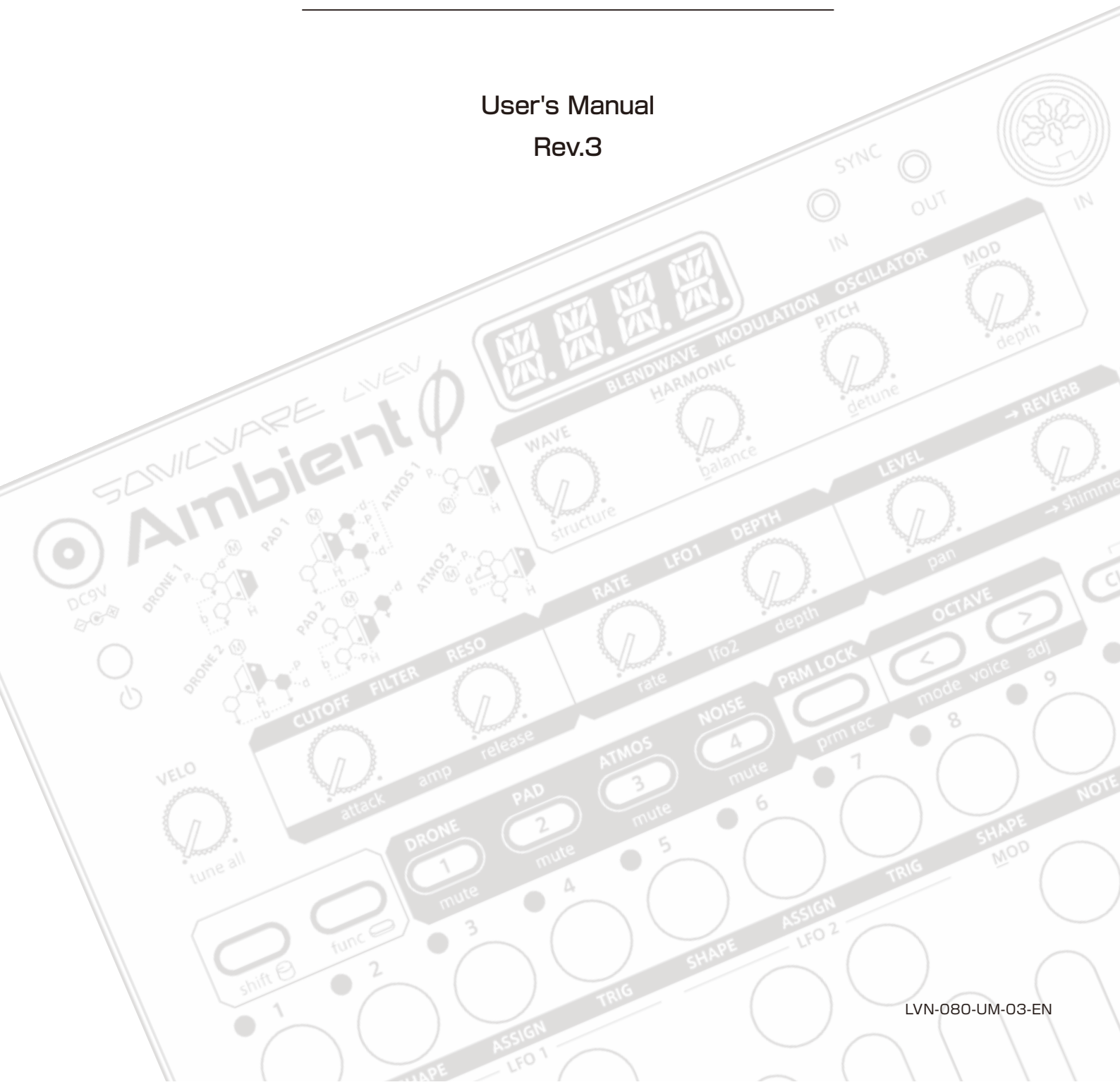
SONICWARE

LIVEN

Ambient ø

User's Manual

Rev.3



LVN-080-UM-03-EN

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 a SONICWARE LIVEN Ambient Ø.

LIVEN Ambient Ø is an immersive ambient generator that 4 layers of tone and texture—Drone, Pad, Atmos, and Noise—merge to generate deep resonance and continuous transformation.

We hope you enjoy using it for a long time.

Key features of the LIVEN Ambient Ø

- 4 layers of tone and texture—Drone, Pad, Atmos, and Noise—merge to generate resonance and transformation.
- Newly developed synth-engine with 6 structures, designed to create undulating and fluctuating tones.
- The Noise layer processes 8-second stereo sampling loops with noise blending and pitch modulation.
- 9 types of lush Reverb with shimmer, plus 6 types of effects including Tape Delay and Stereo Chorus.
- Records performances and evolving tonal changes.

Play On The Go: Portable, Built-in speaker, and Battery-powered

Leave your usual workspace and try using Ambient Ø in your living room or outdoors. As its evolving sounds mixes with the surrounding environmental noises, you are likely to experience genuine Ambient Music.

Synchronize with all kinds of devices

Clock synchronization is possible with devices that have MIDI or SYNC connectors.

The audio SYNC function enables synchronization with Teenage Engineering Pocket Operator devices using the LINE jack.

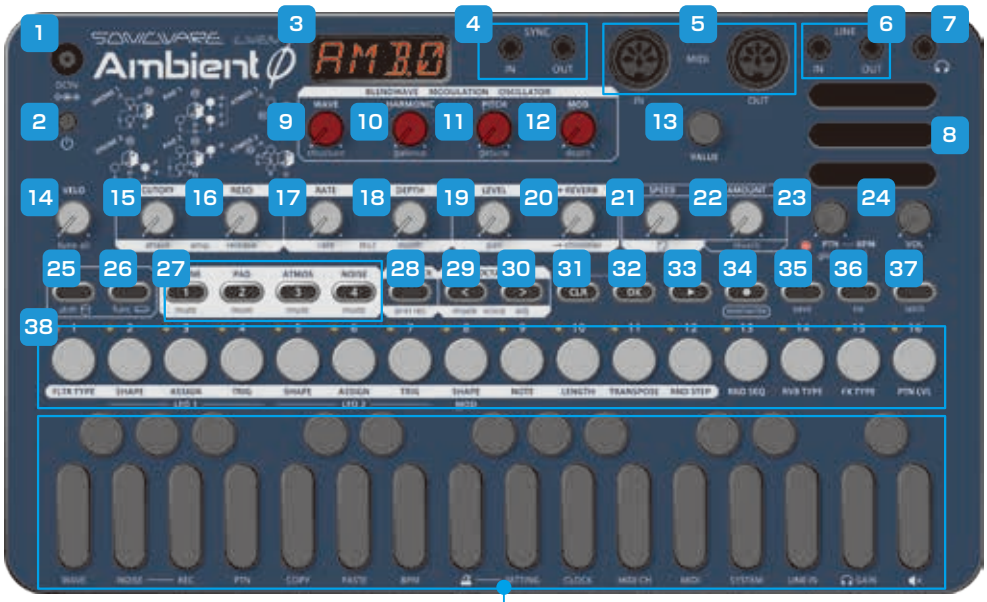
In addition, clock synchronization signals can be bridged between different connectors. For example, MIDI clock can be generated from an external SYNC clock signal.

Contents

Contents

Contents

Names of parts

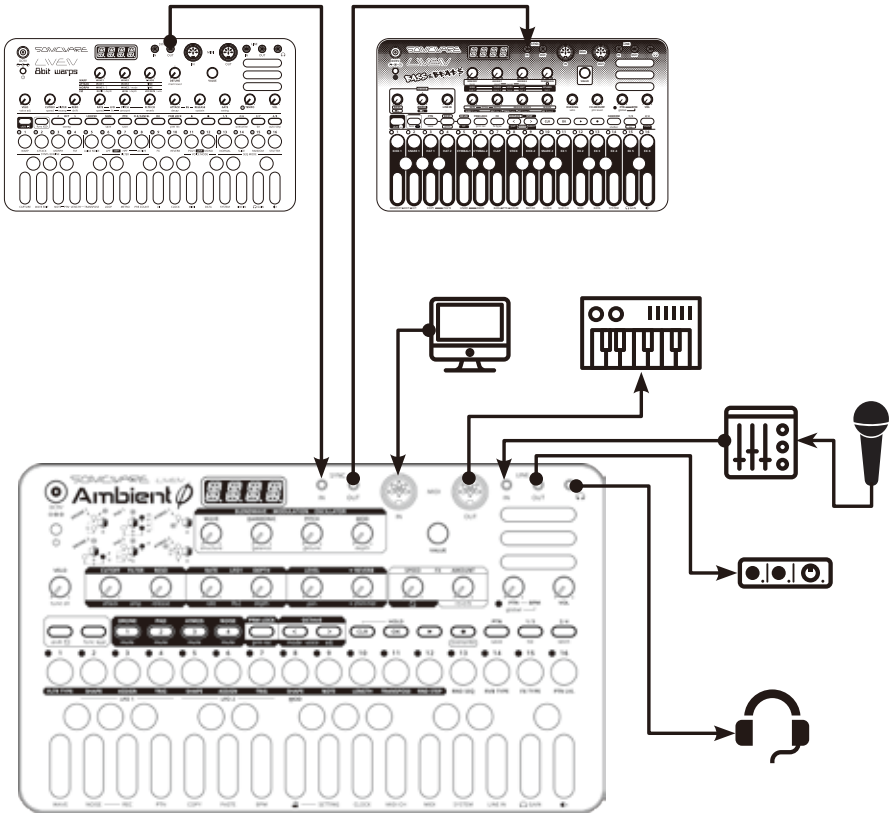


Keyboard			
WAVE key	NOISE key	NOISE REC key	PTN key
COPY key	PASTE key	BPM key	METRO key
METRO SETTING key	CLOCK key	MIDI CH key	MIDI key
SYSTEM key	LINE IN key	GAIN key	SPK MUTE key

Names of parts

1 : DC9V Connect DC power supply.	**2 : POWER switch** Press and hold to power on and off.	**3 : Display**	**4 : SYNC input/ output** Input and Output for SYNC signals.
5 : MIDI input/ouput Input and Output for MIDI signal.	**6 : Line input/output** 3.5mm stereo line input and stereo line level audio output.	**7 : Headphone jack** Stereo headphones output.	**8 : Speaker** Built-in speaker.
9 : WAVE/structure knob	**10 : HARMONIC/ balance knob**	**11 : PITCH/detune knob**	**12 : MOD/depth knob**
13 : VALUE knob	**14 : VELO/all tune knob**	**15 : CUTOFF/attack knob**	**16 : RESO/release knob**
17 : RATE/rate knob	**18 : DEPTH/depth knob**	**19 : LEVEL/pan knob**	**20 : → REVERB/ → shimmer knob**
21 : FX SPEED/dice knob	**22 : FX AMOUNT/ reverb knob**	**23 : PTN/global BPM knob**	**24 : VOL knob**
25 : Shift button	**26 : Function button**	**27 : Layer button(1,2,3,4)**	**28 : PRM LOCK/prm rec button**
29 : OCTAVE DOWN = voice mode	**30 : OCTAVE UP = voice adj**	**31 : CLR**	**32 : OK = HOLD**
33 : PLAY	**34 : REC = overwrite**	**35 : PTN = ptn save**	**36 : 1/3 = tie**
37 : 2/4 = latch	**38 : STEPS** Used to specify the step position of the sequence		
STEP1 = FLTR TYPE	**STEP2 = SHAPE(LFO1)**	**STEP3 = ASSIGN(LFO1)**	**STEP4 = TRIG(LFO1)**
STEP5 = SHAPE(LFO2)	**STEP6 = ASSIGN(LFO2)**	**STEP7 = TRIG(LFO2)**	**STEP8 = SHAPE(MOD)**
STEP9 = NOTE	**STEP10 = LENGTH**	**STEP11 = TRANSPOSE**	**STEP12 = RND STEP**
STEP13 = RND SEQ	**STEP14 = RVB TYPE**	**STEP15 = FX TYPE**	**STEP16 = PTN LVL**

Connection example

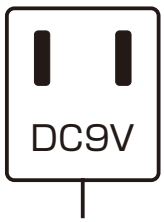


※ Use connection cables that are 3m or shorter.

Starting up and shutting down

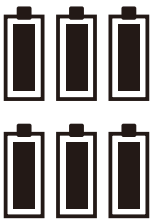
Preparing a power supply

AC adapter (sold separately)



or

6 AA batteries



Only use AC adapters that conform to the specifications. Using an AC adapter with different specifications could cause damage.

AC adapter specifications*

Voltage : 9V output
Current : 1A or higher
Connector : EIAJ-03 compliant
(1.7mm inner diameter, 4.75mm outer diameter)
Polarity : center+

*Equivalent to Korg Volca KA350 adapter

BT.LO 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.103)

Starting up

1 Press and hold the POWER switch until AMB.0 (LIVEN Ambient Ø) appears on the display.

Turning the unit off

1 Press and hold the POWER switch until the display turns off.

Recently made changes will be lost when the unit is turned off. Save the changes if necessary.

Basic operations

This section explains basic operations.

Adjusting the overall volume

The volume from the speaker, headphones and the LINE OUT can be adjusted.

Volume
0 - 127
This can be adjusted from −∞ to +6 dB with 0 dB as the middle value (63-64).

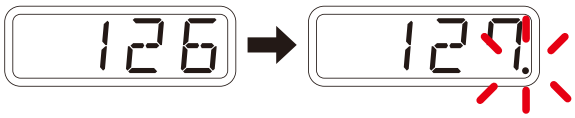
Turning on/off the speaker

The built-in speaker can be turned off manually if you want to mute it without connecting headphones (when only using the LINE OUT, for example).

Speaker	
MUTE	Speaker off
SPK	Speaker on

About the Origin mark

The dot will be shown on the lower right corner of the display when the parameter value is the same as the value stored in the pattern.



- when the knob movement behavior is set to Latch (→ P.106), the dots on the display will be animated to show how much the knob position and parameter value differs to the left or right. The dots will appear to flow to the left when the parameter value is lower than the knob position and to the right when the value is higher than the position. The flow will be faster for higher values.

Basic operations

Using the func button

Some Ambient Ø buttons have two functions.

In the example above, the secondary functions of the PTN and 14 buttons are “save” and “RVB TYPE” .
Pressing these buttons while pressing the func button will activate their secondary functions.
In this manual, operations while pressing the func button will be shown as follows.

func + 14 RVB TYPE

func + ×SPK MUTE

Using the shift button

Many Ambient Ø knobs have both **uppercase** and **lowercase** names.

Turning a knob alone will adjust the uppercase parameter.
Turning the knob while pressing the shift button will adjust the lowercase parameter.
In this manual, operations while pressing the shift button will be shown as follows.

shift + pan

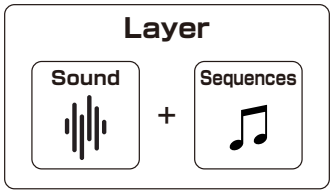
Using the shift button hold function

By pressing the shift button while pressing the func button, the shift button hold function can be activated. (The button lights orange.)
When the hold function is activated, lowercase parameters can be adjusted without pressing the shift button.
Press the shift button again to deactivate the hold function.

Layers and Pattern Palettes

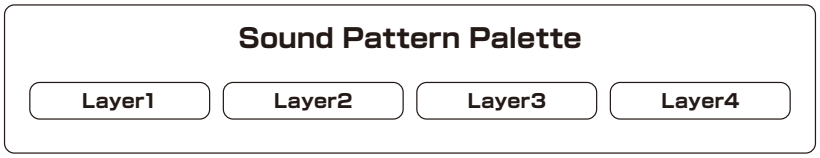
Layer overview

The LIVEN Ambient Ø is an immersive ambient generator that has 4 - sound layers with a sequencer. **Layers** contain both **sound** settings and **sequences** (performance data). The 4 Layers of the LIVEN Ambient Ø can each have different sounds and individual sequences created for them.



