

SuperOS-101

SHORTCUT GUIDE

BUILD 2026-10-20 (E5E9B18*) · CUSTOM FIRMWARE FOR THE ROLAND SH-101
AT90USB1286 CPU BOARD · SUPEROS + 80C49 EMULATOR · MIDI ON DIN AND USB-C

Every SuperOS function on one drawing each: the panel, the controls involved, the order to press them, and the LEDs the SH-101 shows while you do it. The LED states are real: the firmware ran each sequence in the host simulator. Find the function, look at the picture, follow the numbered steps.



Panel photo: Wikipedia user 909 bd, Wikimedia Commons, CC BY-SA 3.0.

READING THE DRAWINGS

- Black ring: press this.
- Red ring and red label: hold it while you do the rest.
- — — Blue dashed box: any key in that group.

LEDs

● lit ○ blinking ○ off
On the photo a lit LED glows red; a blinking one is half lit inside a dashed red ring. The box beside each drawing repeats the seven LEDs large. Keys are numbered 1 to 32 from the lowest F; key 8 is the lowest C.

WORDS

A + B: hold A, then press B. Tap: press and release. Playing: the sequencer runs. Clock: the LFO / CLK RATE, or MIDI clock with sync on. The header gives the mode and when it works.

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1 KEYBOARD

KEYBOARD

NOTHING LIT



32 KEYS, F TO C: THE LOWEST HELD KEY SOUNDS

☐	☐	☐	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.	
OFF	OFF	OFF	OFF	OFF	OFF	OFF	

No LED: plain keyboard mode.
Keys 8 and 15 held, key 8 (the lower) sounds.

1. With no function LED lit, the keyboard plays the voice directly.
2. Hold two keys: the lower one sounds. Let it go and the other one takes over.
3. Key 1 is the lowest F, key 8 the lowest C, key 32 the top C.

NOTE

With the ENV TRIG switch on GATE+TRIG the priority is the last key pressed instead. MIDI notes 53 to 84 act as keys 1 to 32.

2 HOLD

KEYBOARD OR ARPEGGIO

ANY TIME



HOLD DOWN: KEYS LATCH

PLAY A NOTE OR CHORD

☐	☐	☐	☐	☐	☒	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.	
OFF	OFF	OFF	OFF	OFF	ON	OFF	

HOLD lit while the button (or the pedal) is down: the keys played keep sounding.

1. Keep HOLD pressed, or press the HOLD pedal.
2. Play keys: they keep sounding after you let go. A new chord replaces the latched one.
3. Release HOLD (or the pedal): the latched keys are released and the LED goes out.

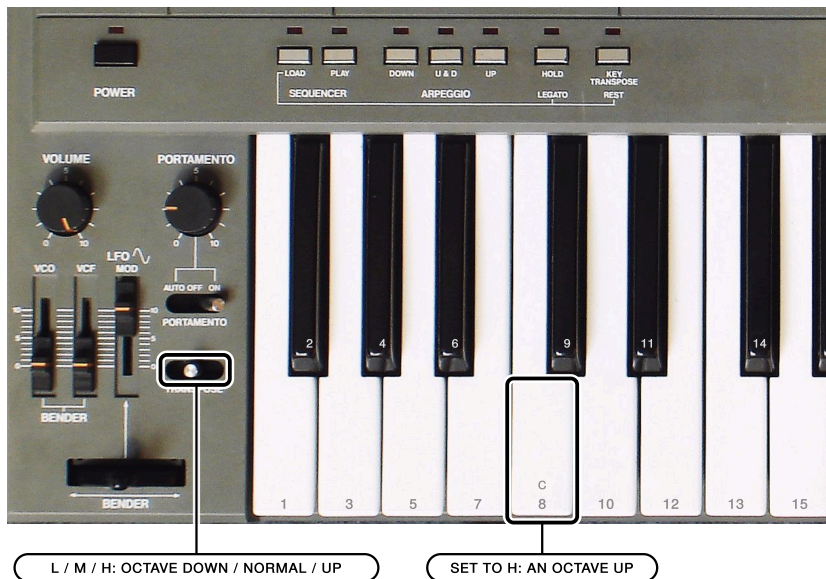
NOTE

The HOLD LED follows the button and the pedal: it is lit only while one of them is down. A pedal on the HOLD jack is the hands-free way to latch.

3 TRANSPOSE SWITCH

KEYBOARD

ANY TIME



LOAD PLAY DOWN U&D UP HOLD KEY TR.
OFF OFF OFF OFF OFF OFF OFF

No LED. The switch is read with every key.

1. Set TRANSPOSE to L, M or H: the keyboard plays an octave down, as marked, or an octave up.
2. Keys you record take the octave the switch is at; a stored pattern keeps it.

