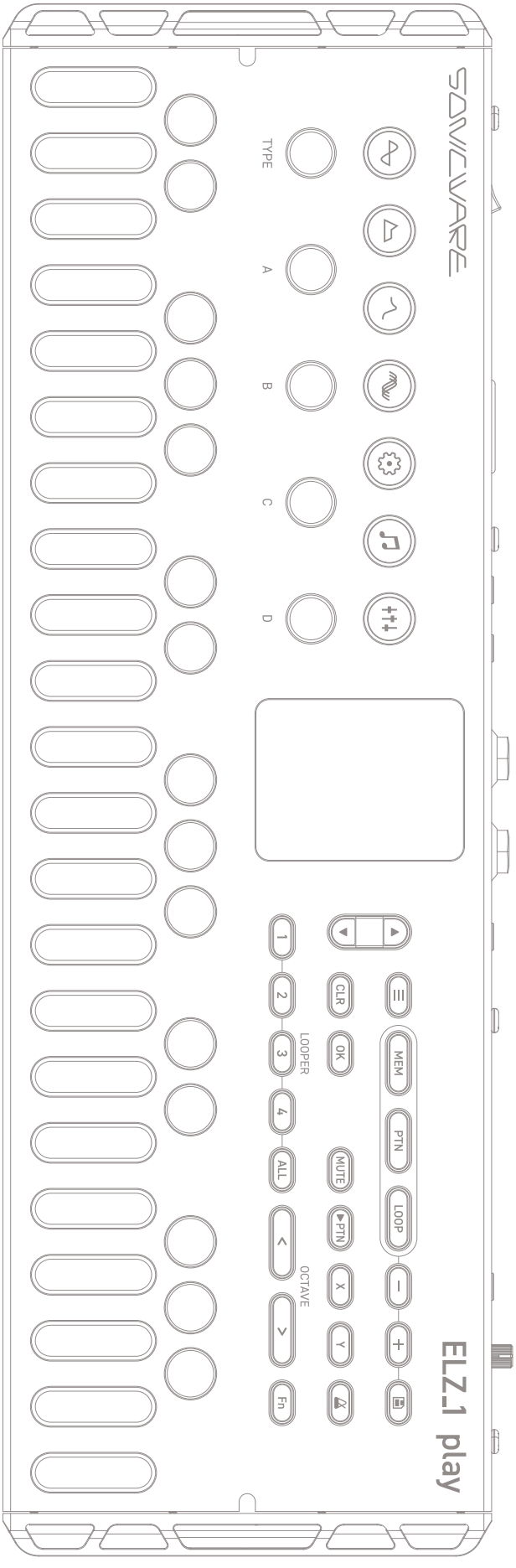
SONICWARE



ELZ_1 play

Reference Manual

Rev.3

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.

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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 play.

The ELZ_1 play 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.

Key Features

・17 synth engines including 3 new ones: "ZTRINGS" physical modeling string engine, "SUPER OSC" for loud detuned sounds, and "STK DRUMMER" sampled drum engine

・A total of 33 effects, including 20 insert effects and 13 master effects

・Newly developed 4-track looper for easy recording, playback, and overdubbing at the touch of a track button

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.

Key Features

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, SmplTrek, and even Teenage Engineering's PO series.

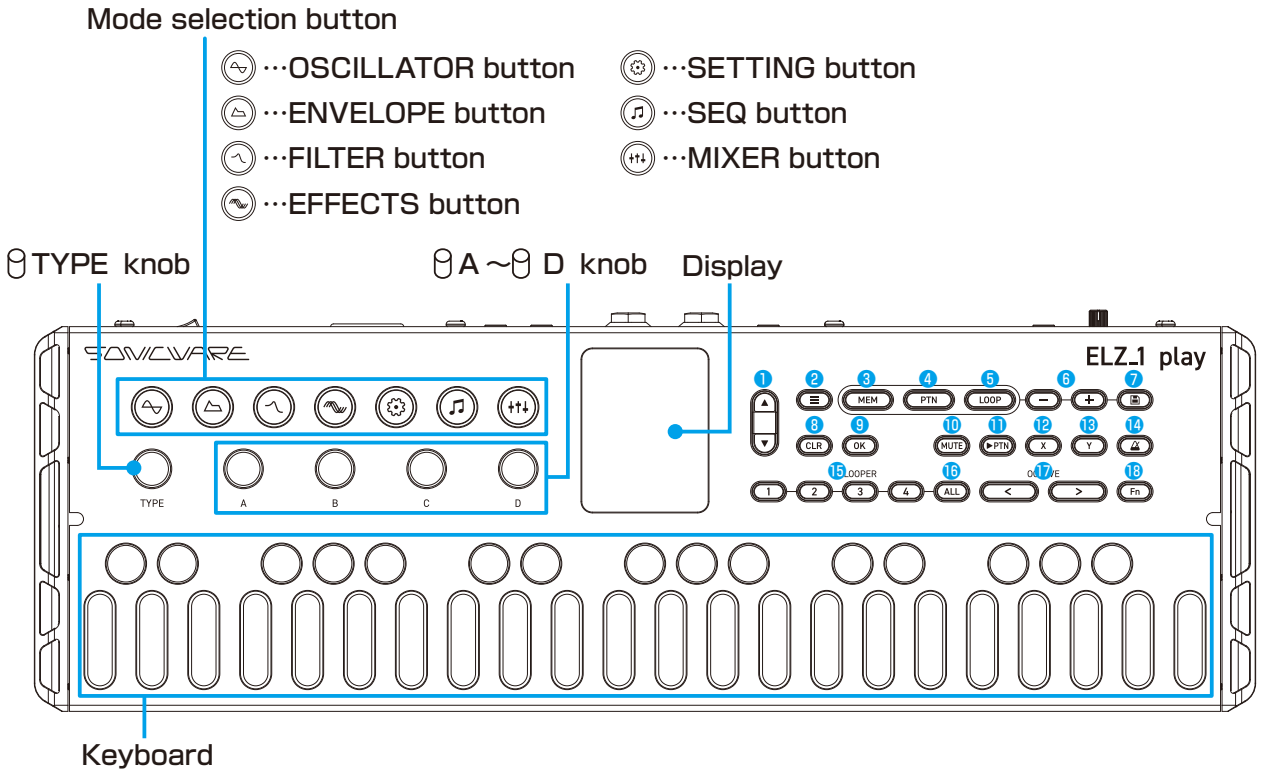
Also, by bridging clock synchronization signals between different types of connectors, such as generating MIDI clock from it's SYNC IN connection, it will be useful at the center of live performances.