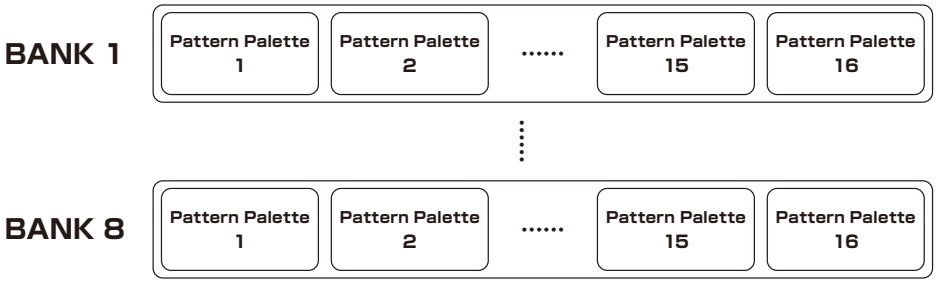
Sound Pattern Palette overview

A **Pattern Palette** is a combination of the 4 Layers described above. With lengths of 1 - 512 bars, Pattern Palettes can be used as the smallest units in making songs.



Pattern Palettes and banks

16 Pattern Palettes can be stored together in a single **bank**.
The LIVEN Ambient Ø has 8 banks enabling 128 Pattern Palettes to be saved in total.



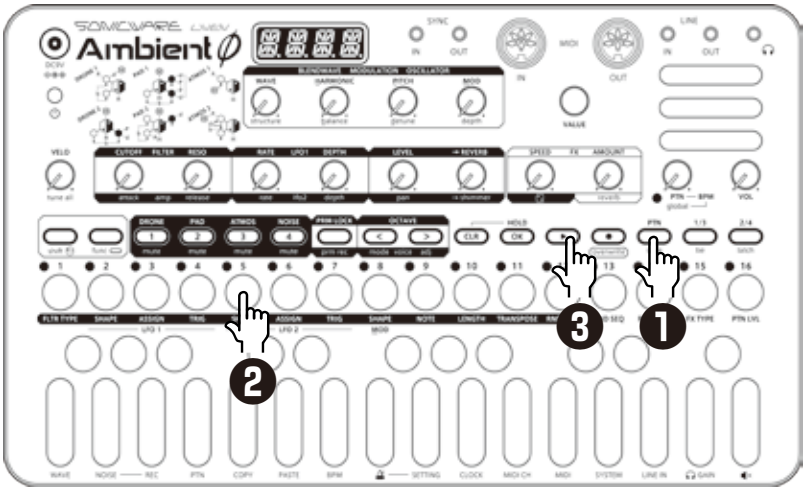
・BANK 1 - 4 contain preset Pattern Palettes.
All preset Pattern Palettes contain sound settings and sequences.
Following the instructions on the next page, try playing them.

Layers and Pattern Palettes

Selecting Pattern Palettes

1 Press PTN.

2 Press 1 - 16.
→The Pattern Palette is selected.
(STEP1=Pattern Palette 1...
STEP16=Pattern Palette 16)



Playing Pattern Palettes

3 Press ▶.
Press it again to stop.
Pressing func + ▶ button
to stop with natural release.

Selecting Pattern Palette 17 and higher

Press OCTAVE < > after procedure 1 to change the bank, enabling selection of Pattern Palette 17 and higher.

- If a different Pattern Palette is selected during Pattern Palette playback, it will be readied but will not start playing immediately. Playback will switch to the selected Pattern Palette after the playing Pattern Palette completes.

- After pressing PTN, VALUE can also be used to select Pattern Palette

Layers and Pattern Palettes

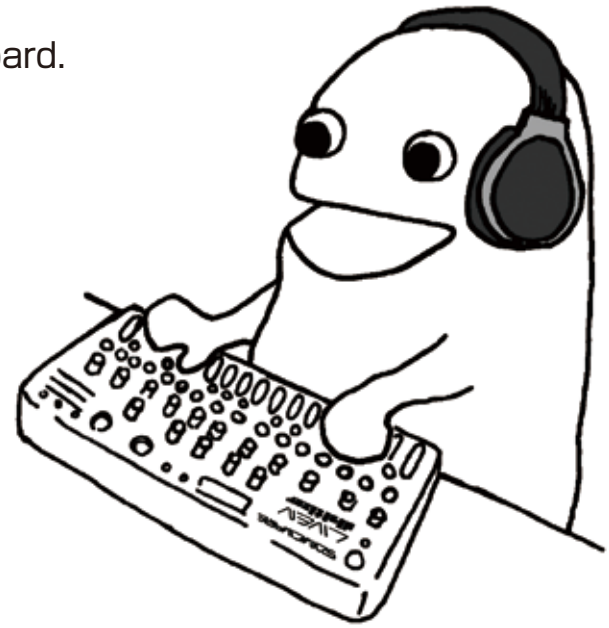
Normal release and Natural release

When stopping pattern play back, Ambient Ø has two release modes.

▶	Normal release	Voices and sequences on all layers are stopped immediately.
func + ▶	Natural release	Only the sequence is stopped. Voices on each layer will continue to play until their amp envelope release times finish.

Performing

1 Play the keyboard.



Performing with holding keyboard notes

1 Press OK + keys to hold them.

- Press the same key again to stop holding it.
- Press CLR + OK to stop holding all keys in a selected layer.
- Press CLR + ▶ to stop holding all keys at once in all layers.

Changing the velocity

The velocity value used when playing keys can be set.

VELO

Velocity
0 - 127
The higher the value, the louder the notes will be played.

Changing tune all

This changes sounds of tune in all layers in real time.
The texture of sound can be changed greatly.

VALUE

Tune all
-1200 - 0 - 1200
This can change the pitch -1OCT - +1OCT in 20 cent steps. The VALUE knob makes adjustments 1 cent steps.

Changing the octave range

1 Press < / > .
This lowers/raises the range by an octave.

<	>	+3 octaves
<	>	+2 octaves
<	>	+1 octave
<	>	
<	>	− 1 octave
<	>	− 2 octaves
<	>	− 3 octaves

・When selecting DRONE structure, the octave is -2 on default.
(→ P.45)

Changing the voice mode

1 Press func + voice mode.
This selects the voice mode.

func + voice mode

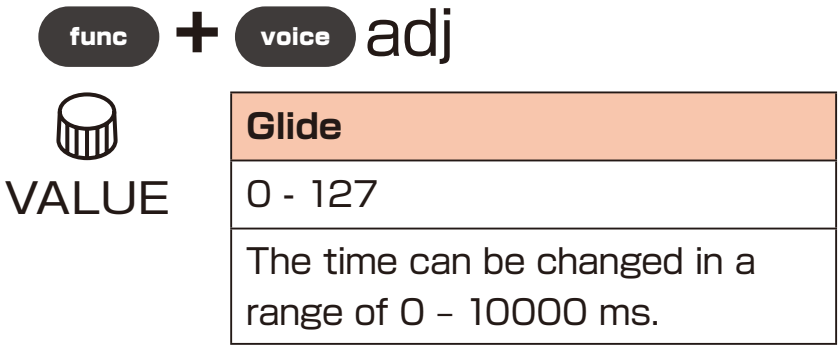

VALUE

Voice Mode		
POLY	Polyphonic	Polyphonic note can be output simultaneously in this mode
MONO	Mono	In this single voice mode,each note retriggers the sound.
LGT	Legato	In this single voice mode, notes do not retrigger the sound.
UNI	Unison	In this voice mode, 4 detune-able voices sound in a single unison voice.
ARP	Arpeggiator	In this mode, each note played on the keyboard is played one by one.

Changing the glide (in MONO/LEGATO mode)

1 Press func + voice adj.

2 Use VALUE to set the speed.

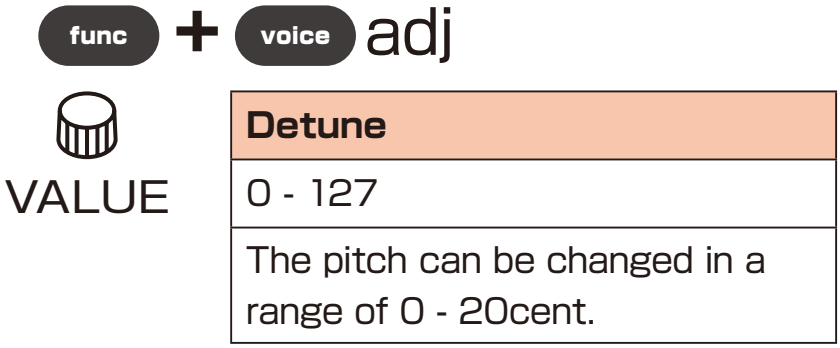


Glide
0 - 127
The time can be changed in a range of 0 – 10000 ms.

Changing the detune (in UNISON mode)

1 Press func + voice adj.

2 Use VALUE to set the detune.



Detune
0 - 127
The pitch can be changed in a range of 0 - 20cent.

Changing the arpeggiator type (in ARP mode)

1 Press func + voice adj.

2 Use VALUE to select the arpeggiator type.

func + voice adj

VALUE

Arpeggiator		
UP	UP	↗
DOWN	DOWN	↘
U.D	UP DOWN	↗↘
D.U	DOWN UP	↘↗
U.A.D	UP&DOWN	↗↘
D.A.U	DOWN&UP	↘↗
RNDM	RANDOM	～
UP+1	UP+1	↗
UP+2	UP+2	↗
DN-1	DOWN-1	↘
DN-2	DOWN-2	↘
P.O	PLAY ORDER	Notes are sounded in the order played on the keyboard

・The arpeggiator's note speed is determined by NOTE (→P.59) and BPM (→P.24).

Copying Layers

Copying a layer to another layer

You can copy a sound setting & sequence you've created from layer to layer.

1. Press 1 - 4 to select layer to copy.
2. Press func + COPY.
3. Press 1 - 4 to select the layer to be pasted.
4. Press func + PASTE .

Copying layer to another pattern palette

1. Press 1 - 4 to select the Layer of the Pattern Palette to be copied.
2. Press func + COPY.

3. Press 1 - 4 to select the layer for the pattern palette to be pasted.
4. Press func + PASTE .

- Layer copying is only valid between Layers of the same type (between Layers 1 - 3 and between layer 4 of difference pattern).

Changing the tempo

BPM

BPM
40 - 250
When the tempo is shown on the display, VALUE can be turned to change it in 0.1-beat increments. When you want to set the BPM lower than 80 or higher that 160, use VALUE to achieve this too

Reloading patterns

1 Press PTN .

2 Press OK .
This is useful for restoring sounds to their original states during live performances, for example.

PTN → OK

Changing Pattern Palettes automatically

Selecting multiple Pattern Palettes and performing them in order (chain playback)

1 Press PTN twice (lights orange).

2 Press 1 - 16 .
Select Pattern Palettes in the order that you want them to play.
Press 1– 16 again to deselect.

3 Press ▶ .
The Pattern Palettes will play in the selected order.

・Press PTN again to end chain playback.

Relaxation Playback Mode

Repeat pattern palettes and chain playback with fade-outs.

1 Press PTN twice (lights orange).

2 Press 1 - 16 .
Select Pattern Palettes in the order that you want them to play.
Press 1 - 16 again to deselect.

3 Press 1/3 and use VALUE to set the number of repeat times before fading out.

VALUE

Fadeout Start
2 - 10
Once the set number of repeat times is reached, the pattern will fade out and the next pattern will begin playing once the fade out is complete.

Changing Pattern Palettes automatically

4 Press 2/4, and use VALUE to set fade out time.

VALUE

Fadeout Time
5, 10, 15, 20, 25, 30
Fade time varies from 5 to 30 seconds

5 Hold down OK and press Play.
The Pattern Palettes will play in the selected order.

・During relaxation playback, ▶ lights orange.

Looping the chain playback

1 Press func + SYSTEM and select CN.LP.

2 Select LOOP by VALUE.

Adjusting the volume of individual Pattern Palettes

1 Press func + 16 PTN LVL.

2 Adjust parameter by VALUE.

VALUE

Pattern Palette Level
0 - 127
Pattern Palette levels can be set in a range of −∞ – +6 dB.

Layer selection and basic adjustments

Ambient Ø has a total of 4 layers that consist of 3 selectable structures synth layers and 1 Noise sound layer.

Layer 1, 2, 3:

BLENDWAVE MODULATION SYNTH engine that has 6 structures and 32 WAVEs.

For details on editing BLENDWAVE MODULATION SYNTH, see BLENDWAVE
MODULATION SYNTHESIS(→ P.40)

Layer 4:

Adjust balance between 8 ambient noise samples and white noise. You can also capture any sound by using the sampling function. For details on editing NOISE layer, see Adjusting NOISE layer (→ P.49)

Layer selection and basic adjustments

The relations about max polyphony between structure and voice mode

Ambient Ø shares max polyphony across all layers. And in case basically use, max polyphony is around 10 voices.

This is because a maximum of 34 oscillators Ambient Ø has, while the maximum polyphony is determined by the number of oscillators consumed by the structure, the voice mode, and the number of notes being played.

If the maximum polyphony is exceeded, notes will be turned off starting with notes on the lowest priority Layer. (Priority is Layer 1 > Layer 4 is the order. However, sounds that are being released will be turned off first in Layer priority order.)

The number of oscillators consumed by each structures is following.

DRONE1、2	2
PAD1、2	3
ATMOS1	3
ATMOS2	3
NOISE	1

・ATMOS1 consumes 3 times by one to be ring modulation.

Following, See the examples how it changes the max polyphony by setting.

Layer selection and basic adjustments

The relations about max polyphony between structure and voice mode

Example of use in case basic

Layer1 : structure=DRONE1、Voice mode=UNI、sounding notes=1(OSC consumptions is 8)
Layer2 : structure=PAD1、Voice mode=POLY、sounding notes=4(OSC consumptions is12)
Layer3 : structure=ATMOS1、Voice mode=POLY、sounding notes=4(OSC consumptions is 12)
NOISE : Voice mode=MONO、sounding notes=1(OSC consumptions is 1)

Total OSC consumptions is 33, therefore max polyphony is 10 voices.

Example of use in case maximum number of max simultaneous notes sounded

Layer1 : structure=DRONE1、Voice mode=POLY、sounding notes=17(OSC consumptions is 34)

Total OSC consumptions is 34 in only the layer1, therefore max polyphony is 17 voices.
In this case, the other layers cannot be sounded.

Example of use in case minimum number of max simultaneous notes sounded

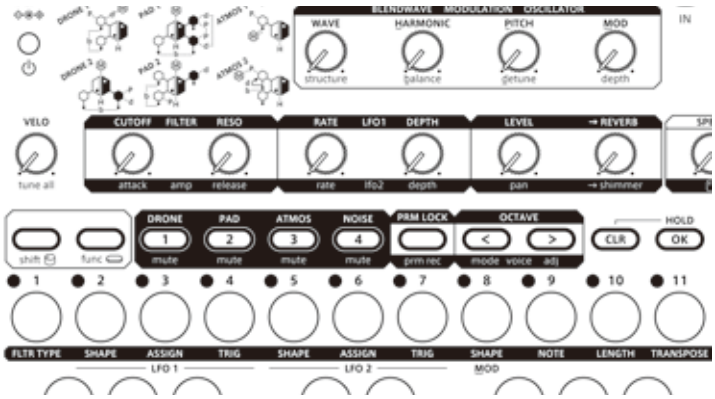
Layer1 : structure=DRONE1、Voice mode=UNI、sounding notes=1(OSC consumptions is 8)
Layer2 : structure=ATMOS1、Voice mode=UNI、sounding notes=1(OSC consumptions is 12)
Layer3 : structure=ATMOS1、Voice mode=UNI、sounding notes=1(OSC consumptions is 12)
NOISE : Voice mode=MONO、sounding notes=1(OSC consumptions is 1)

Total OSC consumptions is 33, therefore max polyphony is 4 voices.