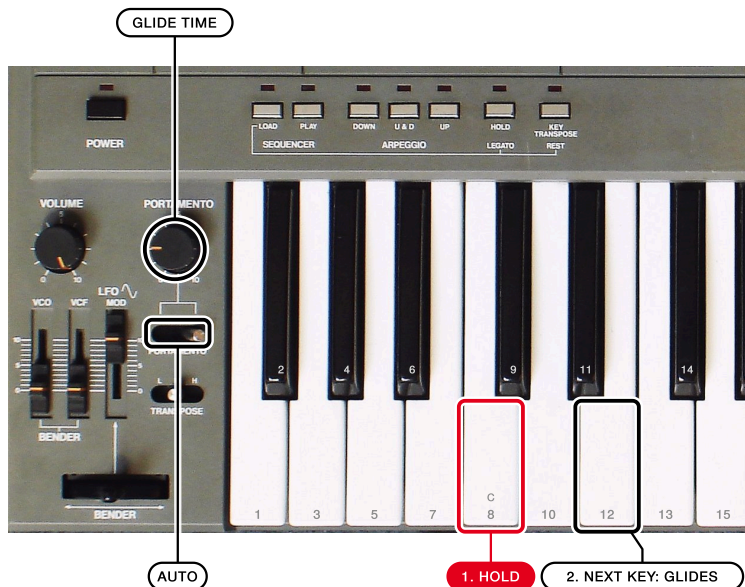
NOTE

The TRANSPOSE switch works on keys, the arpeggio and recording, as on the stock SH-101. While a sequence plays it picks the performance row instead (Performance Modes). Tune (below) assumes M.

4 PORTAMENTO AUTO

KEYBOARD, ARPEGGIO, SEQUENCER

SWITCH ON AUTO



LOAD PLAY DOWN U&D UP HOLD KEY TR.
OFF OFF OFF OFF OFF OFF OFF

No LED. Key 12 pressed while key 8 is held: legato, so it glides.

1. Set the PORTAMENTO switch to AUTO and the PORTAMENTO knob to the glide time.
2. Play legato (the next key before you let go of the last): the pitch glides.
3. Play detached: each note starts on its own pitch.

NOTE

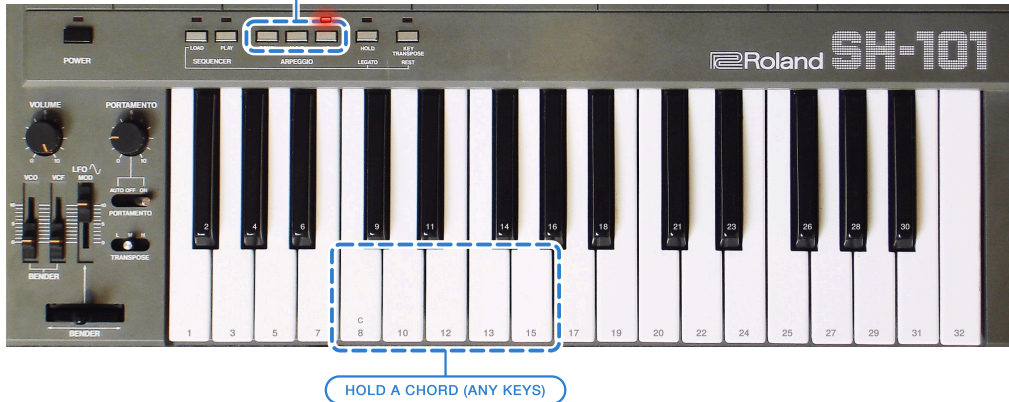
The firmware pulses PORTAMENTO OFF on every fresh note, so on AUTO only legato keys and legato (tied) sequencer steps glide. ON and OFF ignore it, as stock.

5 ARPEGGIO

ARPEGGIO

FROM KEYBOARD MODE

DOWN, U&D OR UP; AGAIN = OFF



☐	☐	☐	☐	☒	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	OFF	ON	OFF	OFF

UP lit: arpeggio up over keys 8, 12, 15.

1. Press UP, DOWN or U&D: its LED lights.
2. Hold a chord: the notes play one after another at the LFO / CLK RATE (or the MIDI clock with sync on).
3. Press another direction to change it; press the lit button again to go back to the keyboard.

