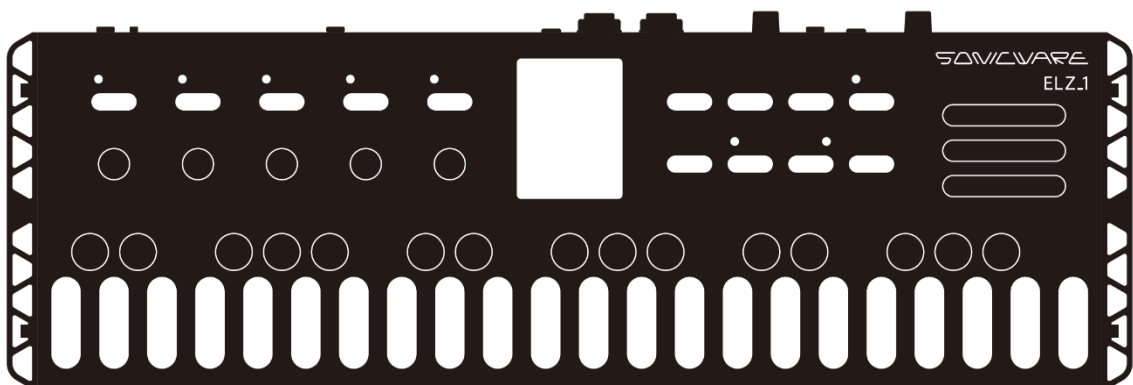




ELZ_1 Version 6 Manual Supplement

Rev.1.0



1 About this manual

This manual explains features added in the Version 6 SYSTEM firmware.

2 Added Synth Engines

Three new synth engines have been added to the 8BIT WAVEMEM SYNTH.

8BIT WAVEMEM SYNTH (WARP)

This is the WARP mode of the 8-bit waveform memory synth.

Crossfades the waveforms of WAVE1 and WAVE2 to generate an intermediate waveform.

Special operations	None	
PRM1	WAVE1	MEMORY1, MEMORY2: Waveforms saved in the current MEMORY Bank01 – Bank50: Bank waveform shared within the ELZ_1 FM01 – FM20: FM bank waveform shared within the ELZ_1
PRM2	WAVE2	
		NOTE: • Bank01 – Bank50 and FM01 – FM20 waveforms cannot be edited.
PRM3	X-FADE	<100 – 0 - 100>
PRM4	DETUNE	-16 - +16(CENT)
PRM5	COLOR	Classic, Modern
PRM6	-	-
PRM7	-	-
PRM8	-	-
PRM9	MOD TYPE	See “Synth engine parameter modulation”



8BIT WAVEMEM SYNTH (ADSAR)

This is the ADSAR mode of the 8-bit waveform memory synth.

The waveforms change according to the envelope.

Special operations		None	
ADSAR	PRM1	ATTACK	MEM.ATK, MEM.DCY, MEM.SUS, MEM.R.ATK, MEM.REL: Waveforms saved in the current MEMORY
	PRM2	DECAY	Bank01 – Bank50: Bank waveform shared within the ELZ_1
	PRM3	SUSTAIN	FM01 – FM20: FM bank waveform shared within the ELZ_1
	PRM4	R ATTACK	NOTE: • Bank01 – Bank50 and FM01 – FM20 waveforms cannot be edited.
	PRM5	RELEASE	
	PRM6	DETUNE	-16 - +16(CENT)
	PRM7	COLOR	Classic, Modern
	PRM8	-	-
	PRM9	MOD TYPE	See “ Synth engine parameter modulation ”
ADSR	PRM1	ATTACK	MEM.ATK, MEM.DCY, MEM.SUS, MEM.REL: Waveforms saved in the current MEMORY
	PRM2	DECAY	Bank01 – Bank50: Bank waveform shared within the ELZ_1
	PRM3	SUSTAIN	FM01 – FM20: FM bank waveform shared within the ELZ_1
	PRM4	RELEASE	NOTE: • Bank01 – Bank50 and FM01 – FM20 waveforms cannot be edited.
	PRM5	DETUNE	
	PRM6	COLOR	Classic, Modern
	PRM7	-	-
	PRM8	-	-
	PRM9	MOD TYPE	See “ Synth engine parameter modulation ”



8BIT WAVEMEM SYNTH (TIME)

This is the TIME mode of the 8-bit waveform memory synth.

The waveforms change in the order of: WAVE1->WAVE2->WAVE3.

The duration of the each waveform can be modified.

Special operations	None	
PRM1	WAVE1	MEMORY1 – MEMORY3: Waveforms saved in the current MEMORY Bank01 – Bank50: Bank waveform shared within the ELZ_1 FM01 – FM20: FM bank waveform shared within the ELZ_1 NOTE: • Bank01 – Bank50 and FM01 – FM20 waveforms cannot be edited.
PRM2	WAVE2	
PRM3	WAVE3	
PRM4	-	-
PRM5	TIME(1->2)	0 - 5000(msec)
PRM6	TIME(2->3)	0 - 5000(msec)
PRM7	DETUNE	-16 - +16(CENT)
PRM8	COLOR	Classic, Modern
PRM9	MOD TYPE	See “Synth engine parameter modulation”

3 Added DETUNE to 8BIT WAVEMEM SYNTH (MORPH)

Added DETUNE to the parameters of 8BIT WAVEMEM SYNTH (MORPH).

8BIT WAVEMEM SYNTH (MORPH)

This is the morphing mode of the 8-bit waveform memory synth.

The waveform morphs from WAVE1 to WAVE2 to WAVE3 cyclically.

Special operations	None	
PRM1	WAVE1	MEMORY1 – MEMORY3: Waveforms saved in the current MEMORY Bank01 – Bank50: Bank waveform shared within the ELZ_1
PRM2	WAVE2	
PRM3	WAVE3	



		FM01 – FM20: FM bank waveform shared within the ELZ_1 NOTE: • “None” can only be selected for WAVE3. When “None” is selected, the waveform will morph from WAVE1 to WAVE2 cyclically. • Bank01 – Bank50 and FM01 – FM20 waveforms cannot be edited.
PRM4	TIME	50 - 4000ms : Waveform switching time
PRM5	COLOR	Classic, Modern
PRM6	DETUNE	-16 - +16(CENT)
PRM7	-	-
PRM8	-	-
PRM9	MOD TYPE	See “ Synth engine parameter modulation ”

Synth engine parameter modulation

Each synth engine has parameters for modulation using an LFO or envelope.

When the MOD TYPE parameter is set to LFO or Envelope, additional modulation parameters become available.

PRM1	MOD TYPE	OFF, LFO, Envelope: Modulation type selection
PRM2	ASSIGN	Select the modulated parameter. The parameters that can be chosen differ according to the synth engine.
The parameters after ASSIGN depend on whether the MOD TYPE is LFO or Envelope.		
When MOD TYPE is LFO		
PRM3	DELAY	0 – 2000ms (delay before modulation starts)
PRM4	WAVE	Sine, Square, Triangle, Sawtooth, Rev.Sawtooth, Random, Log, Rev.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
PRM8	WAVELEN	1~1/8: Range used by LFO waveform



PRM9	PHASE	0, 180: LFO waveform phase
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
When MOD TYPE is Envelope		
PRM3	DELAY	0 – 2000ms (delay before modulation starts)
PRM4	INVERT	Off, On (inverts modulation)
PRM5	DEPTH	0 – 100 (modulation depth)
PRM6	ATTACK	0 – 5000ms
PRM7	DECAY	0 – 5000ms
PRM8	SUSTAIN	0 – 100%
PRM9	RELEASE	0 – 5000ms

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