.SUS、MEM.REL : Waveforms saved in the current MEMORY
PRM2	DECAY	
PRM3	SUSTN	
PRM4	RELEASE	Bank01 ~ Bank50 : FM bank waveform shared within the ELZ_1 play/core FM01 ~ FM20 : FM bank waveform shared within the ELZ_1 play/core
PRM5	COLOR	Classic、Modern
PRM6	DETUNE	-16 ~ 16 (CENT)
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

8BIT WAVEMEM SYNTH (TIME)

8BIT WAVEMEM SYNTH (TIME)		
	This is the TIME mode of the 8-bit waveform memory synth. The waveforms change in the order of:WAVE1->WAVE2->WAVE3. The duration of the each waveform can be modified.	
	Special operations	-
	 	BEND DOWN/BEND UP
PRM1	WAVE1	MEM1 ~ MEM3: Waveforms saved in the current MEMORY Bank01 ~ Bank50: FM bank waveform shared within the ELZ_1 play/core FM01 ~ FM20: FM bank waveform shared within the ELZ_1 play/core
PRM2	WAVE2	
PRM3	WAVE3	
PRM5	TIME (1->2)	0 ~ 5000 (msec)
PRM6	TIME (2->3)	0 ~ 5000 (msec)
PRM7	DETUNE	-16 ~ 16 (CENT)
PRM8	COLOR	Classic、Modern
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

Creating waveforms in the 8BIT WAVEMEM SYNTH

You can create waveform data to use with the 8BIT WAVEMEM SYNTH engines (including MORPH and FM MODE).

In addition, you can copy waveform data you have created and save it to an ELZ_1 play/core waveform data bank. You can also import and export ELZ_1 play/core data with a PC/Mac. (→ P.127)

- 1** Turn knob θ^A and set the PRM1:WAVE to MEM.
- 2** Turn knob θ^C to move the position where the level will be adjusted (move the red cursor left and right on the display).
- 3** Turn knob θ^D to adjust the level at the cursor position.
- 4** Repeat steps 2 and 3 to create the waveform.
- 5** Press the  button to save the settings to the MEMORY.

Creating waveforms in the 8BIT WAVEMEM SYNTH (FM MODE)

- 1** Turn knob θ^A and set PRM1:WAVE to MEM.
- 2** Turn knob θ^C and θ^D to create the waveform.
- 3** Press the  button to save the settings to the MEMORY.

Oscillator List

Copying waveforms between MEMORY and Banks

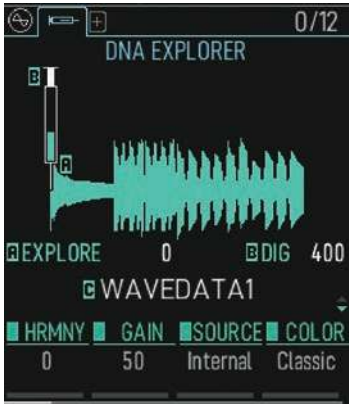
- 1** Press the  button to activate oscillator mode.
- 2** Turn the  knob to select 8BIT WAVEMEM SYNTH or 8BIT WAVEMEM SYNTH (FM MODE).
- 3** Turn knob  and set PRM1:WAVE to MEM.
- 4** Press the  +  button to open the copy dialog.
- 5** Use the   buttons to select the copy direction.
MEMORY to Bank: Copy from the MEMORY to the Bank,
Bank to MEMORY: Copy from the Bank to the MEMORY
- 6** Use the   buttons or any knob to select the Bank used as the copy destination or source.
- 7** Press the  button.

POINT!

- Waveform data created with the 8BIT WAVEMEM SYNTH can be copied to 50 banks (Bank01 – Bank50).
- Waveform data created with the 8BIT WAVEMEM SYNTH (FM MODE) can be copied to 20 banks (FM01 – FM20).
- When using the 8BIT WAVEMEM SYNTH and the copy direction is set to Bank to MEMORY, Bank01 – Bank50 or FM01 – FM20 can be selected as the copy source.
- When using the 8BIT WAVEMEM SYNTH (FM MODE) and the copy direction is set to Bank to MEMORY, FM01 – FM20 can be selected as the copy source. (Bank01 – Bank50 cannot be selected.)