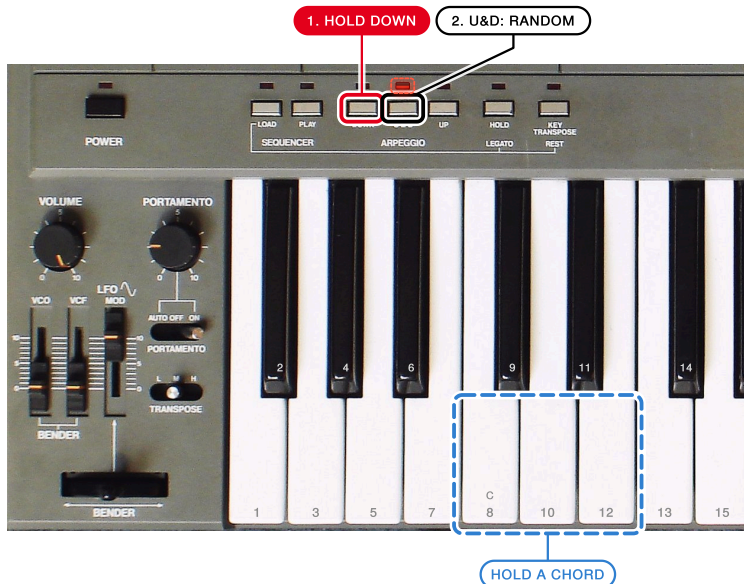
NOTE

Each arpeggio note retriggers the envelope; CV / GATE OUT and MIDI OUT follow it.

6 RANDOM ARPEGGIO

ARPEGGIO

FROM KEYBOARD OR ARPEGGIO



☐	☐	☐	☒	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	BLINK	OFF	OFF	OFF

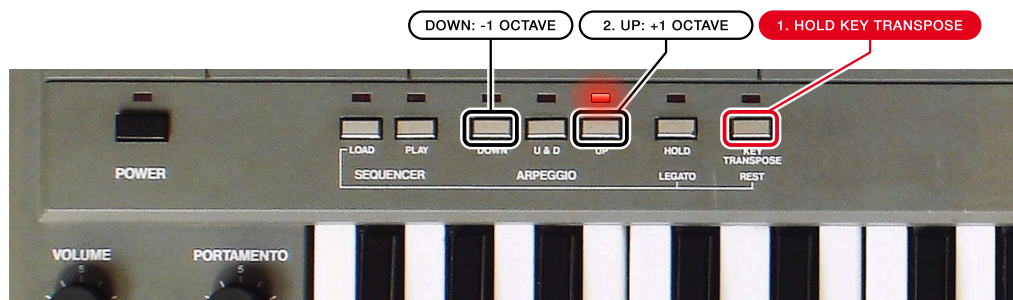
U&D blinking: random arpeggio.

1. Press DOWN and U&D together: the U&D LED blinks.
2. Held keys play in random order, never the same note twice in a row when there is a choice.
3. DOWN + U&D together again: back to the keyboard.

7 ARPEGGIO OCTAVE RANGE

ARPEGGIO

ARPEGGIO ON



☐	☐	☐	☐	☒	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	OFF	ON	OFF	OFF

UP still lit: the range changed, the mode did not. No LED shows the range.

1. With an arpeggio on, hold KEY TRANSPOSE.
2. UP adds an octave, DOWN takes one away: 1 to 3 octaves.
3. UP climbs octave by octave, DOWN starts at the top, U&D bounces across the whole span, random picks an octave too.

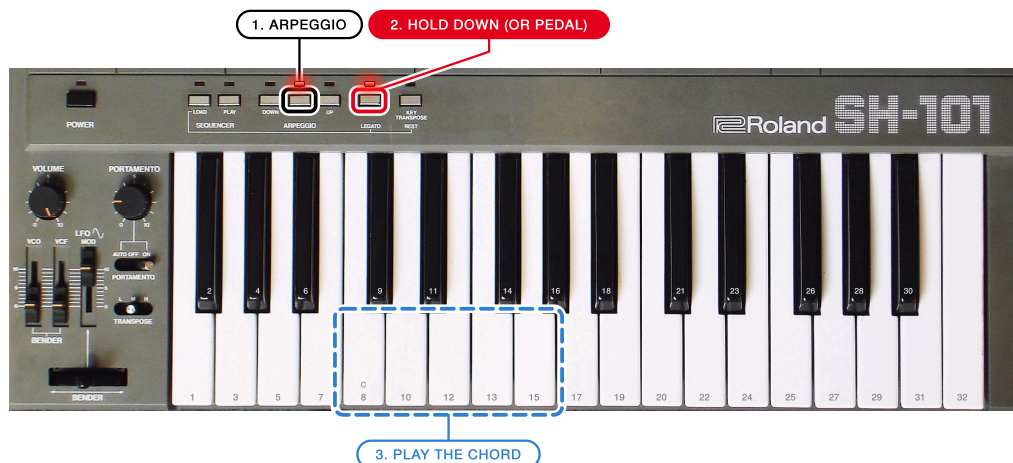
NOTE

The range is kept across power-off. It needs an arpeggio running: in keyboard mode KEY TRANSPOSE + UP does nothing to the range.