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

Contents

Contents

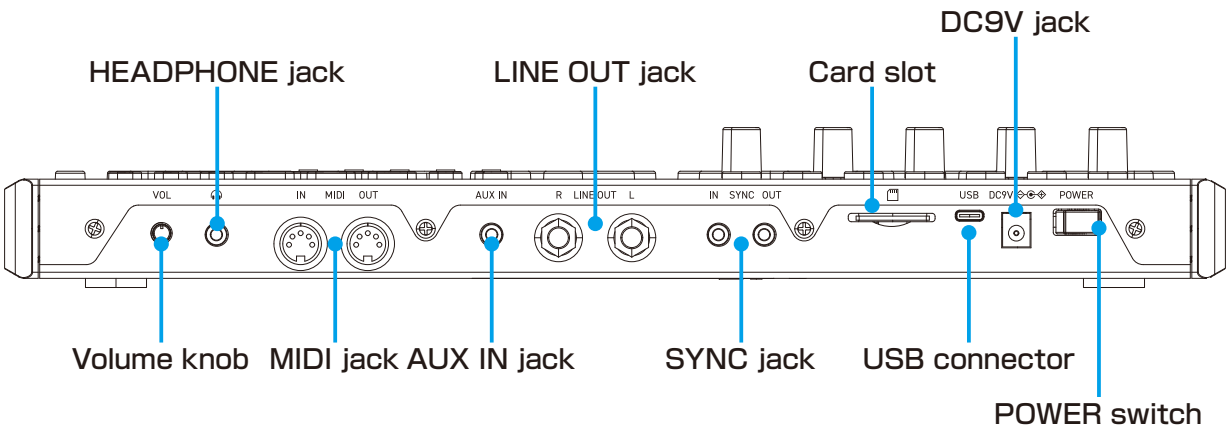
Names of parts



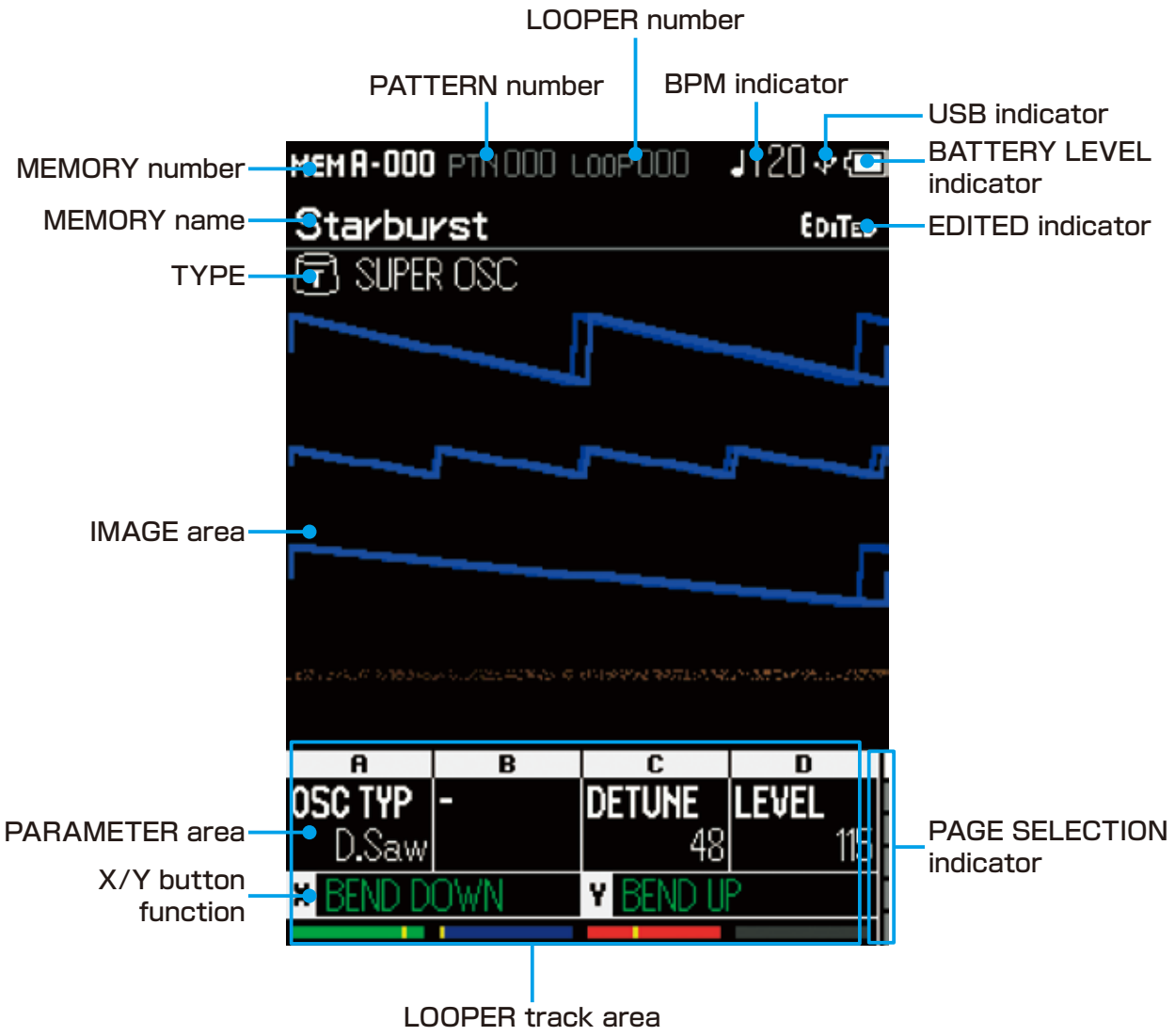
❶ UP/DOWN button ❷ MENU button ❸ MEM button ❹ PTN button
❺ LOOP button ❻ + / − button ❼ SAVE button

❽ CLR button ❾ OK button ❿ MUTE button ⓫ PTN PLAY button
⓬ X button ⓭ Y button ⓮ TEMPO button

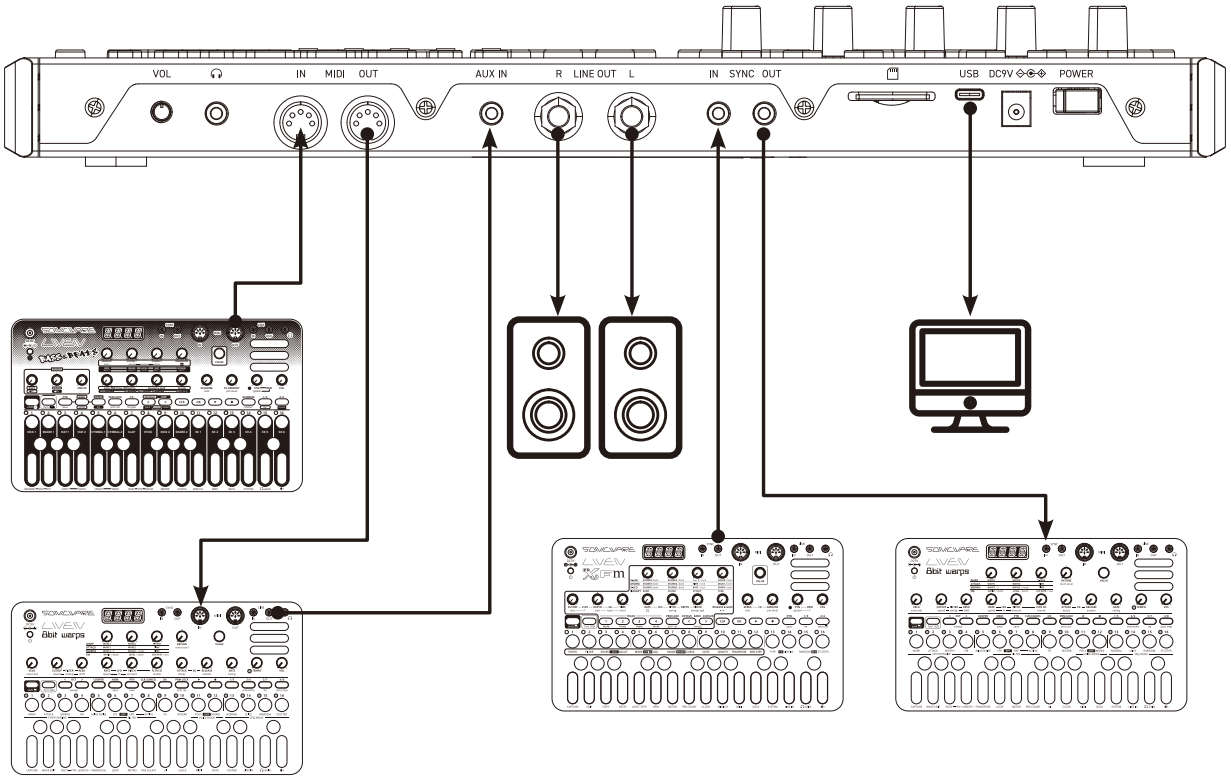
⓯ LOOPER1 ~ 4 button ⓰ LOOPER ALL button ⓱ OCTAVE UP/DOWN button
⓲ Func button



Names of parts



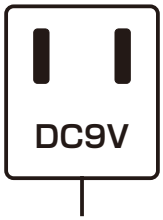
Connection example



Basic operations — General

Preparing a power supply

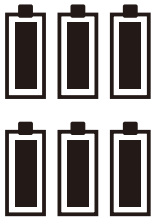
An AC adapter is included.



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

or

6 AA batteries



“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.132)

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.132)

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.

Recalling and saving MEMORY settings

Recalling MEMORY settings

MEMORY settings can be recalled.

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

1 Press MEM button, and Press − / + buttons to select MEMORY.

2 Recall the desired MEMORY.

POINT!

- Factory preset sounds can be recalled immediately after the unit is purchased new.
- You can access Memory banks A, B, C, D by holding down MEM button and pressing the 1 2 3 4 button.
- By turning any knobs while holding down MEM button, you can change Memory quickly.
- If you recall a MEMORY when the EDITED icon is shown, all changes to the current sound will be lost.

Saving settings to MEMORY

Edited sounds can be saved to MEMORY.