Oscillator List

DNA EXPLORER

DNA EXPLORER		
 The screenshot shows the DNA EXPLORER interface with a waveform display. Parameters visible include EXPLORE (0), DIG (400), WAVEDATA1, HRMNY (0), GAIN (50), SOURCE (Internal), and COLOR (Classic).	This synth engine extracts and generates waveforms from audio data saved in the ELZ_1 play/core. It can play audio data recorded into the ELZ_1 play/core through the AUX IN jack.	
	Special operations	See Recording audio data for use with DNA EXPLORER and SiGRINDER for how to record audio. (→ P.174)
	 	BEND DOWN/BEND UP
PRM1	EXPLORE	0 ~ 2389: Position within the waveform where the audio data is extracted
PRM2	DIG	10 ~ 1000: Extent of waveform extraction
PRM3	HRMNY	0 ~ 100: volume of sound one octave higher than source
PRM4	GAIN	1 ~ 100
PRM5	STORAGE	Internal、Card
PRM6	WAVE	Internal WAVEDATA1 ~ 3: Selects WAVEDATA waveforms shared within the ELZ_1 play.
		Card Selects WAVEDATA waveforms from the external storage card
PRM7	COLOR	Classic、Modern
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

SiGRINDER

SiGRINDER ①		
 The screenshot shows the SiGRINDER interface with a waveform display. Parameters visible include: START, END, TIME 2000, WAVEDATA1, DIG (400), HRMNY (0), GAIN (50), RESOL (20), CRUSH (Off), MODE (UpDwn), SOURCE (Internal), and COLOR (Classic).	This granular synth engine uses audio data saved in the ELZ_1 play. It can play audio data recorded into the ELZ_1 play through the AUX IN jack.	
	Special operations	See Recording audio data for use with DNA EXPLORER and SiGRINDER for how to record audio. (→ P.174)
	 	BEND DOWN/BEND UP
PRM1	START	0 ~ 2379: Starting point in audio data
PRM2	END	0 ~ 2379: Ending point in audio data
PRM3	TIME	100 ~ 10000ms: Generated waveform length
PRM4	DIG	10 ~ 1000: Extent of waveform extraction
PRM5	HRMNY	0 ~ 100: Volume of sound one octave higher than source
PRM6	GAIN	1 ~ 100
PRM7	RESOL	1 ~ 100: Waveform resolution
PRM8	CRSH	Off, Normal, Heavy, Destruct
PRM9	MODE	UP/DWN, RANDOM
PRM10	SOURCE	Internal, Card
PRM11	COLOR	Classic, Modern
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

Recording audio data for use with DNA EXPLORER and SiGRINDER

The DNA EXPLORER and SiGRINDER synth engines use audio data saved in the ELZ_1 play/core. This audio data is created by recording sound input through the AUX IN. Recorded audio data can also be exported as WAV files and imported to the ELZ_1 play/core after editing on a PC/Mac.

Recording

- 1** Connect an audio device capable of line output to the **AUX IN**.
- 2** Press the  button to activate oscillator mode.
- 3** Turn the  knob to select DNA EXPLORER or SiGRINDER.
- 4** Press the  +  button to open the recording dialog.
- 5** Press the  button to start recording and play the audio device. (Recording will be stopped automatically after five seconds.)
- 6** After recording, use the   buttons or any knob to select the save destination.
- 7** Press the  button to save.

POINT!

- Three 5-second audio data files can be saved in the ELZ_1 play/core internal memory
- WAV files can also be imported from a PC/Mac. See Importing waveform data for use with DNA EXPLORER/SiGRINDER for details. (→ P.133)

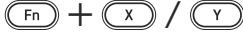
Oscillator List

FM SYNTH

FM SYNTH		
	A high-quality FM audio source with 4 operators and 31 algorithms. Each operator has feedback and detuning.	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	ALGORITHM	01 ~ 31
PRM2	GACHA	Randomizes FM synth parameters
PRM3	RATIO	0.5 ~ 32.0
PRM4	LEVEL	0 ~ 127
PRM5 ~ 8	FEEDBACK	-127 ~ 127
PRM9 ~ 12	DETUNE	-64 ~ 64 (cent)
PRM13 ~ 16	Parameters for operator 2 (RATIO, LEVEL, FEEDBACK, DETUNE)	
PRM17	Parameters for operator 3 (RATIO, LEVEL, FEEDBACK, DETUNE)	
PRM20	Parameters for operator 4 (RATIO, LEVEL, FEEDBACK, DETUNE)	
	MOD 1-4	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