8 ARPEGGIO AND HOLD

ARPEGGIO

ARPEGGIO ON



☐	☐	☐	☒	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	ON	OFF	ON	OFF

U&D and HOLD lit: the chord keeps arpeggiating after the keys are released.

1. Pick an arpeggio direction.
2. Keep HOLD down, or press the pedal, and play the chord: it keeps running with the keys released.
3. A new chord replaces it. In this state transpose mode (Transpose chapter) moves it with single keys.

9 RECORD A PATTERN

LOAD FROM STOP



☒	☐	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.
ON	OFF	OFF	OFF	OFF	OFF	OFF

LOAD lit: recording. Two steps entered.

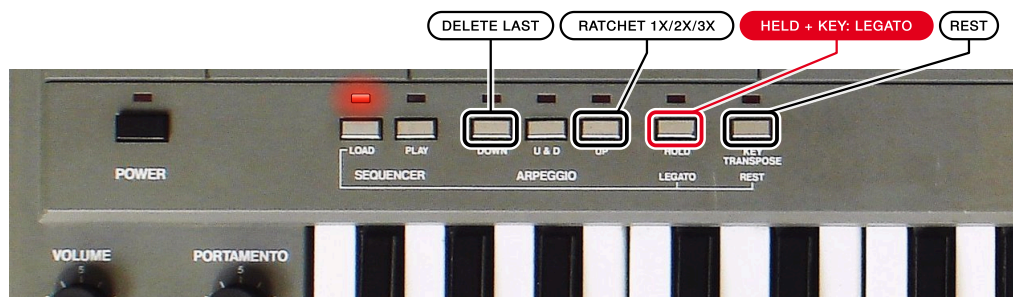
1. Stopped, press LOAD: the LED lights and the current pattern is cleared.
2. Play the notes, one key per step. Timing does not matter: every key is one step.
3. Press LOAD again: the pattern is stored and the LED goes out.

NOTE

Up to 128 steps, 8 patterns, kept in flash across power-off. PLAY + key 1-8 picks the pattern to record into (Pattern Select).

10 TIES, RESTS, RATCHETS, UNDO

LOAD RECORDING



☒	☐	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.
ON	OFF	OFF	OFF	OFF	OFF	OFF

LOAD lit. Recorded: key 8, key 10 tied, a rest, key 12 (then ratcheted and taken back).

1. Hold HOLD while pressing a key: that step is legato (no retrigger, glides on AUTO).
2. KEY TRANSPOSE enters a rest.
3. UP cycles the last step's ratchet: 1x, 2x, 3x hits inside the step.
4. DOWN takes the last step back; press it again to go further back.

NOTE

The stock panel prints LEGATO under HOLD and REST under KEY TRANSPOSE for this.

11 PLAY AND STOP

SEQUENCER PLAY

KEYBOARD MODE



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit: the pattern runs at the LFO / CLK RATE.

1. Press PLAY: the LED lights and step 1 sounds at once, the next steps at the LFO / CLK RATE (or the MIDI clock with sync on).
2. Press PLAY again to stop.

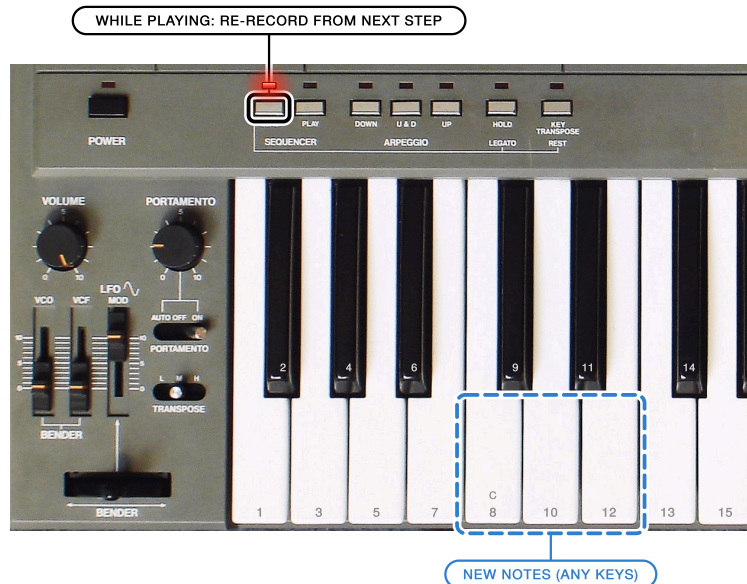
NOTE

With MIDI sync on, PLAY only arms: the first step waits for the clock (MIDI Sync).

12 CORRECT AND ADD

LOAD

PLAYING



☒	☐	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
ON	OFF	OFF	OFF	OFF	OFF	OFF

LOAD lit: recording again from the step after the one that was sounding.