1 Press button to open a screen to select the save destination.

2 Use the − / + buttons or any knob to select the MEMORY where you want to save the settings.

3 Press the OK 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.

Playing held notes

1 Press OK + keyboard keys.
This will hold played notes.
Press the same keys again to release held notes.

All held notes can be released by pressing OK + CLR .

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 .

Mode overview

ELZ_1 play has 7 modes.

MODE		
	Oscillator mode	The ELZ_1 play has multiple synthesis engines, including engines that use FM, 8-bit wave memory and granular synthesis. In this mode, select the synth 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.

Selecting synth engines and editing parameters

1 Press the ∿ button to activate oscillator mode.

2 Turn the TYPE knob to select the synth engine.

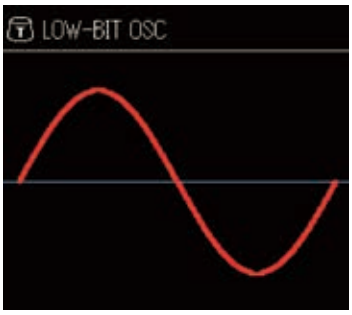
3 Turn knobs A ～ D to adjust the corresponding parameters on the screen.

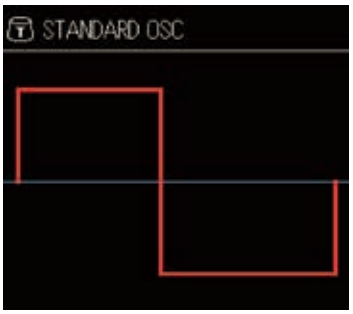
POINT!

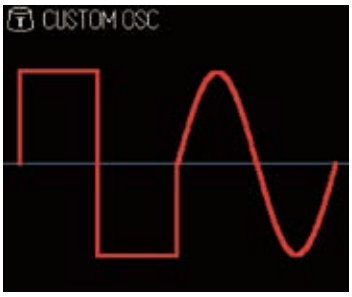
・If the synth engine has more than four adjustable parameters, press the ▲ ▼ buttons to show the next page of parameters.

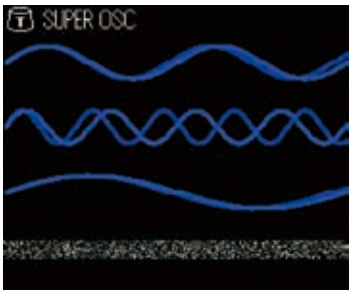
Synth engines and parameters

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

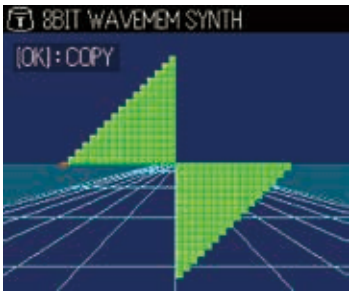
LOW-BIT OSC		
		This low-bit oscillator outputs a sine, square, triangle or saw wave with a resolution of 2–8 bits.
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	BIT	8Bit～2Bit
PRM2	OSC TYP	Sine、Square、Triangle、U.Saw、D.Saw
PRM3	DUTY	**15～50%:** ratio per cycle of the first half of the waveform
PRM4	-	-
PRM5	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

STANDARD OSC		
		This oscillator can output a sine, square, triangle or saw wave.
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	OSC TYP	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	DUTY	**15～50%:** ratio per cycle of the first half of the waveform
PRM3	-	-
PRM4	-	-
PRM5	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

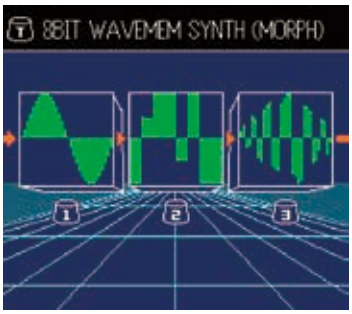
CUSTOM OSC		
		OSC1 and OSC2 waveforms are blended cyclically over the PERIOD and output. For example, if PERIOD is 1.0, OSC1 is Sine and OSC2 is Square, the output waveform will change from sine to square and back to sine each period.
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	OSC1	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	OSC2	Sine、Square、Triangle、U.Saw、D.Saw
PRM3	PERIOD	**0.5～64.0:** Timing in waveform periods of oscillator switching
PRM4	DUTY	15～50%
PRM5	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

SUPER OSC ①		
		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	-	
X Y	BEND DOWN/BEND UP	
PRM1	OSC TYP	Sine、Square、Triangle、U.Saw、D.Saw
PRM2	-	-
PRM3	DETUNE	**0～127**
PRM4	LEVEL	**0～127**
PRM5	+8 DET	**0～127**: Detune amounts of Upper OSC
PRM6	+8 LVL	**0～127**: Levels of Upper OSC
PRM7	-8 DET	**0～127**: Detune amounts of Lower OSC
PRM8	-8 LVL	**0～127**: Levels of Lower OSC
PRM9	NOISE	Selects Noise waveforms preinstalled in the ELZ_1 play White、Pink、Brown、Purple

SUPER OSC ②		
PRM10	NOISE LV	0 ～ 127
PRM11	-	-
PRM12	-	-
PRM13	MOD TYP	See “Synth engine parameter modulation” (→ P.40)

8BIT WAVEMEM SYNTH ①		
	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.42) 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.43) **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
PRM2	DETUNE	-16 ～ 16 (CENT)
PRM3	CURSOR	**0 ～ 31:** Horizontal position when editing waveform (available with PRM1:WAVE is set to MEM)

8BIT WAVEMEM SYNTH ②		
PRM4	LEVEL	**-128～127：** Level at current position when editing waveform (available with PRM1:WAVE is set to MEM)
PRM5	COLOR	Classic、Modern
PRM6	-	-
PRM7	-	-
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

<table>
<tr><th colspan="3">8BIT WAVEMEM SYNTH (MORPH) ①</th></tr>
<tr><td colspan="2"> 
</td><td>This is the morphing mode of the 8-bit waveform memory synth. The waveform morphs from WAVE1 to WAVE2 to WAVE3 cyclically.</td></tr>
<tr><td>Special operations</td><td colspan="2">-</td></tr>
<tr><td>X Y</td><td colspan="2">BEND DOWN/BEND UP</td></tr>
<tr><td>PRM1</td><td>WAVE1</td><td rowspan="3">MEM1 ～ MEM3：
Waveforms saved in the current MEMORY

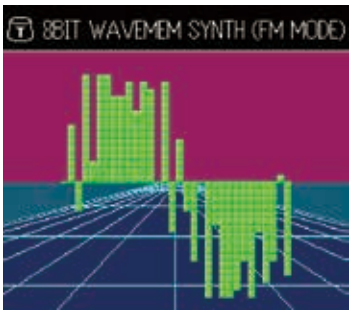
Bank01 ～ Bank50：
Bank waveforms shared within the ELZ_1 play

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.</td></tr>
<tr><td>PRM2</td><td>WAVE2</td></tr>
<tr><td>PRM3</td><td>WAVE3</td></tr>
</table>

8BIT WAVEMEM SYNTH (MORPH) ②		
PRM4	TIME	**50 ～ 4000ms：** Waveform switching time
PRM5	DETUNE	-16 ～ 16 (CENT)
PRM6	COLOR	Classic、Modern
PRM7	-	-
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

<table>
<tr><th colspan="3">8BIT WAVEMEM SYNTH (FM MODE) ①</th></tr>
<tr><td colspan="2"> 
</td><td>This 8-bit waveform memory synth mode is an FM sound source.</td></tr>
<tr><td>Special operations</td><td colspan="2">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.42)
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.43)

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.</td></tr>
<tr><td>X Y</td><td colspan="2">BEND DOWN/BEND UP</td></tr>
<tr><td>PRM1</td><td>WAVE</td><td>MEM：
Waveforms saved in the current MEMORY

FM01 ～ FM20：
FM bank waveform shared within the ELZ_1 play</td></tr>
<tr><td>PRM2</td><td>DETUNE</td><td>-16 ～ 16 (CENT)</td></tr>
<tr><td>PRM3</td><td>FM RATIO</td><td>0.5 ～ 32.0
(available with PRM1:WAVE is set to MEM)</td></tr>
</table>

8BIT WAVEMEM SYNTH (FM MODE) ②		
PRM4	FM LEVEL	1～100 (available with PRM1:WAVE is set to MEM)
PRM5	COLOR	Classic、Modern
PRM6	-	-
PRM7	-	-
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation”（→ P.40)