Layer selection and basic adjustments

Selecting Layers

1 Press 1 - 4 for the Layer you want to select.
The selected Layer button will light red and its Layer number will be shown on the display. (An unselected Layer buttons will light green.)
The parameters shown in the gray areas on the top of the unit can be controlled separately for each Layer.



Muting Layers

1 Press func + 1 - 4 for the Layer you want to mute.
The muted Layer buttons will light orange.
Press func + the button that is lit orange to unmute the Layer.

・By default, MT.MD (mute mode) is set to SEQ, allowing you to play even if the Layer is muted.
If you want to completely mute the sound of a Layer, select **SND** in **MT.MD** in func + SYSTEM.
Regarding mute mode (→ P.104)

Layer selection and basic adjustments

Adjusting Layer levels

1 Turn LEVEL.
The level of the selected Layer can be set in a range of 0 – 127 (−∞ – +6 dB).

Adjusting Layer panning

1 Turn pan.
The panning of the selected Layer can be set in a range of L63 – CNTR – R63.

Changing the sound of Layers

Turn WAVE and shift + structure to select the sound for each Layer.
The sound sources that can be selected differ depending on the Layer.

Layer	TYPE	WAVE	structure
1, 2, 3	BLENDWAVE MODULATION SYNTH	32 Waves	DRONE1,2、PAD1,2、ATMOS1,2
4	NOISE	White noise + 8 noise samples or Line in signal	LOOP, 1SHOT

・Operations can also be performed using VALUE.

Envelope generator

Adjusting the attack and release

Use the envelope generator to adjust the attack that affects the beginning of the sound and the release that affects how the sound fades out.

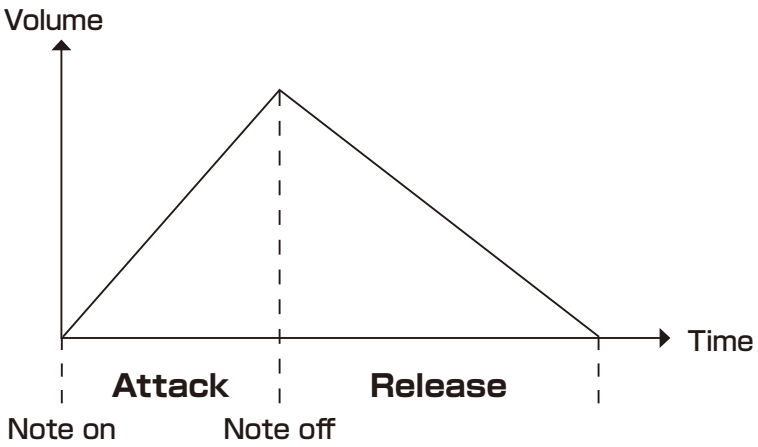
1 Turn shift + attack or release.

shift + attack

attack
0 – 127
This changes the attack time in a range of 0 – 10000 ms.

shift + release

Release
0 – 127
This changes the release time in a range of 0 – 10000 ms. It can be set to 20000ms when using the DRONE structure.



Filters

Changing the filter type

1 Press func + 1 FLTR TYPE to select the type.

func + 1 FLTR TYPE

Filter type	
OFF	No filter used
LPF	Filter that cuts high frequencies
HPF	Filter that cuts low frequencies
BPF	Filter that only allows through frequencies in a specified band

Adjusting the filter cutoff frequency

1 Turn CUTOFF.

CUTOFF

Cutoff
0 – 127
The cutoff frequency can be changed in a range of 70 – 14400 Hz.

Adjusting the filter resonance

1 Turn RESO.

RESO

Resonance
0 – 127
The resonance can be changed in a range of 0.3 – 10.
For BPF, the bandwidth can be changed in a 0.5 – 3.3 octave range.

LFO

Ambient Ø has two modulators that can apply LFOs to various parameters.

Modulation settings

LFO waveform	Modulation destination parameter	LFO Triggering
func + 2 SHAPE - LFO1 func + 5 SHAPE - LFO2	func + 3 ASSIGN - LFO1 func + 6 ASSIGN - LFO2	func + 4 TRIG - LFO1 func + 7 TRIG - LFO2
LFO Shape	**Assign**	**Trigger**
See the list on the next page	See the list on the next page	OFF, 1 - 8, INF
Use VALUE to select the LFO waveform to use for modulation.	Use VALUE to select the parameter to be modulated.	Use VALUE to select the setting to trigger to modulation. When set to OFF that LFO is not retrifggered, INF that LFO is retriggered each note on and 1 - 8 that is count of LFO cycles after retriggering.

Adjusting modulation speed and depth

Modulator 1

Use RATE - LFO1 to adjust the speed.
Use DEPTH - LFO1 to adjust the depth.

Modulator 2

Use shift + RATE - LFO2 to adjust the speed.
Use shift + DEPTH - LFO2 to adjust the depth.

Modulation

Modulation destination parameter

Assign (Mod 1/2)	
OFF	Off
TUNE	TUNE
HARM	HARMONIC
BAL	balance
PTCH	PITCH
DT.FB	detune/feedback
L1.RT	LFO1 RATE (from LFO2 only)
L1.DP	LFO1 DEPTH (from LFO2 only)
MD.RT	MOD RATE
MD.DP	mod depth
FL.CO	FILTER CUTOFF
FL.RS	FILTER reso
PAN	pan
LVL	LEVEL
→SM	→ shimmer
→RV	→ REVERB
O.LVL	Oscillator level (from LFO1 only)

LFO waveform

Wave (Mod 1/2)	
SINE	Sine wave
SQAR	Square wave
TRI	Triangle wave
SAW	Sawtooth wave
R.SAW	Reverse sawtooth wave
RND	Random wave
S.RND	Smooth random wave
LOG	Logarithmic wave
R.LOG	Reverse logarithmic wave
PL.10	10% pulse wave
PL.25	25% pulse wave
PL.75	75% pulse wave
PL.90	90% pulse wave
STP.2	Wave with 2 steps
STP.3	Wave with 3 steps
STP.4	Wave with 4 steps
STP.5	Wave with 5 steps
STP.6	Wave with 6 steps
STP.7	Wave with 7 steps
RMP+	Wave with ascending ramp
RMP-	Wave with descending ramp
L.SIN	Lower speed sine wave
L.TRI	Lower speed triangle wave
L.S.RN	Lower speed smooth random wave

- The balance cannot be selected for noise layers.
- If WAVE is set to LN.IN in the noise layer, assigning TUNE, HARMONIC, balance, detune, MOD RATE, mod depth, and oscillator level has no effect.

Reverb

Ambient Ø includes a sublime high-quality shimmer reverb that adds a layer of reverberations an octave above the original pitch.
REVERB allows you to adjust the send amount to the effect for each Layer.

Adjusting the reverb

1 Press func + 14 RVB TYPE and select other than OFF.
You can also select the reverb type with VALUE.

2 Turn REVERB and shift + reverb to adjust the parameters.

3 Turn shift + → shimmer to adjust amount of the shimmer.

Reverb type		Amount of signal sending to reverb.	Amount of signal sending to shimmer.	Reverb mix level
func + 14 RVB TYPE		REVERB	shift + shimmer	shift + reverb
OFF	OFF	----	----	----
SML.L	Small.L	send	send	Mix
SML.M	Small.M	send	send	Mix
SML.H	Small.H	send	send	Mix
LRG.L	Large.L	send	send	Mix
LRG.M	Large.M	send	send	Mix
LRG.H	Large.H	send	send	Mix
INF.L	Infinity.L	send	send	Mix
INF.M	Infinity.M	send	send	Mix
INF.H	Infinity.H	send	send	Mix

- Use func + LINE IN to adjust the reverb send level for LINE IN input.

Reverb

Deactivating the reverb reset when changing Pattern Palettes

If you want to play Pattern Palette chains without the reverb resetting, set the same reverb type on the Pattern Palettes you want to chain and set the reverb reset to OFF.

1 Press func + SYSTEM multiple times to select R.RST.

2 Select OFF.

Reverb Reset	
OFF	Do not reset the reverb when changing the Pattern Palettes with the same reverb type.
ON	Reset reverb when the Pattern Palette is changed.

・You can change the routing of the master effects. (→ P.80)

Adjusting the Master FX

Set the master effect as follows.

1 Press func + 15 FX TYPE and select the effect.
You can also select the effect type with VALUE

2 Turn FX - SPEED and FX - AMOUNT to adjust the parameters.

func + 15 FX TYPE		FX - SPEED	FX - AMOUNT
DLY	Tape Delay	Time	Amount
R.DLY	Reverse Delay	Time	Amount
DRV	Overdrive	Gain	Mix
CRSH	Bit/Rate Crush	Bit/Sample rate	Mix
TILT	Tilt EQ	Frequency	Balance
CHRS	Stereo Chorus	Rate	Depth and Mix

BLENDWAVE MODULATION SYNTHESIS

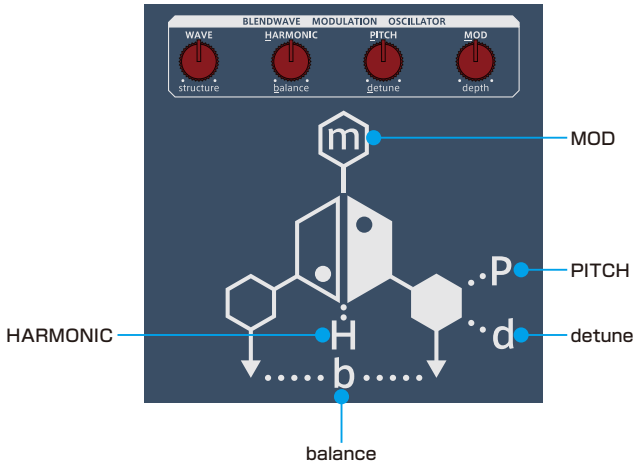
BLENDWAVE MODULATION SYNTHESIS is the original synth-engine constructed using 6 powerful STRUCTUREs and 32 WAVEs installed in the Ambient Ø.

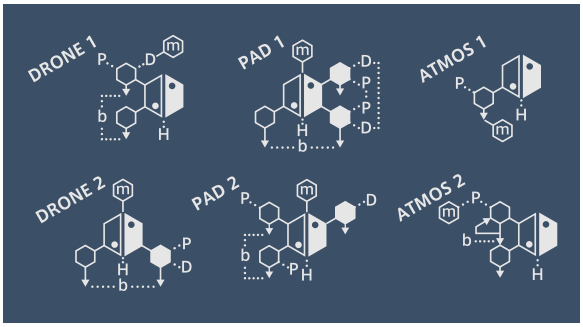
The 32 WAVEs contain 128 HARMONIC tables. They can be morphing basic waveforms to complexed harmonic waveforms or generating whitenoise when using LFOs.
Each WAVE and structure combination produces unique sounds.

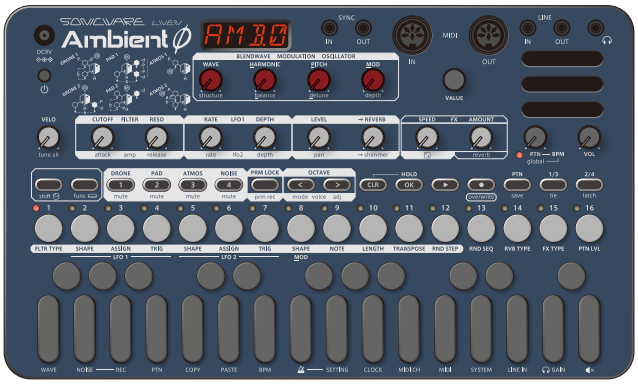
The 6 STRUCTUREs, (DRONE1 and 2, PAD1 and 2, and ATMOS1 and 2) are a core parameter to change MOD destinations, amount of OSC blending and OSC count per layer in the Ambient Ø.
This lets you create more flexible synthesis using fewer knobs.

Each of the structures have a unique modulation circuit like a HARMONIC MOD, DETUNE MOD or FM MOD.
You can change sound colors in your pattern palette instantly using a single knob.

The combination of 6 characteristic structures and 32 WAVEs produce beautiful and complex harmonics which can quickly make sounds well suited to Ambient music like a strong low frequency drones, levitate pad and crystal clear pizzicato sounds.







Adjusting a wave

Selecting a wave

1 Turn WAVE knob.

WAVE

Wave
1 - 32
Selecting a WAVE.

Adjusting Harmonic

1 Turn HARMONIC knob.

HARMONIC

HARMONIC
0 - 127
HARMONIC position in the wave

Adjusting a wave

Built-in WAVE list

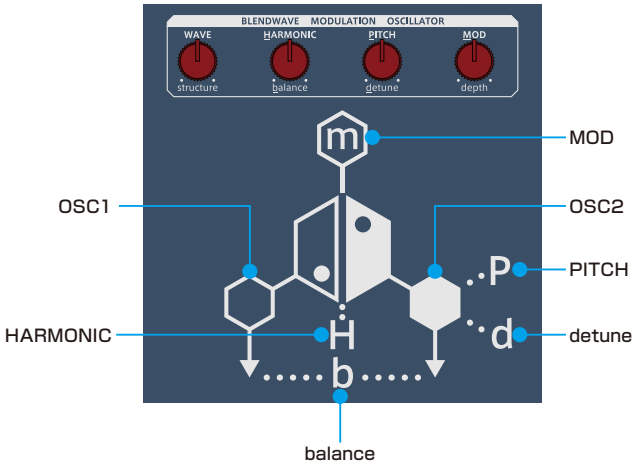
	WAVE	HARMONIC
1	SAW.S	This waveform is wave-shaper sawtooth wave.
2	SQR.D	This waveform is PWM square wave.
3	SIN.S	This waveform is wave-shaper sine wave.
4	SIN.D	This waveform is modulating duty cycles of sine wave.
5	SQR.S	This waveform is wave-shaper square wave.
6	TRI.S	This waveform is wave-shaper triangle wave.
7	SQ.SN	This waveform is wave-shaper square wave by sin wave.
8	EV.OD	This waveform is morphing even harmonics to odd harmonics.
9	OCTV	This waveform is osc syncing multiple basic waveform.
10	SIN.M	This waveform is morphing overtone of sine wave.
11	SIN.F	This waveform is wave-folding sine wave.
12	TRI.F	This waveform is wave-folding triangle wave.
13	SIN.C	This waveform is bit-crushing sine wave.
14	FM.CR	This waveform is bit-crushing sine wave with FM modulating.
15	FM.OD	This waveform is morphing FM modulated wave to over drive sound.
16	SYNC	This waveform is syncing multiple sawtooth wave.

Adjusting a wave

	WAVE	HARMONIC
17	HRM.1	This waveform is summing additive and osc synced overtone to sawtooth wave.
18	HRM.2	This waveform is summing additive and FM modulation overtone to HRM.1 wave.
19	CL.FM	This waveform is FM modulating to digital clipped sine wave.
20	FRML	This waveform is wave-folding and clipping sine wave.
21	FRM.1	This waveform adds FM modulating and modulating formant frequency to sine wave.
22	FRM.2	This waveform adds FM modulation while formant frequency modulating the human voice
23	27.PS	This waveform is changing 27 position of overtone.
24	FM.WF	This waveform is wave-folding and FM modulating triangle wave.
25	FM.PF	This waveform simulating 2 op FM synthesis.
26	AD.MP	This waveform is overtone morphing and additive synthesis and wavefolding.
27	BCHL	This waveform is simulating west coat like complex osc.
28	SQR.R	This waveform is AM modulating square wave by random noise.
29	RNDM	This waveform is changing 127 individual waveforms.
30	S.RND	This waveform is morphing individual waveforms.
31	TRI.N	This waveform is triangle wave including spectrum of pink and white noise.
32	WH.NS	This waveform is including spectrum of white noise. It can generate white noise by setting LFO ASSIGN:HARMONIC and HARMONIC knob:63,LFO depth knob:63.