1. While the pattern plays, press LOAD. Playback stops and the LOAD LED lights.
2. The keys overwrite from the step after the one that was sounding. Steps after the ones you correct stay as they were.
3. LOAD again stores.

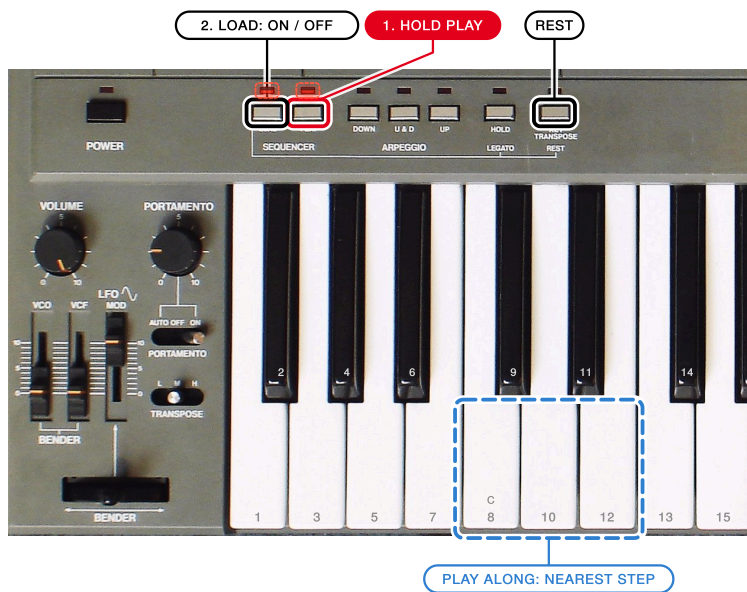
NOTE

The stock SH-101's Correcting and Adding. LOAD from stop starts a new pattern instead.

13 REAL-TIME RECORD

SEQUENCER PLAY

PLAYING



LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.
BLINK	BLINK	OFF	OFF	OFF	OFF	OFF

PLAY and LOAD alternating: real-time record.

1. While playing, hold PLAY and press LOAD: the PLAY and LOAD LEDs alternate.
2. Keys overwrite the step they land on (the next step once the step is half over). A key held past the half-step ties into the next step. KEY TRANSPOSE writes a rest.
3. Hold PLAY and press LOAD again to end. The edits are stored when playback stops.

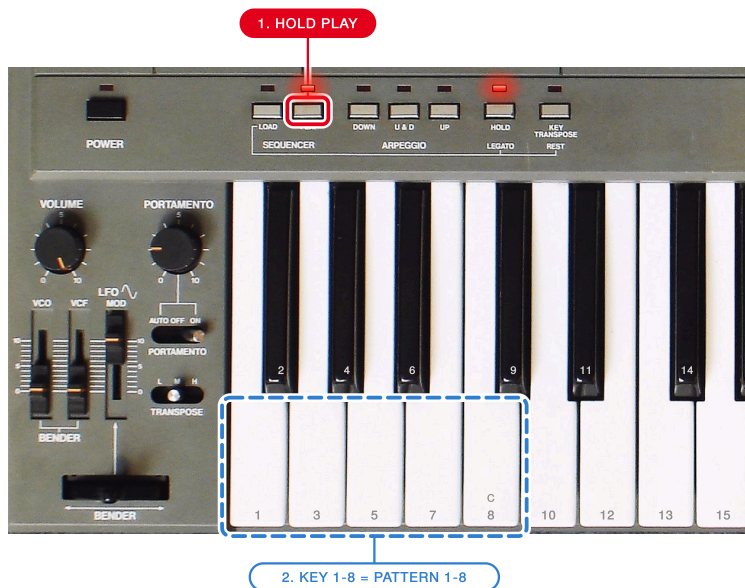
NOTE

An empty pattern gets 16 rest steps to record into.

14 PATTERN SELECT

SEQUENCER

STOPPED OR PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Pattern 2 picked from stop: it plays when PLAY is released.

1. Hold PLAY and press one of the 8 lowest keys (key 1 = pattern 1).
2. From stop, the pattern starts when you release PLAY.
3. While playing, it follows at the end of the current pass.