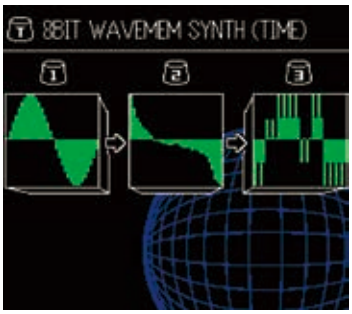
8BIT WAVEMEM SYNTH (WARP)		
		This is the WARP mode of 8-bit waveform synth. It crossfades the waveforms of WAVE1 and WAVE2 to generate an intermediate waveform
Special operations	-	
(X) (Y)	BEND DOWN/BEND UP	
PRM1	WAVE1	**MEM1、MEM2：** Waveforms saved in the current MEMORY **Bank01 ～ Bank50：** Bank waveforms shared within the ELZ_1 play **FM01 ～ FM20：** FM bank waveform shared within the ELZ_1 play
PRM2	WAVE2	
PRM3	X-FADE	<100 ～ 0 ～ 100>
PRM4	DETUNE	-16 ～ 16 (CENT)
PRM5	COLOR	Classic、Modern
PRM6	-	-
PRM7	-	-
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation”（→ P.40)

<table>
<tr><th colspan="3">8BIT WAVEMEM SYNTH (ADSAR) - ADSAR ①</th></tr>
<tr><td colspan="2"> 
</td><td>This is the ADSAR mode of the 8-bit waveform memory synth. The waveform changes according to the envelope position.</td></tr>
<tr><td>Special operations</td><td colspan="2">-</td></tr>
<tr><td>X Y</td><td colspan="2">BEND DOWN/BEND UP</td></tr>
<tr><td>PRM1</td><td>ATTACK</td><td rowspan="5">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

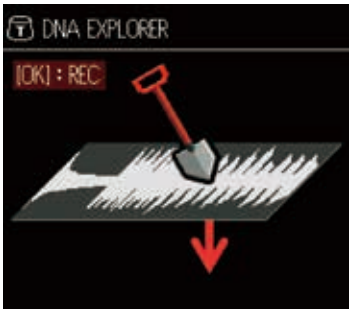
FM01 ～ FM20：
FM bank waveform shared within the ELZ_1 play</td></tr>
<tr><td>PRM2</td><td>DECAY</td></tr>
<tr><td>PRM3</td><td>SUSTN</td></tr>
<tr><td>PRM4</td><td>R ATTACK</td></tr>
<tr><td>PRM5</td><td>RELEAS</td></tr>
<tr><td>PRM6</td><td>DETUNE</td><td>-16 ～ 16 (CENT)</td></tr>
<tr><td>PRM7</td><td>COLOR</td><td>Classic、Modern</td></tr>
<tr><td>PRM8</td><td>-</td><td>-</td></tr>
<tr><td>PRM9</td><td>MOD TYP</td><td>See “Synth engine parameter modulation” (→ P.40)</td></tr>
</table>

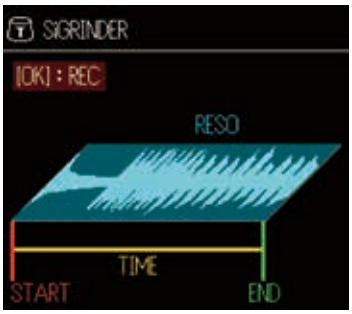
8BIT WAVEMEM SYNTH (ADSAR) - ADSR ②		
PRM1	ATTACK	**MEM.ATK、MEM.DCY、MEM.SUS、MEM.REL：** Waveforms saved in the current MEMORY **Bank01 ～ Bank50：** FM bank waveform shared within the ELZ_1 play **FM01 ～ FM20：** FM bank waveform shared within the ELZ_1 play
PRM2	DECAY	
PRM3	SUSTN	
PRM4	-	
PRM5	DETUNE	-16 ～ 16 (CENT)
PRM6	COLOR	Classic、Modern
PRM7	-	-
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation”（→ P.40)

<table>
<tr><th colspan="3">8BIT WAVEMEM SYNTH (TIME)</th></tr>
<tr><td colspan="2"> 
</td><td>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.</td></tr>
<tr><td>Special operations</td><td colspan="2">-</td></tr>
<tr><td>X Y</td><td colspan="2">BEND DOWN/BEND UP</td></tr>
<tr><td>PRM1</td><td>WAVE1</td><td rowspan="3">MEM1 ～ MEM3：
Waveforms saved in the current MEMORY

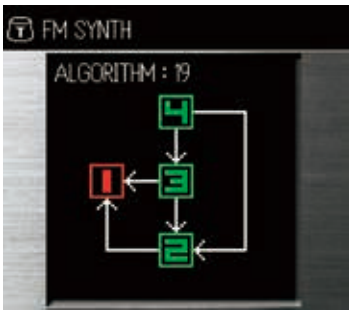
Bank01 ～ Bank50：
FM bank waveform shared within the ELZ_1 play

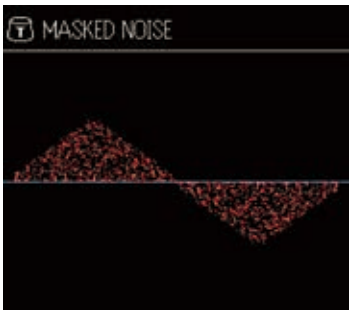
FM01 ～ FM20：
FM bank waveform shared within the ELZ_1 play</td></tr>
<tr><td>PRM2</td><td>WAVE2</td></tr>
<tr><td>PRM3</td><td>WAVE3</td></tr>
<tr><td>PRM4</td><td>-</td><td>-</td></tr>
<tr><td>PRM5</td><td>TIME (1->2)</td><td>0 ～ 5000 (msec)</td></tr>
<tr><td>PRM6</td><td>TIME (2->3)</td><td>0 ～ 5000 (msec)</td></tr>
<tr><td>PRM7</td><td>DETUNE</td><td>-16 ～ 16 (CENT)</td></tr>
<tr><td>PRM8</td><td>COLOR</td><td>Classic、Modern</td></tr>
<tr><td>PRM9</td><td>MOD TYP</td><td>See “Synth engine parameter modulation”（→ P.40）</td></tr>
</table>

DNA EXPLORER		
		This synth engine extracts and generates waveforms from 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.44)	
X Y	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 whitin the ELZ_1 play. Card Selects WAVEDATA waveforms from the external storage card
PRM7	COLOR	Classic、Modern
PRM8	-	-
PRM9	MOD TYP	See “Synth engine parameter modulation” (→ P.40)

SIGRINDER ①		
		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.44)	
X Y	BEND DOWN/BEND UP	
PRM1	RESO	**1～100:** Waveform resolution
PRM2	DIG	**10～1000:** Extent of waveform extraction
PRM3	HRMNY	**0～100:** Volume of sound one octave higher than source
PRM4	BIT CRSH	Off、Normal、Heavy、Destruct
PRM5	START	**0～2379:** Starting point in audio data
PRM6	END	**0～2379:** Ending point in audio data
PRM7	TIME	**100～10000ms:** Generated waveform length
PRM8	GAIN	1～100
PRM9	STORAGE	Internal、Card

SIGRINDER ②		
PRM10	WAVE	Internal **WAVEDATA1 ～ 3：** Selects WAVEDATA waveforms shared whitin the ELZ_1 play. Card Selects WAVEDATA waveforms in the external storage Card.
PRM11	COLOR	Classic、Modern
PRM12	POSI	UP/DWN、RANDOM
PRM13	MOD TYP	See “Synth engine parameter modulation”（→ P.40）

FM SYNTH		
		A high-quality FM audio source with 4 operators and 31 algorithms. Each operator has feedback and detuning.
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	RATIO	0.5 ～ 32.0
PRM2	LEVEL	0 ～ 127
PRM3	FEEDBACK	-127 ～ 127
PRM4	DETUNE	-64 ～ 64 (cent)
PRM5 ～ 8	Parameters for operator 2 (RATIO、LEVEL、FEEDBACK、DETUNE)	
PRM9 ～ 12	Parameters for operator 3 (RATIO、LEVEL、FEEDBACK、DETUNE)	
PRM13 ～ 16	Parameters for operator 4 (RATIO、LEVEL、FEEDBACK、DETUNE)	
PRM17	ALGO	01 ～ 31
PRM18	-	-
PRM19	-	-
PRM20	GACHA	Randomizes FM synth parameters
PRM21	MOD 1-4	See “Synth engine parameter modulation” (→ P.40)