Adjusting a structure

MOD assign and number of OSC change when changing structures. Structures that have mod assigned to HARMONIC have multiple OSC outputs represented by a "Yin Yang".
The Yang(black) oscillator HARMONIC position is modulated in a positive direction, and Yin(white) oscillator HARMONIC position is modulated in negative direction.



Selecting a structure

1 Turn shift + structure.

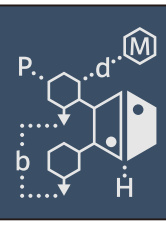
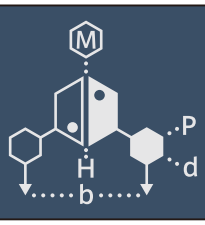
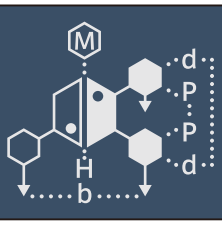
shift + structure

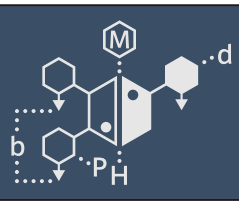
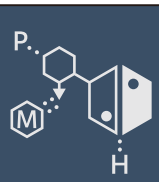
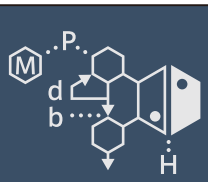
VALUE

Structure Type	
DRN1	DRONE1
DRN2	DRONE2
PAD1	PAD1
PAD2	PAD2
ATM1	ATMOS1
ATM2	ATMOS2

Adjusting a structure

Changing a structure

		
DRONE 1	**DRONE2**	**PAD1**
MOD ➡ detune	MOD ➡ HARMONIC	MOD ➡ HARMONIC
Yang OSC : 2 Yin OSC : none	Yang OSC : 1 Yin OSC : 1	Yang OSC : 1 Yin OSC : 2
This structure is for Drone sound and has two Yang OSCs. Adjust pitch and detune of second Yang OSC to add fluctuation. Balance is adjusted between osc1 and osc2. MOD is assigned to detune knob. The default octave range is set to -2.	This structure is for Drone sounds and has two OSCs, one Yin and one Yang. Adjust pitch and detune of second Yin OSC to add fluctuation. Balance is adjusted between osc1 and osc2. MOD is assigned to HARMONIC knob. The default octave range is set to -2.	This structure is for Pad sounds and has three OSCs, two Yin and one Yang. Adjust pitch and detune of two Yin OSCs to add fluctuation. Balance is adjust between Yin and Yang. MOD is assigned to HARMONIC knob.

		
PAD2	**ATMOS1**	**ATMOS2**
MOD ➡ HARMONIC	MOD ➡ OSC 出力	MOD ➡ PITCH
Yang OSC:2 Yin OSC:1	Yang OSC:1 Yin OSC:none	Yang OSC:2 Yin OSC:none
This structure is for Pad sounds and has three OSCs, one Yin and two Yang. Adjust pitch of third Yang osc and detune of second Yin osc to add fluctuation. Balance is adjust between osc1,2 and osc3. MOD is assigned to HARMONIC knob.	This structure is for Atmos sounds and has one Yang OSC. Adjust pitch and detune of Yang OSC to control sound. Balance is deactivated. MOD is assigned to osc out as ring modulation.	This structure is for Atmos sounds and has two Yang OSCs in an FM pair as modulator and carrier. Adjust Balance knob to control FM modulation amount. Detune knob controls feedback amount. MOD is assigned to modulator osc ratio.

Adjusting a structure

OSC Pitch /Operator ratio (ATMOS2)	MOD rate
PITCH	MOD
Pitch	**Mod**
-240 - 0 - 240 0.50 - 15.99(ATMOS2)	0 - 127
Adjusts OSC pitch. When using ATMOS2, this adjusts pitch ratio of modulator.	Adjusts speed of MOD LFO.

OSC balance/ FM modulation amount (ATMOS2)	OSC detune/ Feedback amount (ATMOS2)	MOD depth
shift + balance	shift + detune	shift + depth
Balance	**Detune**	**Depth**
63 - CNTR - 63 0 - 127(ATMOS2)	-63 - 0 - 63 0 - 127(ATMOS2)	0 - 127
Adjusts balance between OSCs. When using ATMOS2, it adjusts amount of FM modulation.	Adjusts detune amount. When using ATMOS2, this adjusts the amount of feedback.	Adjusts MOD depth.

・MOD LFO is retriggered at each note on.

Adjusting a structure

Changing MOD shape

1 Press func + 8 MOD SHAPE.

VALUE

Wave - Mod	
SINE	Sine wave
SQAR	Square wave
TRI	Triangle wave
SAW	Sawtooth wave
R.SAW	Reverse sawtooth wave
RND	Random wave
S.RND	Smooth random wave
LOG	Logarithmic wave
R.LOG	Reverse logarithmic wave
PL.10	10% pulse wave
PL.25	25% pulse wave
PL.75	75% pulse wave
PL.90	90% pulse wave
STP.2	Wave with 2 steps
STP.3	Wave with 3 steps
STP.4	Wave with 4 steps
STP.5	Wave with 5 steps
STP.6	Wave with 6 steps
STP.7	Wave with 7 steps
RMP+	Wave with ascending ramp
RMP-	Wave with descending ramp
L.SIN	Lower speed sine wave
L.TRI	Lower speed triangle wave
L.S.RN	Lower speed smooth random wave

Renaming WAVE name

Renaming a WAVE

1 Press func + WAVE to select WT.RN.

2 Turn VALUE to select WAVE to rename,
and press OK .

3 Press < > to move
the cursor left and right,
and turn VALUE to select characters.

4 Press OK .
This completes the setting.
DONE will appear on the display.

- Turn HARMONIC knob to audition how the selected WAVE sounds.

Adjusting NOISE layer

8 selected ambient sounds are available on the Noise layer and it can be mixed with white noise, modulated and have their pitch tweaked to add a unique space to your sound.
The MOD is assigned to PITCH knob.

Up to 8 sec stereo sampling (16bit-32kHz) via the line input is lets you change them to your own textures.

These parameters PITCH, detune, MOD, depth behave as same as 1 - 3 layers.(→ P.46)

Changing NOISE sample

1 Turn WAVE knob.

WAVE

Noise
1 - 8, LN.IN
Up to 8 sec stereo sampling (16bit-32kHz) via the line input is lets you change them to your own textures. The 8 samples slots can be overwritten. see Sampling (→ P.51) By selecting LN.IN, you can use the line input as the sound source. When LN.IN is selected, the keyboard, balance, and some modulation parameters are disabled.

Noise	
1	RAIN
2	FIRE
3	RMBL
4	FRST
5	SEA
6	WIND
7	WODS
8	FLUT

Adjusting NOISE layer

Adjusting noise balance

1 Turn HARMONIC knob

Harmonic
63 - CNTR - 63
Sets balance between white noise and noise sample.

Changing sample playback mode

1 Turn shift + structure knob

Playback mode	
SHOT	Plays noise sample once while the key is pressed.
LOOP	Plays noise sample in a loop while the key is pressed.

Sampling

Overview

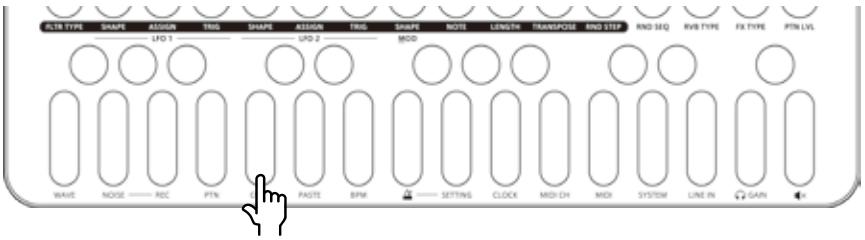
Ambient Ø can save recorded samples in 8 slots.

Activating NOISE REC mode

1 Press func + NOISE REC to select NS.RC.

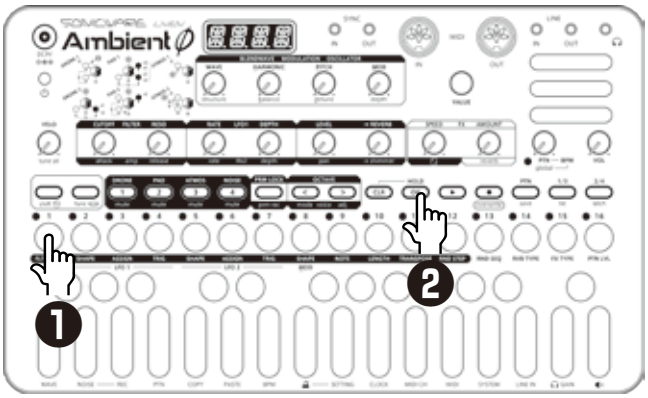
Sample slot selection

1 Press 1 - 8 to select samples.
Sounds can be checked by playing the keys on the keyboard.



Play this key to hear the sample with its original pitch and length.

2 Press OK to decide the slot to overwrite.

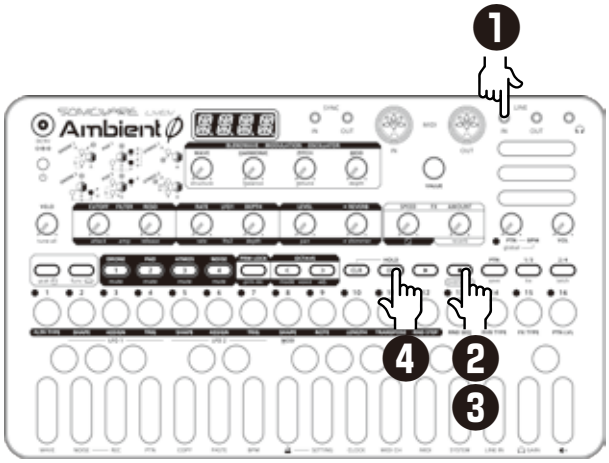


Sampling – Recording

1 Connect the output of the equipment you want to record to the Ambient Ø LINE IN.

・Mics and guitars cannot be connected directly. Use a mixer or other equipment to convert their outputs to line signals.

2 Press ● .
● will blink red.
Use the step LEDs to check the recording level.
(Step 12 indicates -6dB, Step 16 indicates 0dB)



3 Press ● again.
● will light red and recording will automatically start when a signal is input.

The step LEDs show the recording progress.
When step 16 lights, recording will stop automatically.

4 Press OK to save the sample.
Before saving, the sample can be checked by playing the keyboard.

・Press ● to stop immediately during the recording.

・Press CLR to cancel the operation.

Sampling settings

The following settings are used for sampling.

Setting auto recording

1 Press func + NOISE REC to select A.R.LV.

2 Turn VALUE.
This can be set to OFF or the input signal level that starts recording automatically (— 60 - — 20 dB).
If auto recording is off, press ● when in recording standby to start recording.

- Use func + LINE IN to adjust the LINE IN input gain.
- After recording completes, the volume of the sample will be normalized automatically.

Setting crossfading time

1 Press func + NOISE REC key to select X-FD.

2 Turn VALUE.
It can be set to OFF or 1 - 4 sec.
When set to OFF, samples playback looping without crossfading.

- It cannot be to check how applied crossfading before recording or edit sample crossfading setting after recording.
  Please recording again, if you would adjust crossfading setting.

Sampling settings

Setting crossfading curve

1 NPress func + NOISE REC key to select X.CRV.

2 Turn VALUE.

VALUE

X fade curve	
EXP	Crossfading expornentialy following to setting in X-Fade time.
LINE	Crossfading Linearly following to setting in X-Fade time.

Exporting/importing samples

Recorded samples can be exported to or imported from a PC, Mac or similar device by MIDI. See page 97 for details about connection.

Exporting a single sample

1. Press func + NOISE multiple times to select NS.EX.

2. Turn VALUE to select a slot to export.
3. Press OK.

4. Set your PC to receive MIDI data.
5. Press OK.
   This starts sample data transmission.
   The step LEDs will show the progress. When finished, DONE will appear on the display.

Importing a single sample

1. Press func + NOISE multiple times to select NS.IM.

2. Turn VALUE to select a slot to import.
3. Press OK.
4. Start transmitting data from the transmitting device.

5. After receiving data has completed, press OK to save it.

Renaming samples

1 Press func + NOISE to select NS.RN.

2 Turn VALUE to select a slot to rename.

3 Press OK.

4 Use < and > to move
the cursor left and right,
and turn VALUE to select characters.

5 Press OK.
This completes the setting.
DONE will appear on the display.

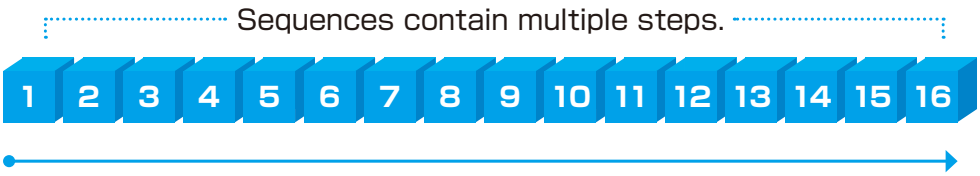
・Press CLR during a procedure to cancel it.

Step sequencer overview

Overview

The Ambient Ø step sequencer can play **multiple steps** in order (a sequence) with performance and parameter data.

Steps contain **note data** and **parameter data**.



Sequences play in order from the first step.

Ambient Ø step sequencer features

The sequencer in the Ambient Ø has the following features.

Three input methods

Step recording

Record notes to each step with the sequencer stopped

Real-time recording

Record notes to steps by playing the keyboard

Direct recording

Record notes to steps directly during sequencer playback

Flexible sequencing

Sequences with up to 64 steps

The number of steps can be set from 1 – 64 as desired for each Layer

Support for various note lengths

The length of each step can be set from 1/32nd note to 8 bars.

Creating sequences – Preparation

Selecting Layers and setting sounds

1 Press one 1 - 4 button to select the Layer for sequence creation.

・If the maximum polyphony is exceeded, notes will be turned off starting with notes on the lowest priority Layer. (Priority is Layer 1 > Layer 4 is the order. However, sounds that are being released will be turned off first in Layer priority order.)

Creating sequences - Settings

Setting the note length of one step

1 Press func + 9 NOTE.

2 Use VALUE to select the note length.

VALUE

Note	
8/1	Octuple whole note (Maxima)
4/1	Quadruple whole note (Longa)
3/1	Triple whole note
2/1	Double whole note (Breve)
1/1	Whole note
1/2	Half note
1/.4	Dotted quarter note
1/4	Quarter note
1/.8	Dotted 8th note
1/2T	Half note triplet
1/8	8th note
1/.16	Dotted 16th note
1/4T	Quarter note triplet
1/16	16th note
1/32	32nd note

Changing the sequence length

1 Press func + 10 LENGTH.

2 Use VALUE to set the sequence length.

VALUE

Length
1 - 64 (steps)

Creating sequences – Step recording

Using step recording, sequences can be created in great detail while playback is stopped.

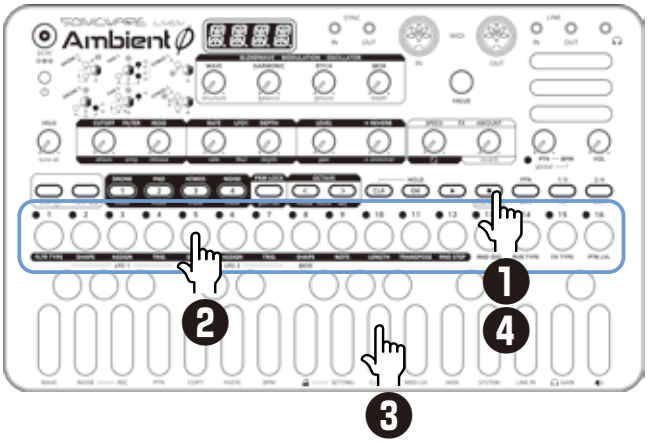
Basic operations

1. When stopped, press ● (lights red).

2. Press ❶ - ⓰ at the step where you want to input a note.
   The LED for the current step will blink. The LEDs for steps that already have notes will light.