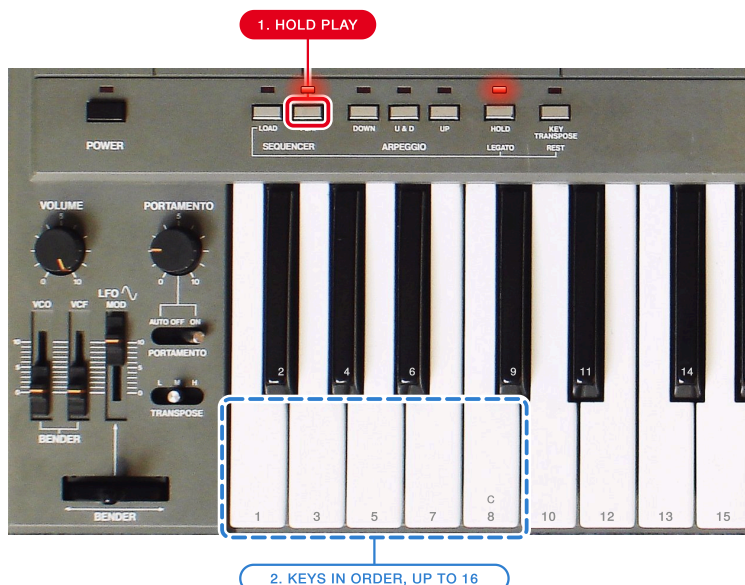
NOTE

MIDI program change 0 to 7 does the same. Hold PLAY and press nothing to toggle play as usual. With PLAY held, UP / DOWN / U&D randomize and KEY TRANSPOSE sets the scale (Randomize and Scale).

15 SONG

SEQUENCER

STOPPED OR PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Song 1, 2, 1, 3 started from stop.

1. Hold PLAY and press several of keys 1-8 in the order to play them.
2. Release PLAY: from stop the song starts; while playing it starts at the end of the pass.
3. Each pattern plays once, then the next; the song loops.

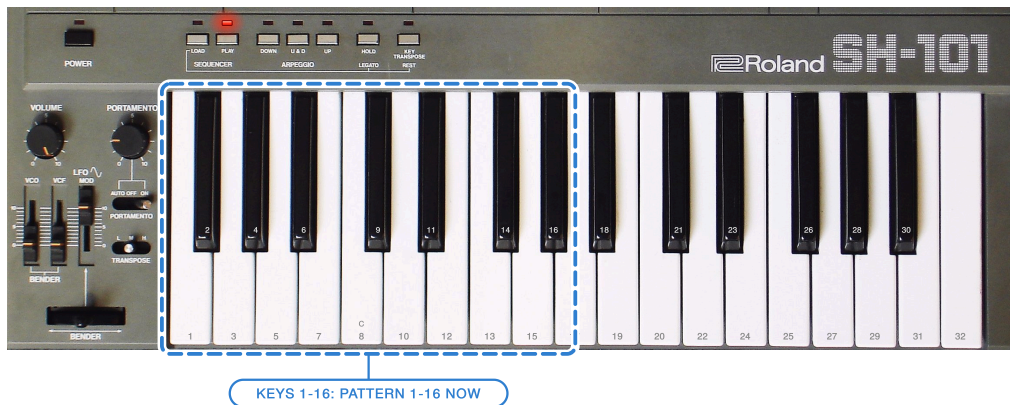
NOTE

Picking a single pattern, or an instant switch, ends the song.

16 INSTANT SWITCH

SEQUENCER PLAY, SUPEROS MODE

PLAYING, HOLD LED OFF



☐	☒	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.
OFF	ON	OFF	OFF	OFF	OFF	OFF

PLAY lit, HOLD off (SuperOS mode). Pattern 2 took over at the same position.

1. In SuperOS mode (HOLD + LOAD, HOLD LED off), press one of keys 1-16 while playing.
2. That pattern takes over at the next step, at the same position (modulo its length).

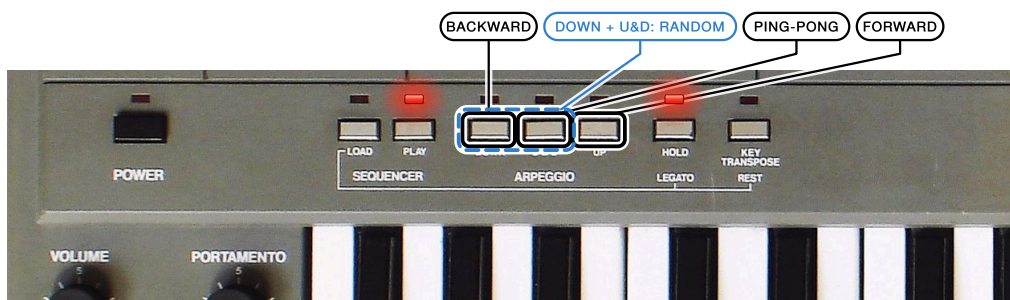
NOTE

Patterns whose lengths are multiples of each other stay in step. In performance mode row 1 keys 25-31 switch patterns 1-7 the same way.

17 PLAY DIRECTION

SEQUENCER PLAY

PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD	KEY TR.
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY stays lit: the arpeggio LEDs do not show the direction.