MASKED NOISE		
		This synth engine incorporates noise into basic waveforms
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	NOISE	White、Pink、Brown、Purple
PRM2	MASK	Sine、Square、Triangle、U.Saw、D.Saw
PRM3	MASK LV	1～100
PRM4	-	-
PRM5	MOD TYP	See “Synth engine parameter modulation” (→ P.40)

SAND FLUTE		
	This synth engine is inspired by desert wind. It generates tones by applying multiple filters to noise.	
Special operations	-	
X Y	BEND DOWN/BEND UP	
PRM1	NOISE	White、Pink、Brown、Purple
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
PRM9	MOD TYP	See “Synth engine parameter modulation” (→ P.40)

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.125)	
X Y	-	
PRM1	STORAGE	Internal、Card
PRM2	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.
PRM3	ATTACK	**0～127：** ATTACK time of the waveform set by PRM2:NOISE
PRM4	STR TYP	**0～127：** Changing string type
PRM5	DECAY	**0～127：** DECAY time of phisical modeled synth
PRM6	OSC	SINE、RECT、SAW、TRI
PRM7	TONE-F	**0～127：** TONE frequency
PRM8	TONE-Q	**0～127：** TONE quality factor
PRM9	MOD TYP	See “Synth engine parameter modulation” (→ P.40)

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 SmplTrek, you can use kit data you created with SmplTrek in ELZ_1 play.
Special operations	You can select a sample to EDIT by playing keys. See "Using SmplTrek drum kits with STK DRUMMER" for how to load STK files. (→ P.126)	
X Y	-	
PRM1	STORAGE	Internal、Card
PRM2	KIT	**Internal：** Selects preset Drum kits in ELZ_1 play **Card：** Selects Kit data saved in the external storage Card.
PRM3	PTN	Selecting preset drum PTNs to play rhythms with the STK Drummer engine
PRM4	-	-

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.

Modulation of synth engine parameters

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

With PRM1:MOD TYP set to LFO or Envelope, additional modulation parameters become visible.

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

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

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

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)

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 waveform data bank. You can also import and export ELZ_1 play data with a PC/Mac. (→ P.108)

Creating waveforms in the 8BIT WAVEMEM SYNTH

1. Turn knob A and set the PRM1:WAVE to MEM.
2. Turn knob C to move the position where the level will be adjusted (move the red cursor left and right on the display).
3. Turn knob 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 A and set PRM1:WAVE to MEM.
2. Turn knob C and D to create the waveform.
3. Press the button to save the settings to the MEMORY.

Copying waveforms between MEMORY and Banks

1. Press the ∿ button to activate oscillator mode.

2. Turn the TYPE knob to select 8BIT WAVEMEM SYNTH or 8BIT WAVEMEM SYNTH (FM MODE).

3. Turn knob A and set PRM1:WAVE to MEM.

4. Press the Fn + OK 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 OK 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.)

The DNA EXPLORER and SiGRINDER synth engines use audio data saved in the ELZ_1 play. 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 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 TYPE knob to select DNA EXPLORER or SiGRINDER.
4. Press the Fn + OK button to open the recording dialog.
5. Press the OK button to start recording and play the audio device. (Recording will be stoped automatically after five seconds.)
6. After recording, use the ▲ ▼ buttons or any knob to select the save destination.
7. Press the OK button to save.

POINT!

- Three 5-second audio data files can be saved in the ELZ_1 play 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.113)

Selecting and editing envelopes

1 Press the ENV button to activate envelope mode.

2 Turn the TYPE knob to select the envelope type.

3 Turn knobs A ～ 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)

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

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)

Selecting filters and editing parameters

1 Press the button to activate filter mode.

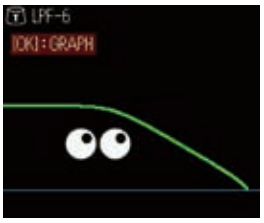
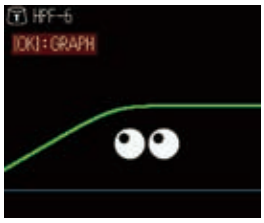
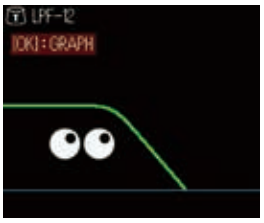
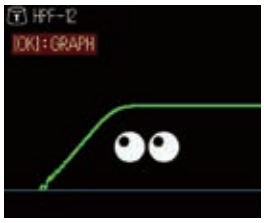
2 Turn the TYPE knob to select the filter type.

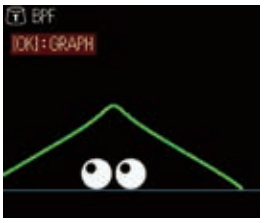
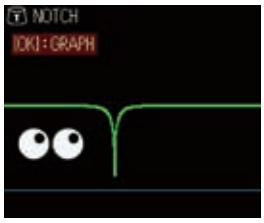
3 Turn knobs A ～ D to adjust the corresponding parameters on the screen.

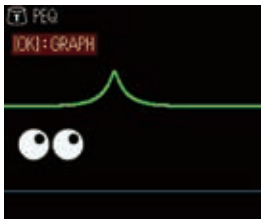
POINT!

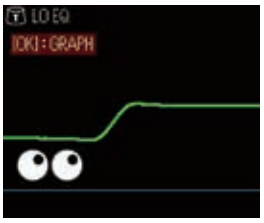
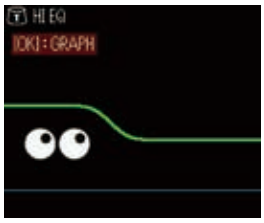
・If there are five or more parameters, press the buttons to show additional parameters that can be adjusted.

・Press the Fn + OK button to show a frequency response graph.

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	-	-
PRM5	MOD TYP	See Filter modulation (→ P.53)
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	-	-
PRM5	MOD TYP	See Filter modulation (→ P.53)

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	-	-
PRM5	MOD TYP	See Filter modulation (→ P.53)

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
PRM5	MOD TYP	See Filter modulation (→ P.53)

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
PRM5	MOD TYP	See Filter modulation (→ P.53)

Filter modulation

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

With PRM1:MOD TYP set to LFO or Envelope, additional modulation parameters become available.

FILTER MODULATION		
PRM1	MOD TYP	**Off、LFO、Envelope：** 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.

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

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

Editing effects

1 Press the button to activate effects mode.

2 Press the button to select different modules to edit.

3 Turn the TYPE knob to select the type for the current effect module.

4 Turn knobs A ～ D to adjust the corresponding parameters on the screen.

POINT!

・To turn a module off, turn the TYPE knob to select OFF.

Effect types and parameters

DRIVE/MOD 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)

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

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

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

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

MODULATION 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)

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)

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)

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

DELAY/REVERB 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

REVERB/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

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

AMBIENT ROOM		
AMBIENT HALL		
AMBIENT INF		
PRM1	LO CUT	0 ～ 127
PRM2	HI DAMP	0 ～ 127
PRM3	BALANCE	-63 ～ 63
PRM4	SHIMMER	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 a 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 TYPE knob to select the setting parameters to edit .