3. Play a note on the keyboard to input it at the step.
   Press the same note again on the keyboard to remove it from the step.
   Repeat steps 2 – 3 to create the sequence.

4. Press ● to end step recording.



Selecting steps 17 and higher

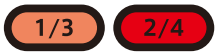
While step recording, if the sequence length is longer than 16 steps press 1/3 and 2/4 to select steps 17 and higher.

To select steps 1–16, press the 1/3 button.

To select steps 17–32, press the 2/4 button.

To select steps 33–48, press the 1/3 button twice.

To select steps 49–64, press the 2/4 button twice.



- During step recording, pressing a step will cause the stored note to sound continuously. This is by design.
- VALUE can also be used to move between steps.
- Page buttons are enabled or disabled according to the length of the sequence.

Clearing steps

1 Press CLR + 1 - 16.
During step recording, only the note information for that step will be cleared.

Copying steps

1 During step recording, press 1 - 16 to select the step to copy.

2 Press func + COPY.

3 Press 1 - 16 to select the paste destination step.

4 Press func + PASTE.
The note and parameter lock data from the copy source step will be pasted to the destination step.

・Data for ties cannot be copied.

Sequence extending copy function (duplicate)

You can duplicate a sequence you've created to double it's length.

1 Select the layer of the sequence you want to make an extended copy by pressing 1 - 4 .

2 Press func + 10 LENGTH .

3 While pressing shift , turn VALUE to duplicate it 2x (or 4x).

Automatically advancing steps during step recording (Auto Step mode)

In step recording mode, the step can be advanced automatically each time a key of the keyboard is pressed.

1 Press func + SYSTEM to select A.STEP.

2 Turn this mode on/off.

Creating sequences – Step recording

Tied-notes (long sounds) can be input with the Ambient Ø.

Enabling tied-note (long sound) input

1 Press func + tie .
The button will light red, and tied-note input will be enabled.

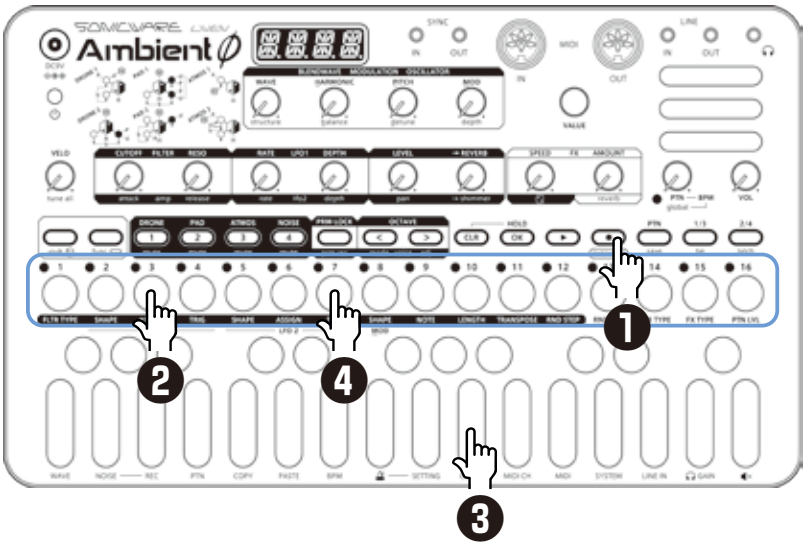
Inputting tied-notes (long sounds)

1 When stopped, press ● (lights red) to start step recording.

2 Press 1 - 16 at the step where you want to start note input.

3 Press and hold a key on the keyboard.

4 Press 1 - 16 at the step where you want to stop the note.
This inputs a tied-note from the starting step to the stopping step.



In the example above, a note (A) is input that starts on step 3 and ends on step 7.

- By pressing 1/3 , 2/4 during procedure 4, tied-notes that span pages can be input.

- It is not possible to enter tied notes that span from the end of a sequence to the beginning.

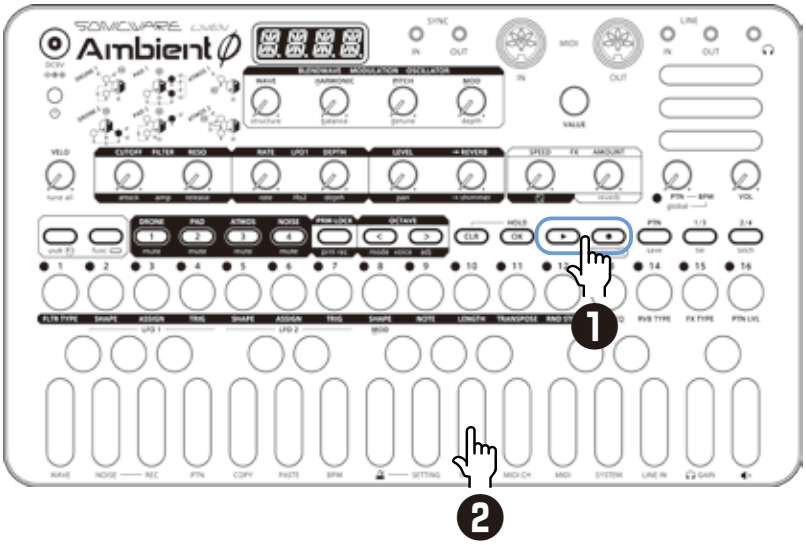
Creating sequences – Real-time recording

Sequences can be created in real time while playing the keyboard.

Basic operations

1 After pressing ● , press ▶ .

2 The Pattern Palette will start playing, so play the keyboard when you want to input notes.



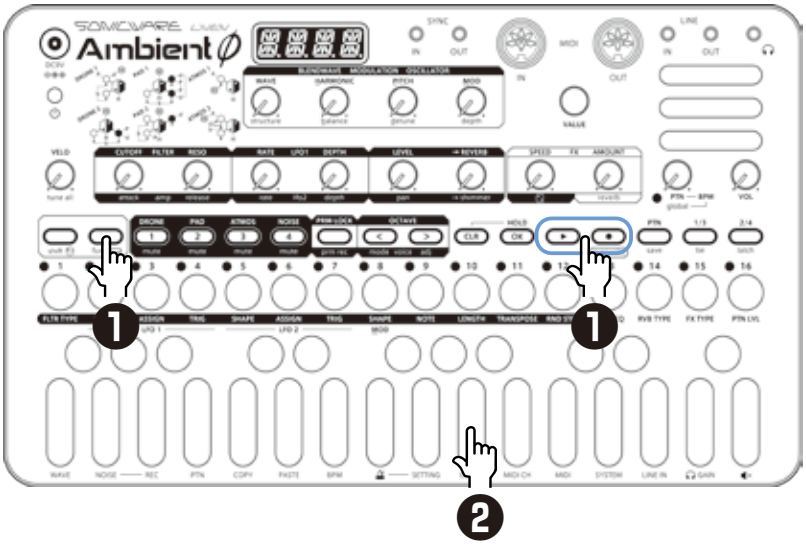
・By pressing func + tie to enable the input of tied-notes, long notes that span steps can be input.

Overwriting to steps real-time (overwrite mode)

By using overwrite mode,recording overwrites new playing without sounding recorded notes.
It is useful for build up your performing with looping.

1 Press func + ● (lights orange) and press ▶.

2 The Pattern Palette will start playing, so play the keyboard when you want to input notes.



・After overwriting new notes, sequence data before new recording will be lost.
If you want it to back again, please save Pattern palette (→ P.81) and be it can be reloaded before overwrite recording.

・While overwrite recording running, press and hold CLR to clear notes on going steps.

Creating sequences – Real-time recording

Turning the metronome ON/OFF

1 Press func + METRO to turn ON/OFF.

Adjusting the metronome volume

1 Press func + SETTING - METRO to select VOL.

2 Turn VALUE to adjust the metronome volume.

VALUE

Metronome
0 - 15

Setting a pre-count

1 Press func + SETTING - METRO to select PR.CT.

2 Turn VALUE to change the pre-count.

VALUE

Precount
OFF, 1 - 8

- When a pre-count is set, recording and playback will start after the pre-count.
- By setting VOL to a value other than OFF and turning off the metronome, only the pre-count can be heard during real-time recording.

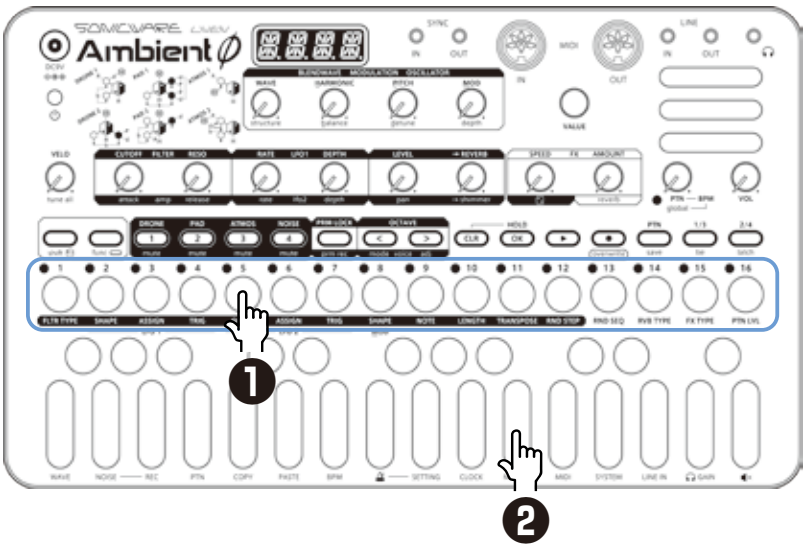
Creating sequences – Direct recording

With direct recording, notes can be input on steps directly when both stopped and during playback.
This is particularly suitable for building up sequences while performing by directly inputting notes during playback.

Basic operations

1 Press and hold ❶ - ⑯ for the position where you want to input a note.

2 Play a note on the keyboard to input it at the step.
Notes can also be input if procedures 1 and 2 are done in reverse order.



Creating sequences – Direct recording

- By pressing 1/3 and 2/4 while step recording, pages with steps 17 and higher can be selected if the sequence is longer than 16 steps.

  To select steps 1–16, press the 1/3 button.

  To select steps 17–32, press the 2/4 button.

  To select steps 33–48, press the 1/3 button twice.

  To select steps 49–64, press the 2/4 button twice.

- During playback, pressing 1/3 or 2/4 will lock the page shown. Press OK to unlock the page.

Creating sequences – settings

Transpose

1 Press func + 11 TRANSPOSE.

2 Turn VALUE to transpose KEY.

VALUE

Transpose	
When set to EQUA, PR.MJ, PR.MN, PY.SH or PY.FL (→ P.77)	-12 - 12 (in semitone)
When set to SLFG, CHKR, or PLNT (→ P.78)	-C, -Db, -D, -Eb, -E, -F, -Gb, -G, -Ab, -A, -Bb, -B ～ C ～ +Db, +D, +Eb, +E, +F, +Gb, +G, +Ab, +A, +Bb, +B, +C

・If you use the Transpose function while the Pattern Palette is playing, changes will not take affect unitl the beginning of the Pattern Palette is reached.

Parameter locking

The Ambient Ø has a **parameter locking** function that can record knob operations to steps.
This allows sounds to be changed over time and is useful for creating Pattern Palettes with great expressiveness.
Parameter locking data can be input in the following three ways.

Direct input

Turn knobs while pressing ❶ - ⑯ in this fundamental method of direct input.

Real-time input

Record knob movements during playback in real-time.

Sound locking input

When recording notes to steps by pressing keys on the keyboard, the state of the sound currently playing is simultaneously recorded to the step as parameter lock data in this input method.

Basic parameter locking operations

Turning parameter locking on

1 Press PRM LOCK.
Pressing PRM LOCK cycles through the following states.

PRM LOCK	Parameter locking off	Parameters do not change automatically
PRM LOCK	Parameter locking on	Parameters change automatically based on parameter lock data
PRM LOCK	Sound locking on	Sound lock recording enabled (→ P.74)

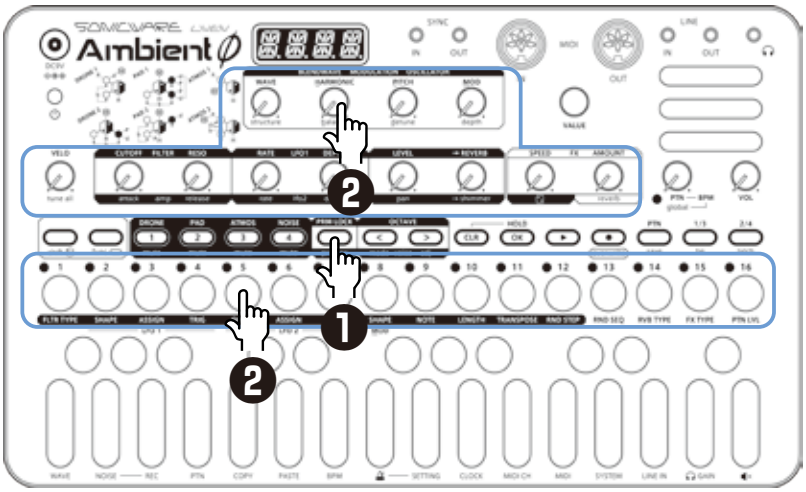
Clearing parameter lock data

1 Press CLR + PRM LOCK.
This clears parameter lock data.

Parameter locking – Direct input

Turn parameter locking on

1 Press PRM LOCK (lights green).



Recording knob operations

2 While pressing 1 - 16 , turn knobs.

- By pressing 1/3 and 2/4 before directly inputting parameter lock data, pages with steps 17 and higher can be selected if the sequence is longer than 16 steps.

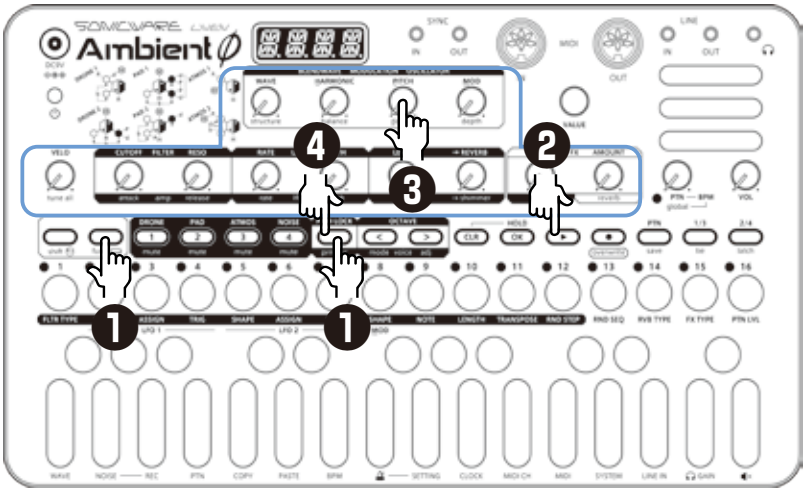
- By turning the knobs while pressing multiple step buttons, you can enter multiple parameter locks at once.

- Parameter locking cannot be used on FX SPEED, FX AMOUNT, tune all, reverb, BPM, VOL.

Parameter locking – Real-time input

Inputting in real time (parameter recording)

1. Press func + prm rec (lights red).
2. Press ▶ to play the Pattern Palette.
3. Turn knobs and record the changes.
4. Press PRM LOCK, making it light green, to end real-time input.