MASKED NOISE

MASKED NOISE		
	This synth engine incorporates noise into basic waveforms	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	NOISE	White、Pink、Brown、Purple
PRM2	MASK	Sine、Square、Triangle、U.Saw、D.Saw
PRM3	MASK LV	1 ~ 100
	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

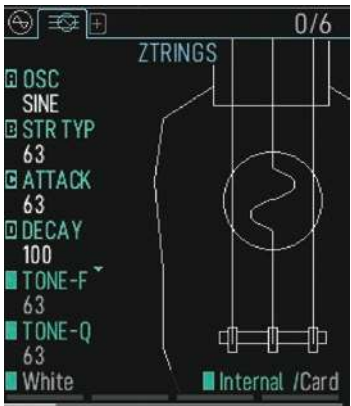
SAND FLUTE

SAND FLUTE		
	This synth engine is inspired by desert wind. It generates tones by applying multiple filters to noise.	
	Special operations	-
		BEND DOWN/BEND UP
PRM1	NOISE	White, Pink, Brown, Purple, Reso
PRM2	FILTER	Off, BPF, PEQ, Notch
PRM3	B. WIDTH	1 ~ 100
PRM4	x1 B. LVL	1 ~ 100
PRM5	x2 B. LVL	1 ~ 100
PRM6	x3 B. LVL	1 ~ 100
PRM7	x4 B. LVL	1 ~ 100
PRM8	x5 B. LVL	1 ~ 100
	MOD TYP	See "Synth engine parameter modulation" (→ P.38)

WHEN NOISE IS SET TO RESO		
PRM2	FREQ	0 ~ 127

Oscillator List

ZTRINGS

ZTRINGS		
	The physical modeled synth engine inspired by plucked string instruments . You can create original string instruments from the 4-color preset noise or user data on the external storage card.	
	Special operations	See Using User Waveforms with ZTRINGS for how to load user waveform data. (→ P.135)
	 	-
PRM1	OSC	SINE、RECT、SAW、TRI
PRM2	STR TYP	0 ~ 127: Changing string type
PRM3	ATTACK	0 ~ 127: ATTACK time of the waveform set by PRM2:NOISE
PRM4	DECAY	0 ~ 127: DECAY time of phisical modeled synth
PRM5	TONE-F	0 ~ 127: TONE frequency
PRM6	TONE-Q	0 ~ 127: TONE quality factor
PRM7	STORAGE	Internal、Card
PRM8	NOISE	Internal: Selects Noise waveforms preset in the ELZ_1 play White、Pink、Brown、Purple Card: Selects Noise waveforms saved in the external storage Card.
 +  / 	MOD TYP	See “Synth engine parameter modulation” (→ P.38)

Oscillator List

STK DRUMMER

STK DRUMMER ①		
	A drum machine engine equipped with 5 types of drum kits. You can edit parameters for each sample and create your own original drum machine. If you have SmpITrek, you can use kit data you created with SmpITrek in ELZ_1 play.	
	Special operations	You can select a sample to EDIT by playing keys. See "Using SmpITrek drum kits with STK DRUMMER" for how to load STK files. (→ P.137)
		-
PRM1	STORAGE	Internal、Card
PRM2	KIT	Internal: Selects preset Drum kits in ELZ_1 play/core Card: Selects Kit data saved in the external storage Card.
PRM3	PTN	Selecting preset drum PTNs to play rhythms with the STK Drummer engine

Oscillator List

STK DRUMMER ②		
PRM5	LEVEL	0 ~ 127: EDIT selected sample's LEVEL
PRM6	PITCH	-1200 ~ 1200 EDIT selected sample's PITCH
PRM7	PAN	L63 ~ CENTER ~ R63 EDIT selected sample's PAN
PRM8	SEND	0 ~ 127: EDIT selected sample's FX SEND

POINT!

- While using the STK DRUMMER, Filter and Effect modules DRIVE/MOD and MODULATION are not available.
- STK DRUMMER does not support the layer function.