4 Turn knobs A ～ D to adjust the corresponding parameters on the screen.

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

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.		
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	

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%

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.123）
PRM2 (available with PRM1:MODE is set to Memory)	TUNE	-75cent～75cent

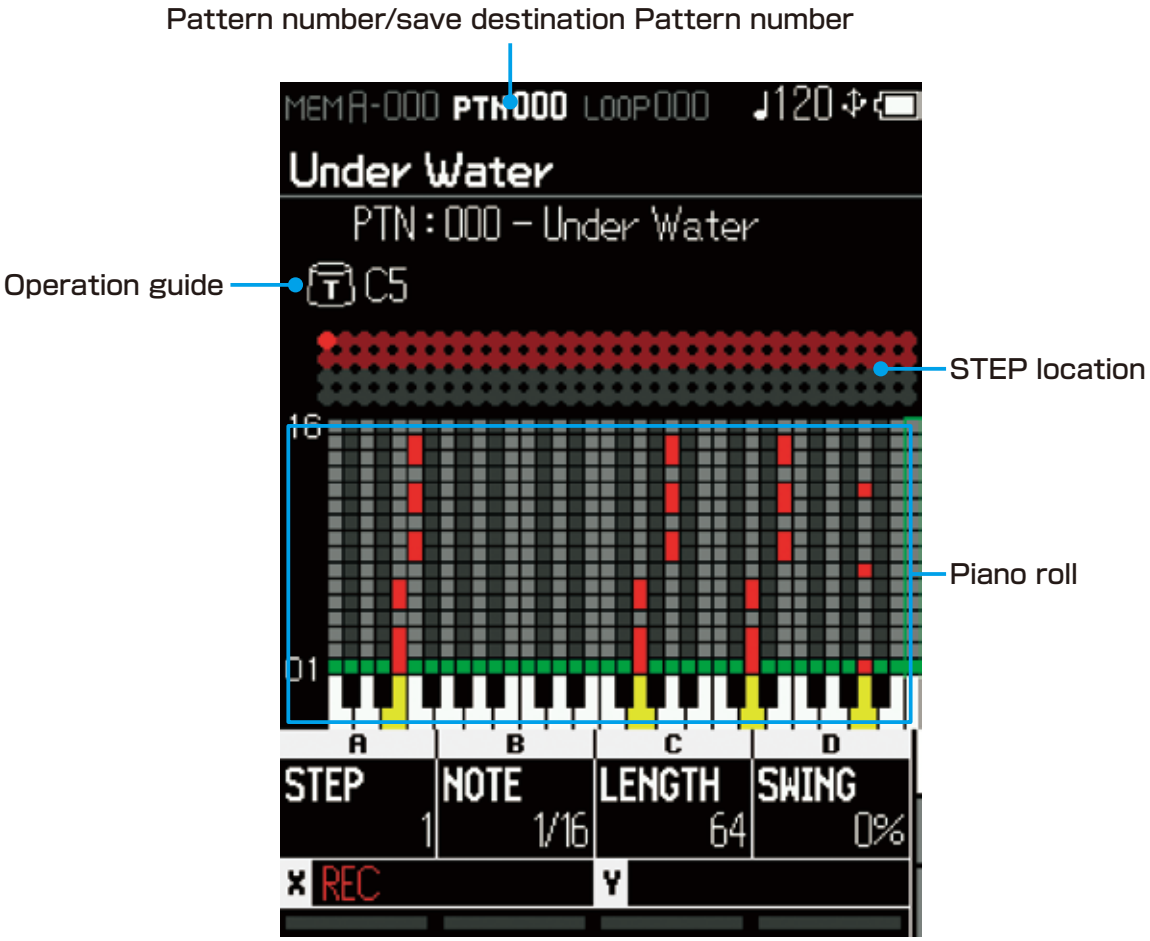
Editing Sequencer

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.

2 Press the PTN button and press − + button to select PATTERNs to edit.
Turn knobs A ～ D to adjust the corresponding parameters on the screen.

Display



Editing Sequencer

Main operations in sequencer mode

SEQUENCER	
▶PTN	Start/stop sequence playback
X	Enable/disable recording standby for sequencer
CLR + ▶PTN buttons simultaneously	Clear all notes in the current pattern
Fn + ▶PTN buttons simultaneously	Awaiting LOOPER Recording By pressing any 1 2 3 4 buttons, you can play the sequencer at the same time as LOOPER recording starts.

POINT!

・You can select a pattern by sending the ELZ_1 play MIDI CC:98 messages on SOUND SETTING2 MIDI Ch or SONG SELECT messages on SYNTH/PTN MIDI Ch.
During sequencer playback, the current pattern will play and then the new pattern will start.

Step Sequencer

Step recording

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

1. When Sequencer is stopped, press the ⓧ button to start recording.
2. Use the A PRM1:STEP to select the desired step.
3. Play the keyboard to input notes on the selected step.
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.

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.

Parameters when stopped/step recording

STEP RECORDING ①			
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	Number of steps in the current PATTERN	-
PRM4	SWING	0 ～75%	Amount of SWING throughout current PATTERN
PRM5	STEP	Same as PRM1	-
PRM6	TRANSP	-24 ～ 24	Transpose sequencer playback

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.

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

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.

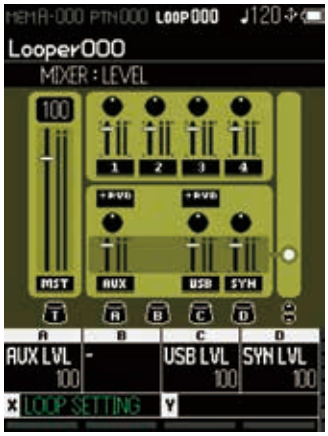
REALTIME RECORDING			
PRM1	-	-	-
PRM2	TRANSP	-24～24	Transpose sequencer playback
PRM3	-	-	-
PRM4	SWING	0～75%	Amount of SWING throughout current PATTERN
PRM5	-	-	-
PRM6	TIE	Off、On	Setting whether or not to tie the same notes inputting.
PRM7	TIM REC	Off、On	Setting whether to quantize notes input in real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

Selecting and editing MIXER

1 Press the button to activate MIXER mode.

2 Press button to select setting to edit.

3 Turn TYPE A ～ D knobs to adjust the corresponding parameters on the screen.

MIXER SETTING ①		
		
Special operations	Press the button to switch to LOOPER SETTING. To show on display MIXER again, press the button again. See LOOPER mode for details. (→ P.83)	
TYPE	MASTER LEVEL	0 ～ 127
MIXER : PAN (LOOPER)		
PRM1	LP1 PAN	L63 ～ CENTER ～ R63
PRM2	LP2 PAN	
PRM3	LP3 PAN	
PRM4	LP4 PAN	

MIXER SETTING ②		
MIXER : LEVEL (LOOPER)		
PRM1	LP1 LVL	0 ～ 127
PRM2	LP2 LVL	
PRM3	LP3 LVL	
PRM4	LP4 LVL	
MIXER : MUTE (LOOPER)		
PRM1	LP1 MUTE	Off、On
PRM2	LP2 MUTE	
PRM3	LP3 MUTE	
PRM4	LP4 MUTE	
MIXER : EFX SEND POSITION		
PRM1	AUX SN.P (A.L SN.P)	Delay、Reverb
PRM2	(A.R SN.P) ※ Available when AUX IN MODE is set to Dual Mono	
PRM3	USB SN.P	
PRM4	-	-

MIXER SETTING ③		
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

Using LOOPER

The LOOPER 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.

Main operations for LOOPER

LOOPER	
1 2 3 4	Playing LOOPER tracks, starting or stopping recording
ALL	Play/stop all LOOPER tracks
Fn + 1 2 3 4 buttons simultaneously	Stop LOOPER tracks
MUTE + 1 2 3 4 buttons simultaneously	Mute LOOPER tracks
CLR + 1 2 3 4 buttons simultaneously	Clear LOOPER tracks
Fn + CLR + 1 2 3 4 buttons simultaneously	Deletes the recorded audio data of the track number pressed and initializes the track settings.
CLR + LOOP buttons simultaneously	Deletes all track audio data and initializes LOOPER settings

Using LOOPER

Record to LOOPER

New recording to the LOOPER track in real time.

1 Press the LOOP button to select the LOOPER.

2 Press a LOOPER track button 1 2 3 4 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 1 2 3 4 to end recording.

POINT!

- Recording start behavior follows to REC TRIG setting. (→ P.91)

- During LOOPER recording, you can record continuously by pressing different LOOPER track buttons 1 2 3 4 .

- 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.

Queuing up another looper track while recording

1 While recording to a looper track, press a track button (1) (2) (3) (4) that is empty to queue it up for recording.

2 Press the looper track button (1) (2) (3) (4) 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 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.

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 ① ② ③ ④ 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 (1) (2) (3) (4) 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

Editing Looper setting

1. Press the button to active MIXER mode.
2. Press the button to show LOOP SETTING.
3. Press the button and select the setting.
4. Turn the A ～ D knobs that correspond to the parameter you want to adjust on the screen.