1. While playing, with PLAY not held, press UP (forward), DOWN (backward), U&D (ping-pong), or DOWN and U&D together (random).
2. Ping-pong repeats its end steps (1 to n, then n to 1), so a round trip is 2n steps and stays on the bar.
3. The direction is kept across power-off.

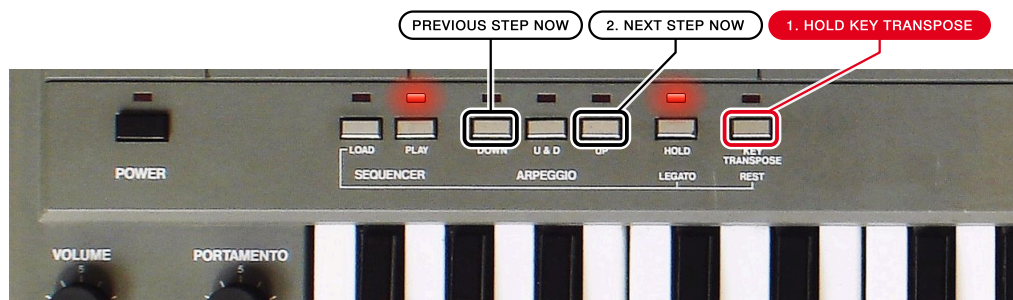
NOTE

Config menu keys 15-18 set it too. With PLAY held these buttons randomize the pattern instead (Randomize and Scale).

18 SHIFT

SEQUENCER PLAY

PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

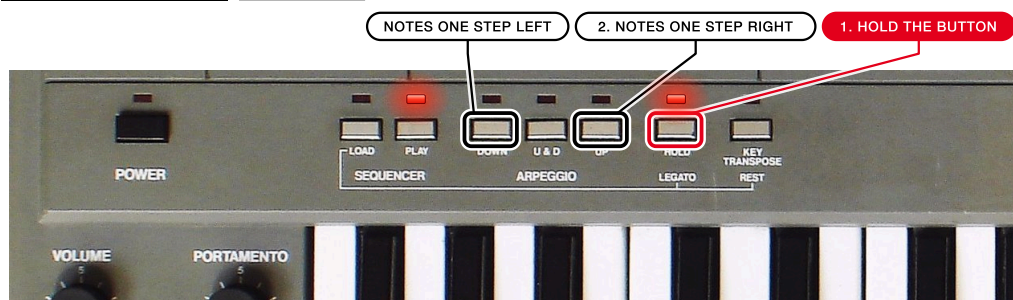
PLAY lit; the pattern moved one step ahead of the clock.

1. While playing, hold KEY TRANSPOSE.
2. UP plays the next step at once, DOWN the previous one: the pattern moves against the clock.

19 NUDGE

SEQUENCER PLAY

PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit (HOLD lights only while held). The notes moved, the timing did not.

1. While playing, hold the HOLD button.
2. UP moves every note one step right (later), DOWN one step left (earlier). Ratchets move with their steps; the pattern wraps around.
3. The move lands at the next half-step: the sounding note has already started and the next one is not chosen yet, so nothing is cut or doubled and the beat never moves.

NOTE

Unlike Shift, which moves the playhead against the clock, Nudge moves the notes inside the pattern. The web editor has the same as ◀ Nudge / Nudge ▶ (Shift + arrow keys), with Undo.

20 LOOP LENGTH, LIVE

SEQUENCER PLAY

PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Key 2 with HOLD held: only the first 2 steps loop.

1. While playing, hold the HOLD button and press key n: only the first n steps loop (key 1 = 1 step).
2. The same key again: the full pattern.

NOTE

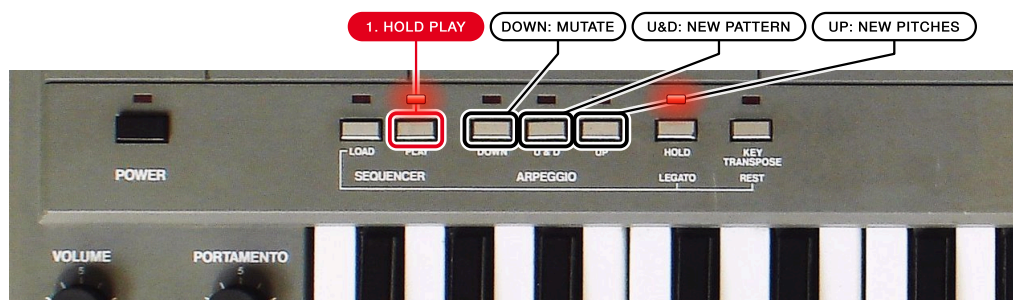
Nothing is erased. The HOLD pedal does not do this; it keeps its hold (or transpose) job.