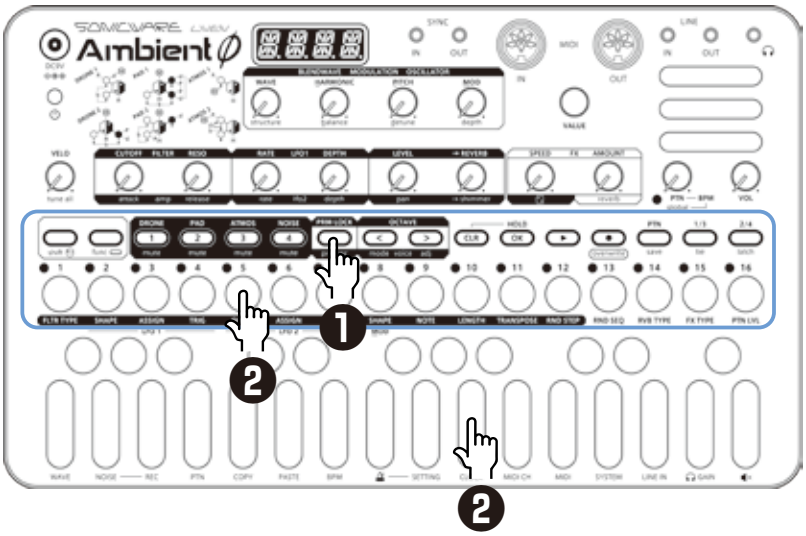
Parameter locking – Sound locking input

Turn sound locking on

1 Press PRM LOCK twice (lights orange).

Recording note input and parameter lock data at the same time

2 While pressing ❶ - ⑯ , play the keyboard.



- In this example, direct recording is used for note input. The sound locking function can also be used with step recording and real-time recording in the same manner.

- The sound locking function will record all of the the current WAVE, HARMONIC, balance, PITCH, detune, MOD, and depth parameter values onto the step(s) in which you input notes.

Sequence effects

The Ambient Ø has sequence effect functions, **Random** that can randomize phrases.

Random

1 Press func + 13 RND SEQ.
When this is on, a randomized sequence will be played back
Press func + 13 RND SEQ again to turn the random function off.

Random settings

The smallest unit used for randomization during random playback can be set (for example, 1 step or 4 steps).

1 Press func + 12 RND STEP, and use VALUE to adjust.

VALUE

Random step unit
OFF, 1, 2, 4, 8, 16 (steps)
If set to OFF, randomization will not occur even if the random playback function is on.

The random on/off setting is saved with the Pattern Palette, but random unit settings can be saved per Layer.

DICE

1 Turn func + DICE.
When voice mode setting to ARP, the probability of a note sounding by arpeggiater has also changed.
The probability of a note sounding can be set from 25 – 100% .

・The probability of notes sounding can be set independently for each step using the parameter locking function.

Deleting sequences

Clearing steps

1 Press CLR + 1 - 16.
The note and parameter lock data from that step will be cleared.

- While pressing CLR, steps that have parameter lock data blink red.
- When recording notes (● button lit red), only note data will be cleared.
- When parameter recording (prm rec lit red), only parameter lock data will be cleared.
- Normally, when ● and prm rec buttons are lit red, both note and parameter data will be cleared.

Clearing all note data in a sequence

1 Press CLR + 1 - 4 for the Layer with the sequence to be cleared.

2 Use VALUE to select NOTE, and press OK.
This clears all notes on all steps of the sequence.

Restoring only Layer sounds to the last saved state

1 Press CLR + 1 - 4 for the Layer with the sound to be restored.

2 Turn VALUE to select SND, and press OK.

Setting a different temperament to each patterns

You can set a temperament other than the 12 equal temperament to each patterns.

Changing the temperament of a pattern

1 Press func + PTN and select TMPR.

2 Turn VALUE to select the temperament.

VALUE

Temperament	
EQUA	Equal
PR.MJ	Pure Intonation - Major
PR.MN	Pure Intonation - Minor
PY.SH	Pythagorean Tuning #
PY.FL	Pythagorean Tuning ♭
SLFG	Solfeggio Frequencies
CHKR	Chakra Frequencies
PLNT	Planetary Frequencies

- When solfeggio, chakra, or planet is selected, the octave setting will be set to 0. The master tune setting will also be ignored.

Setting a different temperament to each patterns

Changing the key/concert pitch of the temperament

You can set the key/concert pitch for the temperaments other than EQUA.

1 Hold down any of the layer buttons and turn VALUE to select the key or concert pitch.

VALUE

Tonic/Concert Pitch	
PR.MJ	C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B
PR.MN	C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B
PY.SH	C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B
PY.FL	C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B
SLFG	174, 285, 396, 417, 528, 639, 741, 852, 963
CHKR	1st, 2nd, 3rd, 4th, 5th, 6th, 7th
PLNT	1st, 2nd, 3rd, 4th, 5th, 6th, 7th

- When solfeggio, chakra, or planet is selected as the temperament, you can set a different concert pitch to each layers.

- When TMPR is set to PR.MJ - PY.FL, the pitch of the NOISE layer will go up or down in semitones when you play the keys.

Setting a different temperament to each patterns

The concert pitch of chakra and planetary frequencies

Frequency on C4		
	Chakra	Planet
1st	256Hz	194.18Hz
2nd	288Hz	210.42Hz
3rd	320Hz	234.16Hz
4th	341Hz	270Hz
5th	384Hz	282.4Hz
6th	426Hz	315.4Hz
7th	480Hz	352Hz

・When you play keys other than C4, the notes are produced in 12-tone equal temperament based on their respective frequencies.

For information on Solfeggio frequencies, please refer to the column by Sound Healing Vibes - Mario Escamilla at the end of this manual. (→ P.111)

Changing FX routing

You can switch the position of the master effect before or after the pattern level.

1 Press func + PTN to select FX.RT.

2 Turn VALUE to select the FX routing.

VALUE

FX Routing		
POST	Connect the master effect after the pattern level	When the effect is sounding, the sound will remain even if the pattern level is set to 0
PRE	Connect the master effect before the pattern level	When the pattern level is set to 0, all sound disappears

・FX.RT setting is saved in the pattern.

Pattern Palette saving

Sequences created on every Layer can be saved as Pattern Palettes.

Saving Pattern Palettes

1 Press func + save .

2 Press OK .
DONE will appear, and it will be saved.

Changing the save destination or **copying the Pattern Palette**

1 Press func + save .

2 Use < , > to select the save destination bank.

3 1 - 16 to select the save destination Pattern Palette.
DONE will appear, and it will be saved.

- In step 2, VALUE can also be used to select the save destination (execute with OK).
- Press CLR during a procedure to cancel it.

Initializing Pattern Palettes

1 Select the Pattern Palette to be initialized. (→ P.15)

2 Press CLR + PTN .
CLR will be shown, and Pattern Palette settings along with note and parameter lock data will all be cleared.

3 Save the Pattern Palette.

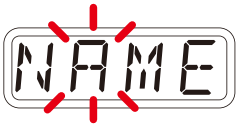
Pattern Palette renaming

Renaming Pattern Palettes

1 Press func + PTN multiple times to select PT.RN (**P**a**t**tern **R**e**n**ame).

2 Use VALUE to select the Pattern Palette for renaming, and press OK .

3 Use < / > to move the cursor left and right, and turn VALUE to select characters.



Cursor position blinks

4 Press OK .
This saves the name and returns to Pattern Palette selection.
To rename other Pattern Palettes, repeat from step 2.
To end renaming, press CLR .

Tempo overview

The Ambient Ø has two BPM modes.

Pattern Palette BPM mode

Whenever a different Pattern Palette is selected, the BPM is reset using the tempo saved in that Pattern Palette.

Global BPM mode

The current global BPM value will continue to be used even when a different Pattern Palette is selected.

Select global BPM mode to maintain a consistent tempo during the jam session.
Use Pattern Palette BPM mode when you want the tempo to change with each Pattern Palette.

Setting the BPM mode

1 Press func + BPM.

BPM	
BPM mode	
PTN	Pattern Palette BPM mode
GLBL	Global BPM mode

For BPM settings, see Changing TEMPO (→ P.24)

LINE IN settings

Changing the gain

1 Press func + LINE IN to select GAIN.

2 Turn VALUE to change the gain.

VALUE

Gain
MUTE – 127

Setting mono/stereo

1 Press func + LINE IN to select MONO.

2 Turn VALUE to switch between ON and OFF.

VALUE

Monophonic	
ON	Mono
OFF	Stereo

Setting the send amount to the reverb

1 Press func + LINE IN and select → RV.

2 Turn VALUE to change the send amount.

VALUE

REVERB SEND	
OFF	REVERB is not applied to LINE IN.
1～127	Adjusting amount of send to reverb.

LINE IN settings

Setting the send amount to the shimmer

1 Press func + LINE IN and select → SM.

2 Turn VALUE to change the send amount.

VALUE

SHIMMER SEND	
OFF	Shimmer is not applied to LINE IN.
1～127	Adjusting amount of send to shimmer.

Setting the effect

1 Press func + LINE IN and select → FX.

2 Turn VALUE to change ON/OFF.

VALUE

FX SEND	
OFF	FX is not applied to LINE IN.
ON	FX is applied to LINE IN.

Overview

The Ambient Ø has the following synchronization capabilities.

SYNC

Use the SYNC IN/OUT jacks to connect and synchronize with devices that support SYNC (including the Korg Volca series).

MIDI

Use the MIDI IN/OUT jacks to connect and synchronize with devices that support MIDI.

Audio Sync

Use the LINE IN and headphone jacks to connect and synchronize with devices that support Audio Sync (including the Teenage Engineering Pocket Operator series).
When using Audio Sync, the audio exchanged will be mono.

The Ambient Ø can act as a clock master or receive clock from an external device.

Setting the clock source

When set to INT (internal), the Ambient Ø acts as a clock master.
When not set to INT, the external device will be treated as the clock master.

1 Press func + CLOCK to select SRC.

2 Turn VALUE to set the clock source.

VALUE

Clock Source	
INT	Use internal clock of LIVEN Ambient Ø
MIDI	Use clock from MIDI IN
SYNC	Use clock from SYNC IN
LN.IN	Use clock from LINE IN

Setting Audio Sync output

Audio Sync output uses the headphone jack.
For this purpose, make the following setting to use Audio Sync output.

1 Press func + CLOCK and select A.OUT.

2 Turn VALUE to select ON.

・The sync signal will be output from the left channel and a mono mix of the audio will be output from the right channel of the headphone jack.

Setting SYNC IN polarity

1 Press func + CLOCK and select S.I.PO.

2 Turn VALUE to set the polarity.

VALUE

Polarity - Sync In	
FALL	Synchronize with falling of sync signal
RISE	Synchronize with rising of sync signal

Setting SYNC OUT polarity

1 Press func + CLOCK and select S.O.PO.

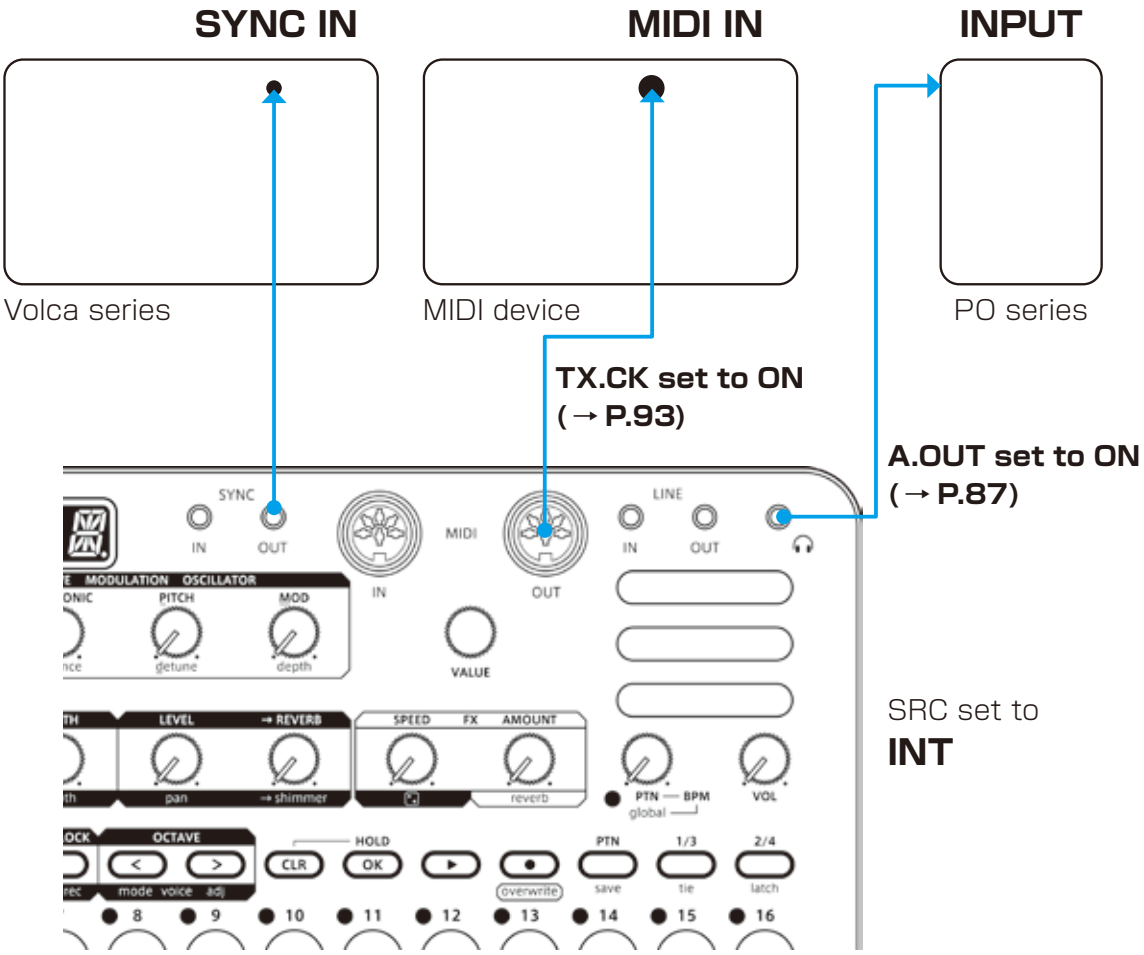
2 Turn VALUE to set the polarity.