LOOP SETTING ①			
			
Special operations	Press the (X) button to switch to LOOPER SETTING. To display MIXER again, press the (X) button again. After LOOPER recording,you will able to use UNDO and REDO function by pressing (Y) button.		
LOOP SETTING : BAR			
PRM1	LOOP1	Auto、Free、1～64	Setting the LOOPER recording length **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.
PRM2	LOOP2		
PRM3	LOOP3		
PRM4	LOOP4		

<table>
<tr><th colspan="4">LOOP SETTING ②</th></tr>
<tr><td colspan="4">LOOP SETTING : REVERSE</td></tr>
<tr><td>PRM1</td><td>LOOP1</td><td rowspan="4">Off、On</td><td rowspan="4">Sets whether to play the recorded LOOP in reverse during playback</td></tr>
<tr><td>PRM2</td><td>LOOP2</td></tr>
<tr><td>PRM3</td><td>LOOP3</td></tr>
<tr><td>PRM4</td><td>LOOP4</td></tr>
<tr><td colspan="4">LOOP SETTING : 1SHOT</td></tr>
<tr><td>PRM1</td><td>LOOP1</td><td rowspan="4">Off、Gate、Latch</td><td rowspan="4">Off :
Play LOOPER repeatedly.

Gate :
Plays only while the LOOPER TRACK button is pressed.

Latch :
Plays the recorded LOOPER track recording once without repeating.</td></tr>
<tr><td>PRM2</td><td>LOOP2</td></tr>
<tr><td>PRM3</td><td>LOOP3</td></tr>
<tr><td>PRM4</td><td>LOOP4</td></tr>
</table>

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	-	-	-

TEMPO Setting

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

Press button to open the TEMPO screen and set the internal BPM of the ELZ_1 play.

1 Press button (The TEMPO setting screen will open.)

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.

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 and are common to all PATTERNs and LOOPERs.

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.

MEMORY management

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

1 Press the ☰ button.

2 Use the ▲ ▼ buttons to select MEMORY.

3 Press the OK 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 OK button.

3 Use the ▲ ▼ buttons to choose Select.

4 Press the OK button.

POINT!

・You can access Memory banks A, B, C, D by holding down MEM button and pressing the 1 2 3 4 button.

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 OK button.

2 Use the ▲▼ buttons to select Rename and press the OK 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 OK button to open a confirmation screen.

POINT!

・Changes can be canceled by pressing the CLR 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 OK button.

2 Use the ▲▼ buttons to select Initialize, and press the OK button to open a confirmation screen.

3 Use the ▲▼ buttons to select Yes, and press the OK 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 OK button.

2 Use the ▲ ▼ buttons to select Export, and press the OK button.

3 Use the TYPE and A ～ D knobs to edit the name of the exported file.

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

4 Press the OK button to open a confirmation screen.

5 Use the ▲ ▼ buttons to select Yes, and press the OK button.

POINT!

・Changes can be canceled by pressing the CLR 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 OK button.

2 Use the ▲▼ buttons to select Import, and press the OK 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 OK button to open a confirmation screen.

4 Use the ▲▼ buttons to select Yes, and press the OK 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 OK 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 OK button.

2 Use the ▲▼ buttons to select Rename and press the OK button.

3 Use the TYPE 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 OK button to and editing.

POINT!

・Changes can be canceled by pressing the CLR 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 OK button.

2 Use the ▲▼ buttons to select Initialize, and press the OK button to open a confirmation screen.

3 Use the ▲▼ buttons to select Yes, and press the OK 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 OK button.

2 Use the ▲ ▼ buttons to select Export, and press the OK button.

3 Use the TYPE and A ～ D knobs to edit the name of the exported file.

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

4 Press the OK button to open a confirmation screen.

5 Use the ▲ ▼ buttons to select Yes, and press the OK button.

POINT!

・Changes can be canceled by pressing the CLR 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 OK button.

2 Use the ▲▼ buttons to select Import, and press the OK 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 OK button to open a confirmation screen.

4 Use the ▲▼ buttons to select Yes, and press the OK button.

POINT!

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

LOOPER management

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 OK 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 OK button.
3. Use the ▲ ▼ buttons to choose Select.
4. Press the OK button.

LOOPER management

Changing LOOPER names

The selected LOOPER names can be changed.

1 Use the ▲▼ buttons to select the LOOPER to use and press the OK button.

2 Use the ▲▼ buttons to select Rename and press the OK 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 OK button to and editing.

POINT!

・Changes can be canceled by pressing the CLR or ☰ button.

・The following characters and symbols can be used.
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!” #$%&' () *+,-./ : ;<=>?@[＼]^_`{|}˜(space)

LOOPER management

Deleting one LOOPER file

The selected LOOPER files can be Deleted

1 Use the ▲▼ buttons to select the desired LOOPER, and press the OK button.

2 Use the ▲▼ buttons to select "Delete Files", and press the OK button to open a confirmation screen.

3 Use the ▲▼ buttons to select Yes, and press the OK 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 WAVMEM 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 OK 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 OK button.

4 Use the ▲▼ buttons to select Bank01 – 50 or FM01 – 20, and press the OK button.

5 Use the ▲▼ buttons to select Export, and press the OK button.

6 Use the TYPE and A ～ D knobs to edit the name of the exported file.

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

7 Press the OK button to open a confirmation screen.

8 Use the ▲ ▼ buttons to select Yes.

9 Press the OK button.

POINT!

・Changes can be canceled by pressing the CLR 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 WAVMEM SYNTH/8BIT WAVMEM 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 WAVMEM SYNTH.

1 Press the ☰ button.

2 Use the ▲▼ buttons to select "WAVEDATA" on the menu, and press the OK 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 OK button.

4 Use the ▲▼ buttons to select Bank01 – 50 or FM01 – 20, and press the OK button.

5 Use the ▲▼ buttons to select Import, and press the OK 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 OK button to open a confirmation screen.

7 Use the ▲▼ buttons to select Yes, and press the OK button.

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.

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 OK button to open the WAVEDATA screen.

3 Use the ▲ ▼ buttons to select DNA EXPLORER or SiGRINDER, and press the OK button.

4 Use the ▲ ▼ buttons to select the desired WAVEDATA and press the OK button.

5 Use the ▲ ▼ buttons to select Export, and press the OK button.

6 Use the TYPE and A ～ D knobs to edit the name of the exported file.

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

7 Press the OK button to open a confirmation screen.

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

POINT!

・Changes can be canceled by pressing the CLR 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 OK button to open the WAVEDATA screen.

3 Use the ▲▼ buttons to select DNA EXPLORER or SiGRINDER, and press the OK button.

4 Use the ▲▼ buttons to select the desired WAVEDATA and press the OK button.

5 Use the ▲▼ buttons to select Import, and press the OK 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 OK button to open a confirmation screen.

7 Use the ▲▼ buttons to select Yes, and press the OK 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.

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 OK button.
4. Use the ▲ ▼ buttons to select the desired Track and press the OK button.
5. Use the ▲ ▼ buttons to select MIDI Channel, and press the OK 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 SETTING1	MIDI CC : SOUND SETTING1	Default value : 11
SOUND SETTING2	MIDI CC : SOUND SETTING2	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's 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 OK button.
3. Use the ▲▼ buttons to select MIDI THRU, and press the OK button.
4. Use the ▲▼ buttons to select On and press the OK button.

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 OK button.
3. Use the ▲▼ buttons to select CLOCK OUT, and press the OK button.
4. Use the ▲▼ buttons to select On and press the OK button.

SYNC functions

Synchronizing the ELZ_1 play with external clock (CLOCK menu)

The ELZ_1 play arpeggiator, sequencer, LOOPER and some of effects can be synchronized with an external clock source.

Use the CLOCK menu to select the clock source.

1 Press the ☰ button.

2 Use the ▲▼ buttons to select "CLOCK" on the menu, and press the OK button.

3 Use the ▲▼ buttons to select SOURCE, and press the OK button.

4 Press the OK button to open SOURCE screen.

5 Use the ▲▼ buttons to select the CLOCK source to use and press the OK 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

＜Important＞

Proper connection with all SYNC devices is not guaranteed.

Never input voltage higher than 5V through the ELZ_1 play 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

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 OK button.

3 Use the ▲▼ buttons to select AUDIO SYNC OUT.

4 Press the OK button to open AUDIO SYNC OUT screen.

5 Use the ▲▼ buttons to select On and press the OK 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.

VELOCITY function

Adjusting VELOCITY

1 Press the ☰ button.

2 Use the ▲▼ buttons to select "KEYBOARD" on the menu, and press the OK button.

3 Use the ▲▼ buttons to select "VELOCITY" on the menu, and press the OK button.

4 Use the TYPE knob or ▲▼ buttons to select parameters, and press the OK or CLR 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.