STK DRUMMER の MIDI NOTE MAP

STK DRUMMER NOTE MAP

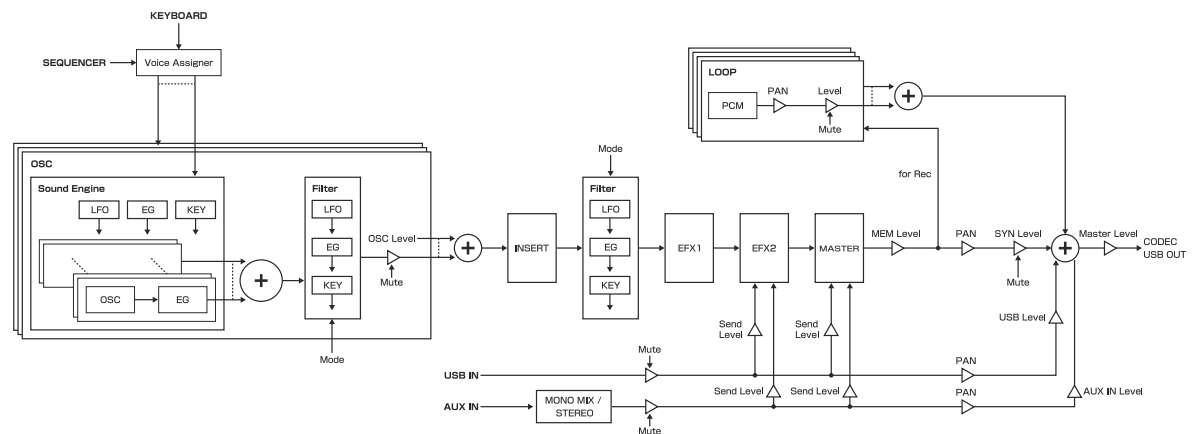
36 37 38 39 40 49 41 42 43 44 45 46 47 50 48
C2 C#2 D2 D#2 E2 C#3 F2 F#2 G2 G#2 A2 A#2 B2 D3 C3

POINT!

- Instrument assignments vary depending on the kit.

Appendix

Figure1. Sound architecture



Specs

Synth engines (Maximum Polyphony)	· Up to 3 oscillators can be layered 18 oscillator types — maximum polyphony: · WAVE TABLE OSC : 15 voices Featuring 16 built-in Waldorf wavetables from the legendary PPG and Microwave Plus 32 wavetable slots with 24 expertly curated presets (supports importing Serum wavetables) · ZTRINGS — 6 voices Physical modelling strings engine · SUPER OSC — 6 voices Super synth engine with 5 detunable sub-oscillators · LOW-BIT OSC — 15 voices 2-bit to 8-bit variable low-bit oscillator · STANDARD OSC — 15 voices 32-bit floating-point processing high resolution oscillator · CUSTOM OSC — 15 voices Choose two waveforms / period of cycles · DNA EXPLORER — 12 voices Extracts and generates waveform DNA from audio* · SiGRINDER — 6 voices Granular synthesis engine* *You can record and save three samples, each up to 5 seconds long. Supports 16bit/48kHz WAV file import and export · MASKED NOISE — 15 voices Noise oscillator · SAND FLUTE — 10 voices Extracts and generates tones from noise · FM SYNTH — 6 voices 4 operators with 31 algorithms, 32-bit floating point processing · 8BIT WAVE MEMORY SYNTH — 20 voices Edit your own waveform · 8BIT WAVE MEMORY SYNTH (MORPH) — 20 voices Morph between three waveforms · 8BIT WAVE MEMORY SYNTH (FM MODE) — 15 voices 2 operators 8bit FM mode · 8BIT WAVE MEMORY SYNTH (WARP) — 15 voices Generates an intermediate waveform by crossfading two waveforms · 8BIT WAVE MEMORY SYNTH (ADSAR) — 20 voices Waveforms change according to envelope · 8BIT WAVE MEMORY SYNTH (TIME) — 20 voices Three waveforms change in the orders · STK DRUMMER — 15 voices Drum machine engine equipped with 5 types of drum kits Compatible with SmpITrek .stk file 512 sound memories (128 x 4 banks), including 256 performance-ready presets
Envelopes	· ADSR · ADSR — w/curve · ADS-RA-R · ADS-RA-R — w/curve
Filters	· LPF-6, LPF-12 · HPF-6, HPF-12 · BPF · Peaking EQ · LO EQ · HI EQ · NOTCH
Voice modes	Poly, Mono, Legato Unison