VALUE

Polarity - Sync Out	
FALL	Synchronize with falling of sync signal
RISE	Synchronize with rising of sync signal

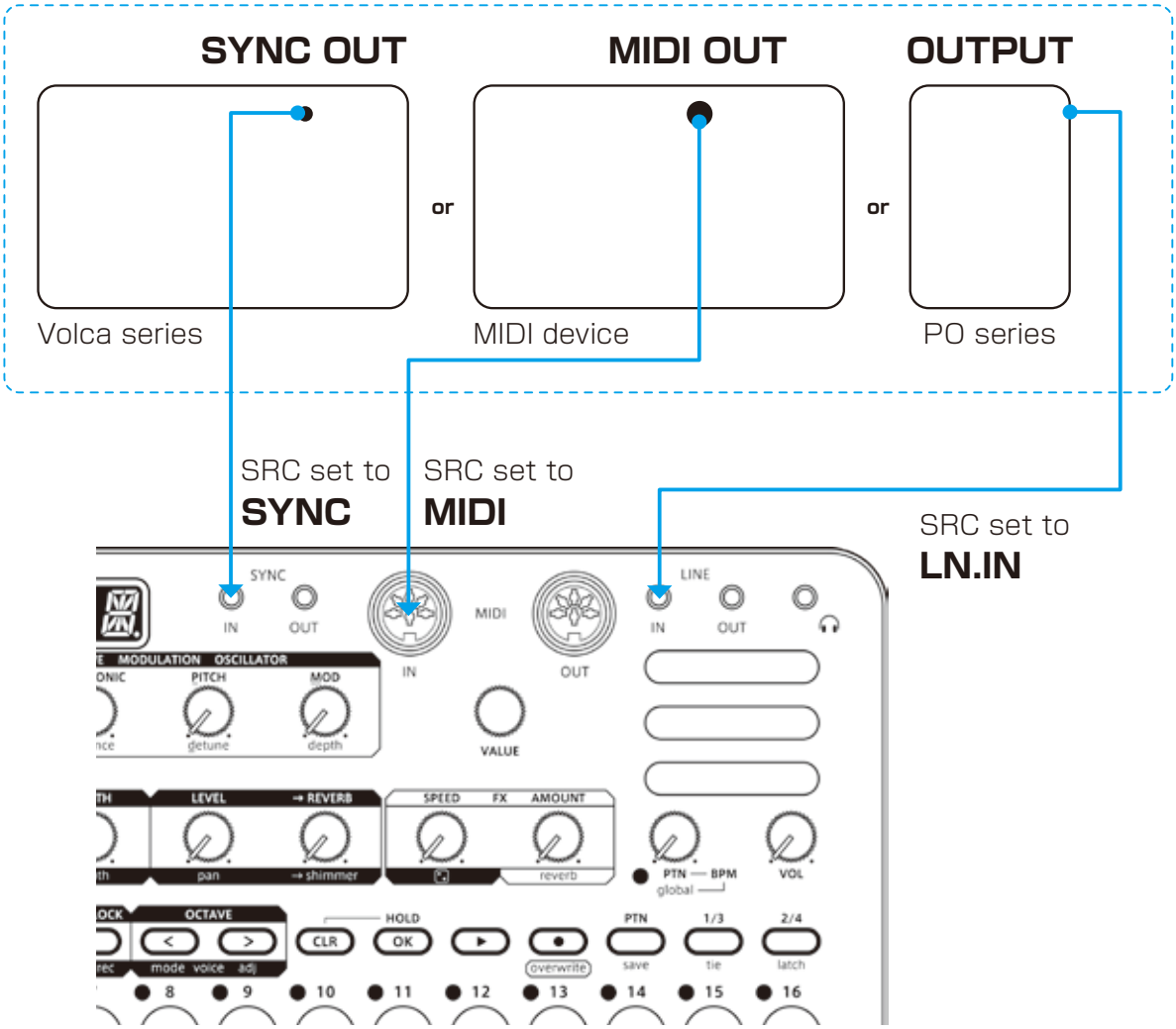
・See (→ P.93) for details about setting MIDI clock.

LIVEN Ambient Ø as clock master

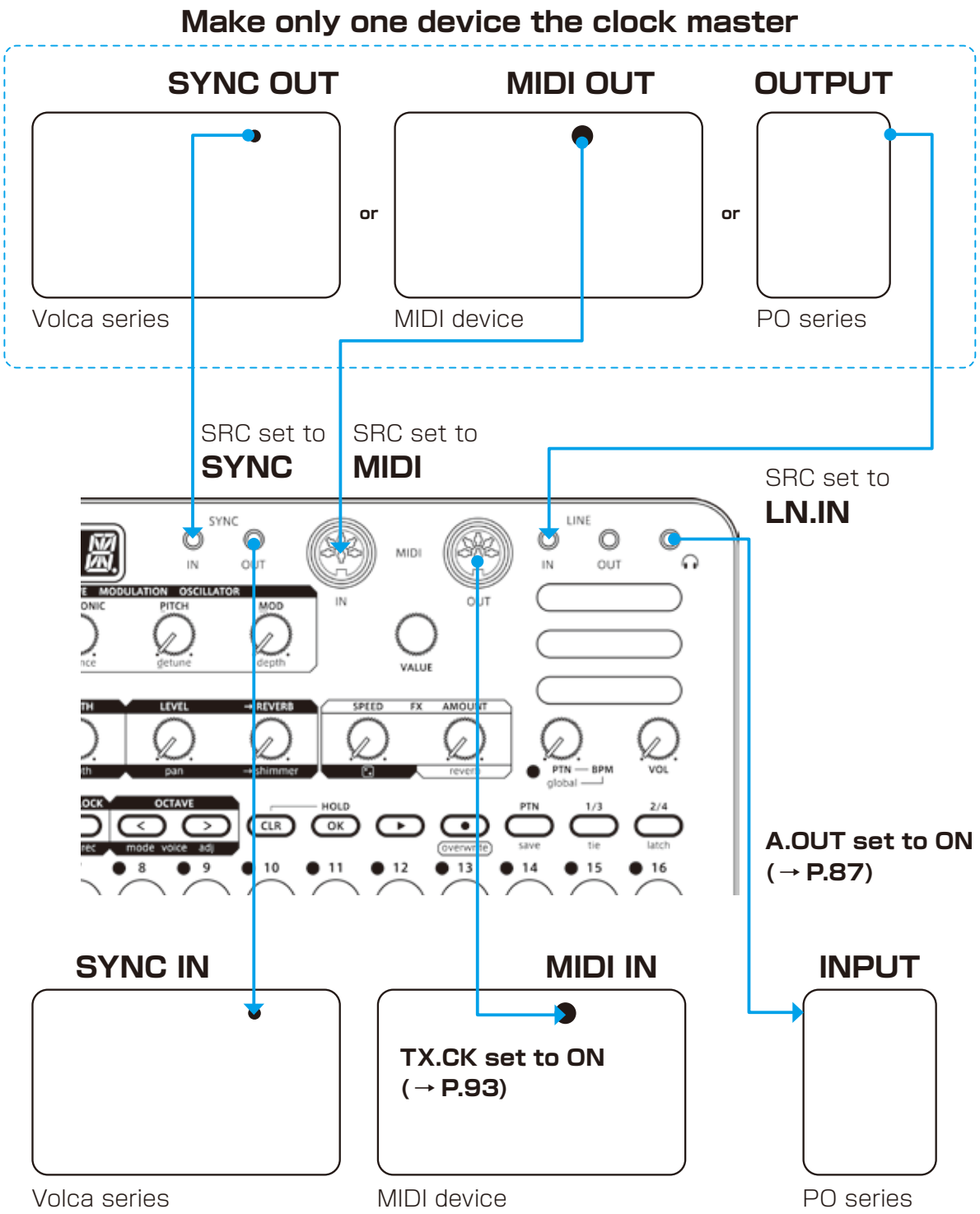


External device as clock master

Make only one device the clock master



Bridging clock signals to a different connector from an external device acting as the clock master

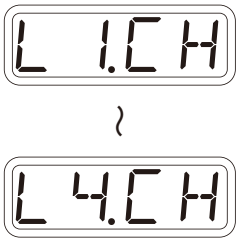


Using the bridging function, it is possible to synchronize devices with different connectors. For example, a Pocket Operator acting as a clock master can be used to synchronize a Volca or MIDI device connected to the Ambient Ø.

MIDI

Setting channels for transmitting and receiving MIDI

1 Press func + MIDI CH, and select the Layer for which you want to set the MIDI channel.



2 Turn VALUE to set the channel.

VALUE

MIDI Channel - Layer
OFF, CH.01 – CH.16

Setting the MIDI channel for Pattern Palette parameters

1 Press func + MIDI CH and select PT.CH.

2 Turn VALUE to set the channel.

VALUE

MIDI Channel - Pattern Palette
OFF, CH.01 – CH.16

Setting the MIDI channel for accessing the selected Layer (automatic channel)

1 Press func + MIDI CH and select AT.CH.

2 Turn VALUE to set the channel.

VALUE

MIDI Channel - Auto
OFF, CH.01 – CH.16

MIDI

Setting the MIDI channel used to output keyboard playing

1 Press func + MIDI CH and select O.CH.

2 Turn VALUE to set it.

VALUE

MIDI Channel - Out
TRCK (Layer), AUTO

Turning control change transmission on/off

1 Press func + MIDI and select TX.CC.

2 Turn VALUE to set it to on/off.

VALUE

Control Change
ON, OFF

・Control change reception is always enabled.

Turning MIDI clock output on/off

1 Press func + MIDI and select TX.CK.

2 Turn VALUE to set it to on/off.

VALUE

MIDI Clock
ON, OFF

MIDI

Setting MIDI OUT

1 Press func + MIDI and select M.OUT.

2 Turn VALUE to set MIDI OUT.

VALUE

MIDI OUT
OUT, THRU

Setting MIDI command transmitting and receiving

1 Press func + MIDI and select M.CMD.

2 Turn VALUE to set MIDI command transmitting and receiving.

VALUE

MIDI Commands	
OFF	Neither transmit nor receive
Rx	Only receive
Tx	Only transmit
Rx.Tx	Transmit and receive

Turning active sensing transmission on/off

1 Press func + MIDI and select TX.AS.

2 Turn VALUE to set it to on/off.

VALUE

Active Sensing - Transmit
ON, OFF

MIDI

Turning on/off active sensing reception

1 Press func + MIDI and select RX.AS.

2 Turn VALUE to set it to on/off.

VALUE

Active Sensing - Receive
ON, OFF

Setting the channel for transmitting and receiving program changes

1 Press func + MIDI and select PC.CH.

2 Turn VALUE to set the program change channel.

VALUE

Program Change - Channel
AUTO, CH.01 – CH.16

Turning on/off program change transmission

1 Press func + MIDI and select TX.PC.

2 Turn VALUE to set it to on/off.

VALUE

Program Change - Transmit
ON, OFF

Turning on/off program change reception

1 Press func + MIDI and select RX.PC.

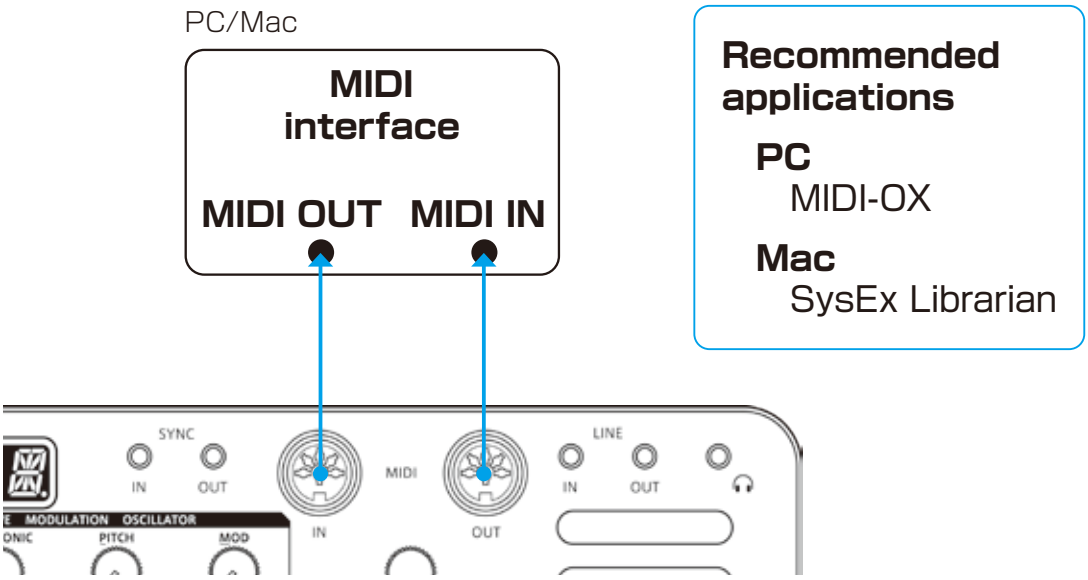
2 Turn VALUE to set it to on/off.

VALUE

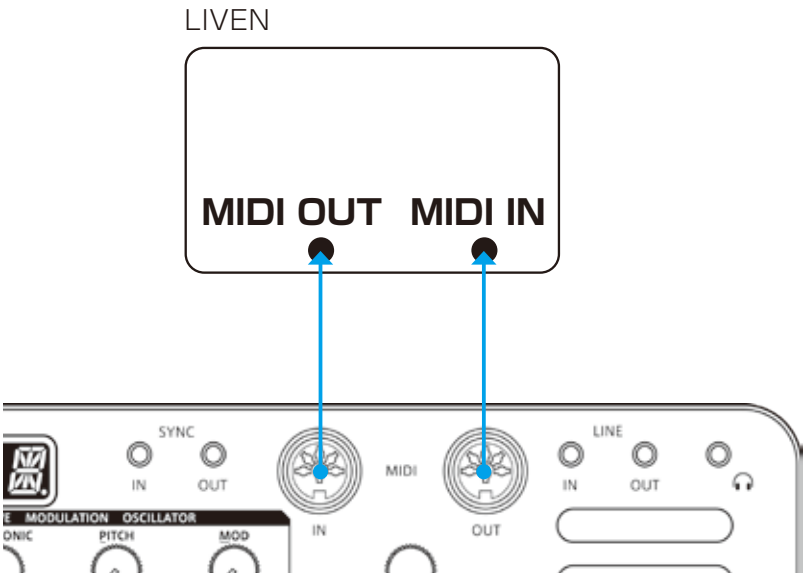
Program Change - Receive
ON, OFF

Exporting/importing user data

Connecting – Exporting/importing to/from a PC/Mac



Connecting – Exporting/importing to/from another LIVEN



Exporting/Importing user data

Exporting a single Pattern Palette

1 Select the Pattern Palette you want to export. (→ P.15)

2 Press func + PTN and select PT.EX.

3 Set your PC to receive MIDI data.

4 Press OK.

・Press CLR to cancel.

Importing a single Pattern Palette

1 Put the unit into regular mode, and start transmitting data from the transmitting device.

・The received Pattern Palette will not be saved automatically. Save the Pattern Palette as necessary. (→ P.81)

Exporting/Importing user data

Backing up all user data at once

1 Press 4 + **the POWER switch** to turn on the Ambient Ø.

2 Turn VALUE to select EXPT.

3 Press OK .

- The step LEDs show the progress. (They light from 1 in order. Transmission is complete when 1 - 16 have all lit.)
- Press CLR to cancel.
- The size of the backup data is 16,852,155 bytes.
- If the size of the data is different, the backup might have failed. If this occurs, before step 3 , while pressing func , turn VALUE to increase the transmission interval. (The default value is 0.)

Exporting/Importing user data

Restoring (importing) user data

1 Press 4 + **the POWER switch** to turn on the Ambient Ø.

2 Turn VALUE to select IMPT.

3 Press OK. This makes the unit ready to receive data.
Start exporting from the sending device.

4 When SAVE appears on the display after receiving completes, press OK to restore (load) the received data.

・The step LEDs show the progress. (They light from 1 in order. Transmission is complete when 1 - 16 have all lit.)

・Press CLR to cancel.

Exporting/Importing user data

Backing up all NOISE sample data at once

1 Press < + **the POWER switch** to turn on the Ambient Ø.

2 Turn VALUE to select N.B.EX.

3 Press OK .

- The step LEDs show the progress. (They light from 1 in order. Transmission is complete when 1 - 16 have all lit.)

- Press CLR to cancel.

Exporting/Importing user data

Restoring (importing) NOISE sample data

1 Press < + **the POWER switch** to turn on the Ambient Ø.

2 Turn VALUE to select N.B.IM.

3 Press OK . This makes the unit ready to receive data.
Start exporting from the sending device.

4 When SAVE appears on the display after receiving completes, press OK to restore (load) the received data.

・The step LEDs show the progress. (They light from 1 in order. Transmission is complete when 1 - 16 have all lit.)

・Press CLR to cancel.

・The size of the backup data is 11,849,183 bytes.

・If the size of the data is different, the backup might have failed. If this occurs, before step 3 , while pressing func , turn VALUE to increase the transmission interval. (The default value is 0.)