Transposing the keyboard with the Transpose setting

Switch on/off transposing the keyboard using the transpose setting in the sequencer

1 Press the ☰ button.

2 Use the ▲▼ buttons to select "KEYBOARD" on the menu, and press the OK button.

3 Use the ▲▼ buttons to select "TRANSPOSE" on the menu, and press the OK button.

4 Use the TYPE knob or ▲▼ buttons to select parameters, and press the OK or CLR buttons.

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 OK button.

3 Use the ▲▼ buttons to select AUX IN MODE, and press the OK button.

4 Use the ▲▼ buttons to select Dual Mono to use and press the OK button.

POINT!

- Select the following parameters for AUX IN 1/2 in the AUX IN menu, press OK, 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 GAIN	0 ～ 127
AUX IN PAN	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 OK button.

3 Use the ▲▼ buttons to select AUX IN GAIN, and press the OK button.

4 Use the ▲▼ buttons or one of the knobs to adjust AUX IN GAIN, and press the OK 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 Global tuning setting.

1 Press the ☰ button.

2 Use the ▲▼ buttons to select "MASTER TUNE" on the menu, and press the OK button.

3 Use the ▲▼ buttons or one of the knobs to adjust MATER TUNE, and press the OK button.

POINT!

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

Accessing the ELZ_1 play 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, 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 to a PC/Mac.
2. Press the ☰ button.
3. Use the ▲▼ buttons to select "CARD" on the menu, and press the OK button.
4. Use the ▲▼ buttons to select USB MASS STORAGE MODE, and press the OK button. (The card storage being used by ELZ_1 play 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 drive on your PC/Mac

CARD functions

Using user waveforms with ZTRINGS

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

1. Connect your PC or MAC and ELZ_1 play.
2. Press the ☰ button.
3. Press the ▲ ▼ buttons, select CARD, and press the OK button (the CARD screen will be displayed).
4. Press the ▲ ▼ buttons to select USB MASS STORAGE MODE and press the OK 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 CLR 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 a Drum Kit created on the SmplTrek with STK DRUMMER

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

1. Connect your PC or MAC and ELZ_1 play.
2. Press the ☰ button.
3. Press the ▲ ▼ buttons, select CARD, and press the OK button (the CARD screen will be displayed).
4. Press the ▲ ▼ buttons to select USB MASS CARD MODE and press the OK 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 CLR 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 by exporting etc.

1 Press the ☰ button.

2 Press the ▲▼ buttons, select CARD, and press the OK button.

3 Press the ▲▼ buttons, select DELETE, and press the OK button.

4 Press the ▲▼ buttons, select the type of file you want to delete from Memory, WaveData, Pattern, and Backup, and press the OK button (a list of files will be displayed).

5 Press the ▲▼ buttons, select the type of files you want to delete, and press the OK button (a confirmation screen will appear).

6 Press the ▲▼ buttons, select Yes, and press the OK button.

POINT!

・Only files generated with ELZ_1 play can be deleted.

・Deleted files cannot be recovered. Please work carefully.

CARD functions

Backing up user data in the ELZ_1 play

The user data in the ELZ_1 play 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 OK button.

3 Press the ▲ ▼ buttons, select Backup, and press the OK button.

4 Press the ▲ ▼ buttons, select Export, and press the OK 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

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	ELZ_1_PREF

6 Use the TYPE and A ～ D knobs to edit the name of the exported file.

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

7 Press the OK button to open a confirmation screen.

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

POINT!

・We recommend that you copy the backed up data to your PC/Mac. Please refer to Accessing the ELZ_1 play card from PC/Mac (USB mass storage mode (→ P.124)

・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)

Restoring backup user data to the ELZ_1 play

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 OK button.

3 Press the ▲▼ buttons, select Backup, and press the OK button.

4 Press the ▲▼ buttons, select Import, and press the OK 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 OK button to open a confirmation screen.

6 Press the ▲▼ buttons, select Yes, and press the OK 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 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 card from PC/Mac (USB mass storage mode (→ P.124)

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.

＜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 OK button.
3. Press the ▲ ▼ buttons, select Format, and press the OK button to open a confirmation screen.
4. Press the ▲ ▼ buttons, select Yes, and press the OK 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 OK button.

3 Use the ▲ ▼ buttons to select a time between 30 minutes and 6 hours (or Off to disable the AUTO POWER OFF function), and press the OK button.

Changing Battery type

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 OK button.

3 Use the ▲ ▼ buttons to select Battery Type, and press the OK 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 OK button.

3 Use the knobs to adjusting the LCD brightness.

LCD BRIGHTNESS	
1 ～ 10	Higher numbers increase brightness.

Restoring the ELZ_1 play to factory default settings

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

< Warning! >

Use this operation with caution because it will delete all user data. Back up user data as necessary beforehand.

1 Press the ☰ button.

2 Press the ▲▼ buttons, select RESET, and press the OK button to open a confirmation screen.

3 Use the ▲▼ buttons to select Yes, and press the OK button.

POINT!

・This does not erase the storage in the external card storage. To format the external card storage, see (→ P.131)

System information

Firmware versions can be checked on this screen.

1 Press the ☰ button.

2 Press the ▲ ▼ buttons, select SYSTEM INFORMATION, and press the OK button.

Updating the ELZ_1 play firmware

The ELZ_1 play firmware can be updated by connecting the ELZ_1 play 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 card from PC/Mac (USB mass storage mode)”(→ P.124)
Copy to

"USB Drive:\ELZ_1 play.bin"

2 Turn the ELZ_1 play 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 off.

8 Turn the ELZ_1 play on again.

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 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.

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

＜Important＞

Recognition of the ELZ_1 play 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 is in USB mass storage mode. Please refer to ELZ_1 play Accessing the card used from a PC/Mac (USB mass storage mode) (→ P.124)
- 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 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 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, and check again.
- If an error appears when connected as mass storage, the mass storage data in the ELZ_1 play might have become corrupted. Referring to Formatting the storage, format the mass storage in the ELZ_1 play, and check again. (Be aware that this operation will erase the data in the mass storage.)

Specs

Synth engines (Maximum Polyphony)	・17 types LOW-BIT OSC : 15 voices STANDARD OSC : 15 voices CUSTOM OSC : 15 voices SUPER OSC : 6 voices 8BIT WAVEMEM SYNTH : 20 voices 8BIT WAVEMEM SYNTH (MORPH): 20 voices 8BIT WAVEMEM SYNTH (FM): 15 voices 8BIT WAVEMEM SYNTH (WARP): 15 voices 8BIT WAVEMEMSYNTH (ADSAR): 20 voices 8BIT WAVEMEM SYNTH (TIME): 20 voices DNA EXPLORER : 10 voices SiGRINDER : 6 voices FM SYNTH : 6 voices MASKED NOISE : 20 voices SAND FLUTE : 10 voices ZTRINGS : 6 voices STK DRUMMER : 15 voices Number of Sound memories: 512 (128 x 4 banks) *3 samplings of up to 5 seconds can be saved (16bit-48kHz WAV file import/export supported)
Envelopes	・ADSR ・ADSR (w/curve) ・ADS-RA-R ・ADS-RA-R (w/curve)
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
Filters	・LPF-6、LPF-12 ・HPF-6、HPF-12 ・BPF ・Peaking EQ ・LO EQ ・HI EQ ・NOTCH
Voice modes	Poly、Mono、Legato
Unison	4 UNISONs Maximum

Specs

Effects	DRIVE/MOD Module ・OVER DRIVE ・DISTORTION ・FUZZ ・CHORUS ・VIBRATO ・PHASER ・TREMOLO ・FLANGER ・RING MODULATOR ・AUTO WAH ・CRUSHER ・4 POLE FILTER ・TRIM FILTER 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 REVERB/MASTER Module ・ROOM ・HALL ・PLATE ・CUSTOM REVERB ・ARENA ・VINYL RECORD ・CASSETTE TAPE ・CRUSHER ・TUNNEL ・INFINITY ・AMBIENT ROOM ・AMBIENT HALL ・AMBIENT INF
Arpeggiator	Up、Down、UpDown、DownUp、Up&Down、Down&Up、Random、Up+1OCT、 Up+2OCT、Down-1OCT、Down-2OCT、Play Order
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

MIDI	・Notes, program change, control changes, clock input/output
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	AC Adaptor Warranty ***External storage card, 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