Specs

Arpeggiator	Up, Down, UpDown, DownUp, Up&Down, Down&Up, Random, Up+1OCT, Up+2OCT, Down-1OCT, Down-2OCT, Play Order
Effects	DRIVE/MOD Module · OVER DRIVE · DISTORTION · FUZZ · CHORUS · VIBRATO · PHASER · TREMOLO · FLANGER · RING MODULATOR · AUTO WAH · CRUSHER · 4 POLE FILTER · TRIM FILTER · FORMANT · RACK COMP · ISOLATOR MODULATION Module · STEREO CHORUS · VIBRATO · PHASER · TREMOLO · FLANGER · AUTO PAN · RING MODULATOR · AUTO WAH DELAY/REVERB Module · DELAY · TAPE ECHO · REVERSE DELAY · PINGPONG DELAY · REVERB · GRAIN FX · GRAIN PAD · GRAIN PARTICLE · GRAIN SHIFT DOWN · GRAIN UNCERTAIN REVERB/MASTER Module · ROOM · HALL · PLATE · CUSTOM REVERB · ARENA · VINYL RECORD · CASSETTE TAPE · CRUSHER · TUNNEL · INFINITY · AMBIENT ROOM · AMBIENT HALL · AMBIENT INF · MIRAGE · MASTER COMP
Sequencer	· Up to 128 steps per pattern (Single track) · 128 patterns · Step length can be set from 1/1 to 1/32 · Step and real-time recording (Supports non-quantized recording with MicroTiming REC) · Enter longer notes (Tied notes) · Metronome and Precount function

Specs

[play] Looper	4-track looper · One-touch recording/overdubbing Recording from the built-in sound source, LINE input, and USB audio input · FREE function automatically sets the number of bars according to the recording time · One-shot playback · UNDO/REDO function
MIDI	· Notes, program change, control changes, clock input/output
[play]	
Main unit	<Keyboard> 37 keys (with a velocity sensitivity) <knob> 5 physical control encoders < Audio out > Stereo line out (1/4 phone × 2) Headphone out (stereo 3.5mm mini jack) Built in speaker (Stereo × 1) < Audio in > LINE IN (stereo 3.5mm mini-jack) *Compatible with Teenage Engineering Pocket Operator Series SYNC IN < USB > USB Type-C · USB audio: USB 2.0, 48kHz-16bit, input: 2 ch, output: 2 ch · USB MIDI · Mass storage class: USB2.0 *For iPhone, an Apple Lightning to USB camera adapter is required separately. <External storage card> standard size (*Supports external storage cards up to 32 GB) · LOOPER recording data storage · Firmware update · Used for backing up other data < Interfaces > MIDI IN connector (5-Pin DIN type) MIDI OUT connector (5-Pin DIN type) SYNC IN jack (monaural 3.5mm mini jack) SYNC OUT jack (monaural 3.5mm mini jack) Compatible with Teenage Engineering Pocket Operator Series SYNC OUT < Display > 1.5 inch LCD display
Power Supply	DC9V output AC adapter (1.7A, Inner Diameter: 1.7mm, Outer Diameter:4.75mm, Polarity: Center +) Ni-MH AA SIZE Rechargeable Battery or Alkaline AA SIZE Dry Battery x 6 (Alkaline dry batteries life: approx. 4.5 hours) *Batteries sold separately
Accessories	· 32GB external storage card (incl. preset wavetables) · AC adapter · Warranty *USB cable and the other connection cables sold separately
Size and weight	Width: 399mm approx.13.3inch Depth: 131mm approx.5.1inch Height: 50mm approx.2inch Weight: 1.12kg approx.2.4lbs

Specs

[core]	
Main unit	<knob> 5 physical control encoders < Audio out > Stereo line out (1/4 phone × 2) Headphone out (stereo 3.5mm mini jack) < Audio in > AUX IN (stereo 3.5mm mini-jack) *Compatible with Teenage Engineering Pocket Operator Series SYNC OUT < USB > USB Type-C • USB audio: USB 2.0, 48kHz-16bit, input: 2 ch, output: 2 ch • USB MIDI • Mass storage class: USB2.0 *For iPhone, an Apple Lightning to USB camera adapter is required separately. USB Type-A • USB Host Function (Supports 500 mA Bus Power) <External storage card> standard size (*Supports external storage cards up to 32 GB) • Firmware update • Used for backing up other data < Interfaces > MIDI IN connector (5-Pin DIN type) MIDI OUT connector (5-Pin DIN type) < Display > 1.5 inch LCD display
Power Supply	DC9V output AC adapter (1.7A, Inner Diameter: 1.7mm, Outer Diameter:4.75mm, Polarity: Center +)
Accessories	• 32GB external storage card (incl. preset wavetables) • AC adapter • Warranty *USB cable and the other connection cables sold separately
Size and weight	Width: 234mm approx.9.2inch Depth: 103mm approx.4.1inch Height: 57.5mm approx.2.3inch Weight: 954g approx.2.1lbs