System settings

Setting the battery type

1 Press func + SYSTEM to select BATT.

2 Turn VALUE to select the battery type.

VALUE

Battery	
ALKL	Alkaline dry cell
NIMH	Nickel-metal hydride rechargeable
LTHM	Lithium dry cell

・Please set this correctly because it effects operation time.

・The remaining charge shown could be higher than the actual amount depending on the type of rechargeable battery.

Setting the automatic power down function

1 Press func + SYSTEM and select A.PWR.

2 Turn VALUE to select the automatic power down time.

VALUE

Automatic power down time	
OFF	Automatic power down is disabled.
0.5H	Power will turn off automatically after 30 minutes without operation.
1H	Power will turn off automatically after 1 hour without operation.
3H	Power will turn off automatically after 3 hours without operation.
6H	Power will turn off automatically after 6 hours without operation.

System settings

Changing mute mode

1 Press func + SYSTEM to seletct MT.MD.

2 Turn VALUE to change mute mode.

VALUE

Mute Mode	
SND	Mute all sound of muted Layer.
SEQ	Mute only notes from sequencer. Layers can still be played by keyboard or external MIDI controllers. Also parameter locking will still be active.

Setting the master tuning

1 Press func + SYSTEM to select TUNE.

2 Turn VALUE to set the master tuning.

VALUE

Master Tune
-75 - 0 - +75 (cents) 410 - 440 - 470 (Hz)

- When the Tune Mode (→ P.105) is set to HZ, you can change the value in 0.1 increments by holding down shift and turning VALUE.

- When a certain temperament is set for a pattern, the Master Tune is disabled. (→ P.77)

System settings

Changing the tune mode

1 Press func + [0] to select TN.MD.

2 Turn VALUE to change the mute mode.

Tune Mode		
CENT	CENT mode	When changing the master tune, it can be set within a range of ± 75 Cents.
HZ	Hz mode	When changing the master tune, it can be set within a range of 410 - 470Hz.

Changing the range of pitch bend

1 Press func + [0] to select PB.RG.

2 Turn VALUE to set the range of pitch bend.

VALUE

Pitch Bend Range
0 - 24

Setting the headphone gain

1 Press func + [0] GAIN.

Headphone Gain	
LOUD	Louder output
NORM	Factory default
SOFT	Quieter output

System settings

Setting knob movement behavior

1 Press func + latch to set whether or not latching is used for knob operation.

Latch			
latch	OFF	Jump	When a knob is moved, the parameter changes immediately.
latch	ON	Latch	The knob does not affect the parameter value until its position reaches the value saved in the Pattern Palette, after which the knob will change the parameter.

・When set to Latch, the dots on the display will be animated to show how much the knob position and parameter value differs to the left or right.
The dots will appear to flow to the left when the parameter value is lower than the knob position and to the right when the value is higher than the position. The flow will be faster for higher values.

System settings

Restoring to factory default settings (factory reset)

1 Press and hold 3 + **POWER switch** to turn on the Ambient Ø.

2 Press OK.
The step LEDs will show the progress.
When finished, OK will appear on the display.

- Press CLR to cancel.

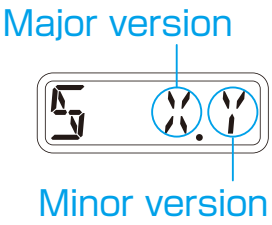
- This will not restore sample waveform data to the factory default. To restore the sample waveform data, download it from the SONICWARE website and import it.

Checking the system versions

1 Press and hold 2 + **POWER switch** to turn on the Ambient Ø.

2 Press PTN, 1/3 and 2/4 to check the versions.

Firmware Versions		
PTN	P x.y	Preset version
1/3	S x.y	System version
2/4	B x.y	Boot version



- Press the same PTN, 1/3 or 2/4 again to show the build number.

System settings

Updating the firmware

1 Press and hold shift + **the POWER switch** to turn on the Ambient Ø.

2 Transmit the firmware (Sys Ex data) from a PC/Mac.

・The step LEDs show the progress of data transmission. (They light from 1 in order. Transmission is complete when 1 - 16 have all lit.)

3 After transmission completes, press OK to execute the update.

・ If the update occurred properly, OK will be shown. (If a problem occurred, an error code will be shown.)

4 Restart the unit.

・Use new batteries or an AC adapter.

・Never interrupt the power during a firmware update.

・Press CLR to cancel the update and start up normally.

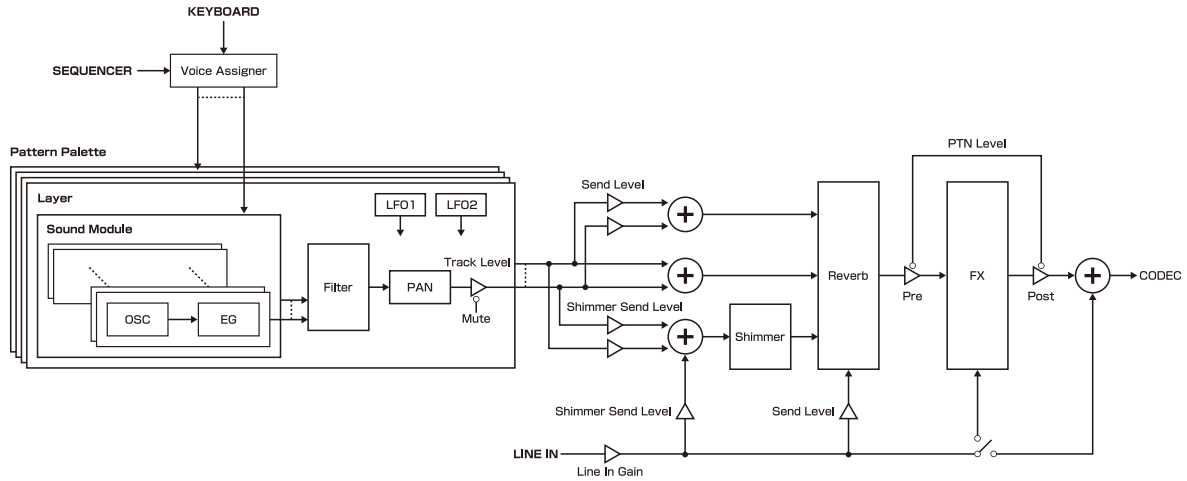
System settings

Error codes

ER.10	System error
ER.11	Low battery
ER.20	Data receiving error
ER.21	Invalid data
ER.22	No need to update (Boot)
ER.30	Update Failed

Appendix

Figure1.　Sound architecture



The Healing Power of Solfeggio Frequencies

Sound Healing Vibes / Mario Escamilla

Introduction

Sound has been used as a tool for healing, meditation, and spiritual transformation for thousands of years. Ancient cultures recognized that specific frequencies have the power to influence the mind, body, and spirit, leading to profound states of balance and well-being. Among these healing sounds, the Solfeggio frequencies hold a special place.

The Solfeggio frequencies are a set of ***nine specific tones*** *that are believed to resonate with the natural frequencies of the universe. These frequencies were rediscovered in the 20th century, but their roots trace back to ancient Gregorian chants and sacred music. Each Solfeggio frequency is said to correspond with different aspects of* ***our physical, emotional, and spiritual health****, facilitating deep healing, transformation, and higher states of consciousness.*

Scientific studies have shown that sound vibrations can influence ***brain waves, cellular structures, and energy fields****. When we listen to these frequencies, we align ourselves with their energetic patterns, promoting healing on multiple levels. Whether used in meditation, energy healing, or sound therapy, Solfeggio frequencies can be powerful tools for personal growth and well-being.*

This column explores the unique properties and benefits of each of the nine Solfeggio frequencies, offering insights into how they can support healing and transformation.

The 9 Solfeggio Frequencies and Their Benefits

1. 174 Hz – Foundation & Pain Relief

The lowest of the Solfeggio frequencies, 174 Hz, is deeply grounding and stabilizing. It is known for its ability to:

- *Reduce physical pain, tension, and inflammation*
- *Promote deep relaxation and a sense of security*
- *Support the healing of muscles, tissues, and organs*
- *Foster feelings of stability and protection*

2. 285 Hz – Tissue Repair & Energy Healing

285 Hz is associated with cellular regeneration and energetic healing. This frequency is beneficial for:

- *Accelerating the healing of wounds, burns, and damaged tissues*
- *Strengthening the immune system and cellular repair*
- *Balancing and restoring personal energy fields*
- *Enhancing overall vitality and well-being*

3. 396 Hz – Liberation from Fear & Guilt

396 Hz is the frequency of emotional release, helping to clear subconscious fears and guilt. Its effects include:

- *Dissolving negative thought patterns and limiting beliefs*
- *Encouraging confidence, courage, and inner strength*
- *Supporting emotional balance and resilience*
- *Providing a sense of safety and empowerment*

4. 417 Hz – Undoing Negativity & Facilitating Change

417 Hz is a frequency of transformation, helping to clear past traumas and facilitate new beginnings. It is effective for:

- *Releasing negative energy and emotional blockages*
- *Encouraging personal growth and adaptability to change*
- *Boosting creativity and problem-solving abilities*
- *Restoring balance to the mind, body, and spirit*

5. 528 Hz – DNA Repair & Transformation (Love Frequency)

Often called the "Love Frequency," 528 Hz is linked to miracles, healing, and DNA repair. It is known to:

- *Stimulate the repair and regeneration of DNA*
- *Enhance feelings of love, harmony, and peace*
- *Reduce stress, anxiety, and emotional distress*
- *Support deep transformation and higher consciousness*

6. 639 Hz – Connection & Harmonizing Relationships

639 Hz is associated with relationships, communication, and harmony. This frequency helps to:

- *Improve communication, understanding, and empathy*
- *Strengthen relationships with family, friends, and partners*
- *Enhance emotional intelligence and interpersonal connections*
- *Promote peace, forgiveness, and unity*

7. 741 Hz – Detoxification & Awakening Intuition

741 Hz is the frequency of cleansing and mental clarity. It is effective in:

- *Detoxifying the body, mind, and environment*
- *Removing negative influences and electromagnetic radiation*
- *Strengthening intuition and decision-making abilities*
- *Enhancing spiritual awakening and self-expression*

8. 852 Hz – Awakening & Spiritual Growth

852 Hz is linked to higher consciousness and inner wisdom. It helps with:

- *Activating the Third Eye and expanding awareness*
- *Deepening intuition and spiritual insight*
- *Releasing fears and limitations that block spiritual growth*
- *Connecting with higher states of consciousness*

9. 963 Hz – Divine Connection & Oneness

963 Hz is often referred to as the "Frequency of the Gods." This powerful frequency is associated with:

- *Activating the Pineal Gland and spiritual awakening*
- *Experiencing oneness with the Universe and Divine energy*
- *Enhancing states of bliss, enlightenment, and deep peace*
- *Aligning with the highest vibrations of consciousness*

Conclusion

The Solfeggio frequencies offer a profound way to ***restore balance, healing, and harmony in our lives****. Whether you use them in meditation, sound baths, or energy healing sessions, their vibrations work on a deep level to support physical, emotional, and spiritual well-being. As you explore these frequencies, allow yourself to be open to their transformative power and experience the benefits they bring.*

Specifications

Synthesizer	・Note Hold function ・128 Sound Pattern Palettes (incl. 64 types of preset palettes) ・Mixing including level/pan for each layer ・Layer (Sound) copy and paste function ・Tune All function changes the pitch of all layers (± 1 octave in 20-cent steps, adjustable in 1-cent step) ・Standard polyphony: 10 voices (depending the structure’ s oscillators x simultaneous voices) 4 Layer Construction Drone, Pad, Atmos Layers ・New Blendwave Modulation Synthesis for creating undulating and fluctuating tones ・6 Structures, 32 Waves Drone 1: 2 oscillators, modulates Detune Drone 2: 2 oscillators, modulates Harmonics Pad 1: 3 oscillators, modulates Harmonics Pad 2: 3 oscillators, modulates Harmonics Atmos 1: 3 oscillator, ring modulation on output Atmos 2: 3 oscillators (frequency modulation), modulates Pitch <Voice mode> ・Polyphonic mode ・Mono mode (adjustable glide time) ・Legato mode (adjustable glide time) ・Unison mode (adjustable detune) ・Arpeggiator modes (Up, Down, UpDown, DownUp, Up&Down, Down&Up, Up+1, Up+2, Down-1, Down-2, Random, Play Order) Noise Layer ・1 Structure, 8 Waves Noise: 1 oscillator, modulates Pitch ・Loop or One-shot playback, White noise mixing ・16bit - 32kHz Linear PCM sampling (stereo) ・Up to 8 seconds of sampling per sample (crossfade settings from 1 to 4 seconds) ・Auto start sampling function with the input level (input level can be set) ・Import and export of a slot of samples (via MIDI) ***Import of audio files from PC/Mac is not supported.** <Voice Mode> ・Polyphonic mode ・Mono mode (adjustable glide time) ・Legato mode (adjustable glide time) ・Arpeggiator modes (Up, Down, UpDown, DownUp, Up&Down, Down&Up, Up+1, Up+2, Down-1, Down-2, Random, Play Order) Each layer has its own envelope, filter and 2LFOs. <Envelope generator> ・Attack ・Release <Filter> ・Low Pass Filter ・High Pass Filter ・Band Pass Filter <LFO> ・2 LFOs assignable to various parameters (individually adjustable) ・Adjustable LFO Shapes and trigger count

Specifications

Effects	9 types of high-quality reverb (Send amount to reverb and shimmer adjustable per layer) ・Small.L ・Small.M ・Small.H ・Large.L ・Large.M ・Large.H ・Infinity.L ・Infinity.M ・Infinity.H 6 types of diverse master effects ・Tape Delay ・Reverse Delay ・Overdrive ・Bit/Rate Crush ・Tilt EQ ・Stereo Chorus
Sequencer	[Sequencer] ・4 tracks (1 track on each layer) ・Up to 64 steps per pattern ・Step length can be set from 1/1 to 1/32 or 2/1(Breve) to 8/1(Maxima) ・Real-time recording ・Overwrite REC function for real-time sequence replacement ・Directly enter notes for each step when playback is on or off ・Enter longer notes (Tied notes) ・Metronome and pre-count function ・Step copy and paste function ・Track copy and paste function ・Duplicate to extend a sequence ・Transpose function ・Pattern BPM / Global BPM can be set ・Pattern chain function (Loop playback possible) ・Track level and pan can be set independently ・Parameter Lock function to record parameter settings for each step ・Sound Lock function to record sound settings for each step ・Note playback probability can be set from 25 to 100% for each step ・RANDOM function to play back steps in random order
MIDI	・Notes, control changes, clock input/output ・IMPORT/EXPORT of user data ・Firmware update via Sysex
Main unit	＜Keyboard＞ 27 keys (with a hold function) <Knobs> ・15 physical control knobs ・Optional LATCH function prevents jumps in value when knob position and parameter values do not match. ・One physical encoder for fine adjustments. ・LCD dot indicates when a parameter value matches the saved value, or when the value has been changed.

Specifications

Main unit	＜Audio in＞ ・LINE IN (stereo 3.5mm mini-jack) ・Compatible with Teenage Engineering Pocket Operator Series SYNC IN ＜Audio out＞ ・Stereo line out (stereo 3.5mm mini jack) ・Headphone out (stereo 3.5mm mini jack) ・Compatible with Teenage Engineering Pocket Operator Series SYNC OUT ・Built in speaker ＜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) ＜Size＞ 297mm (W) x 176mm (D) x 48mm (H) 11.7 in (W) x 6.92 in (D) x 1.89 in (H) ＜Weight＞ 790g 1.74lb. ＜Power supply＞ ・9V DC output AC adapter Current: 1A or greater Plug Type: EIAJ3 Standard Inner Diameter: 1.7mm Outer Diameter: 4.75mm, Polarity: Center + ・Compatible with power supplies designed for the Korg Volca. ・6 AA batteries ***The AC adapter and batteries are not included.**
Accessories	・Warranty