RANDOMIZE AND SCALE

21 RANDOMIZE

SEQUENCER

STOPPED OR PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY stays lit: a new pattern while playing. No LED shows a randomize.

1. Hold PLAY and press U&D: a new pattern, rhythm and pitch.
2. PLAY held + UP: new pitches, the rhythm stays. PLAY held + DOWN: mutate, 2 to 4 small edits.
3. It works stopped or playing and never starts play. Written notes land in the pattern's scale when one is on.

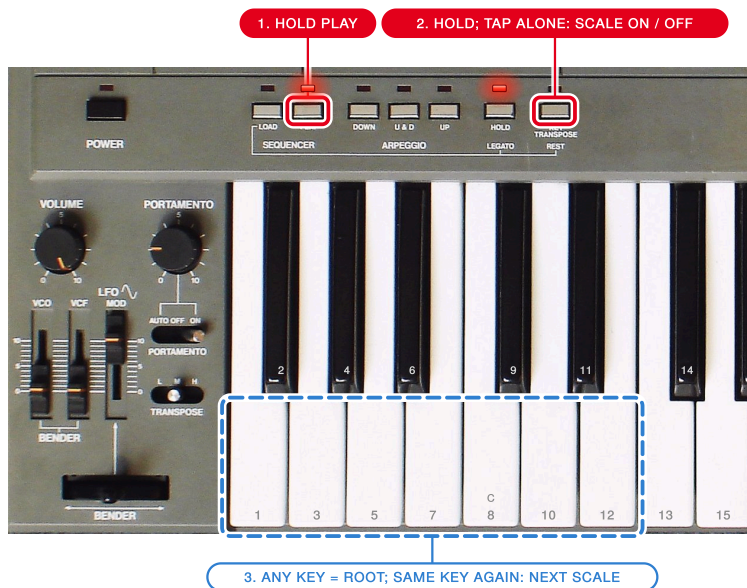
NOTE

Under PLAY held these buttons no longer switch the arpeggio or the direction. The current pattern is changed in place and stored like any edit.

22 SCALE

SEQUENCER

STOPPED OR PLAYING



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY stays lit: C root, second scale. No LED shows the scale.

1. Hold PLAY and KEY TRANSPOSE and press a key: that note is the root, with Major. Key 8 = C.
2. Press the same key again to step through the 35 scales (the SuperOS-303's list, Major first).
3. Hold PLAY and tap KEY TRANSPOSE alone: scale on / off.

NOTE

The scale belongs to the pattern and is stored with it. It is non-destructive: the output snaps to the nearest scale note (the lower one on a tie) before any transpose, and the steps themselves are unchanged. Under PLAY held, KEY TRANSPOSE neither transposes nor counts toward the transpose-mode double tap.

PERFORMANCE MODES

23 PERFORMANCE / SUPEROS MODE

ANY MODE BUT LOAD

ANY TIME



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit, HOLD lit: performance mode, the keys are the overlay.

1. Hold HOLD and press LOAD: performance mode on or off. The choice is saved.
2. Performance mode: while a sequence plays the HOLD LED stays lit and the keys are the performance rows. The HOLD LED flashes three times when you switch it on.
3. SuperOS mode: HOLD LED off (one flash when you switch), the keys switch patterns 1-16 while playing.

NOTE

Ratchet recording, randomize and mutate (PLAY + UP / DOWN / U&D), nudge, shift, loop length and the scale gestures work in both modes: they use a held function button. Performance choices keep playing in SuperOS mode until reset.

SEQUENCER PLAY

PLAYING



☐

☒

☐

☐

☐

☒

☐

LOAD

PLAY

DOWN

U&D

UP

HOLD KEY TR.

OFF

ON

OFF

OFF

OFF

ON

OFF

PLAY lit. TRANSPOSE on M: the keys are row 2, Pitch.

1. While a sequence plays, the keys are the overlay strip above them.
2. The TRANSPOSE switch picks the row: L = 1 Global, M = 2 Pitch, H = 3 Time.
3. A choice stays on until you press the same key again or reset it. Nothing is written into the pattern.

NOTE

Only while playing with no function button held: HOLD + key, PLAY + key and KEY TRANSPOSE + key keep their jobs. Stopped, the keys play notes and the switch sets the octave. The web editor can turn the overlay off.

25 ROW 1: GLOBAL

SEQUENCER PLAY

PLAYING, TRANSPOSE ON L

20-24: LFO/S&H SYNC 25-31: PATTERN 1-7

1-12: TRANSPOSE 13-19: OCTAVE VARIATIONS RESET

KEY TRANSPOSE lit: key 10 transposed the pattern up 2, from the next step.

Key	Function	Color
1	-7	Blue
2	-6	Blue
3	-5	Blue
4	-4	Blue
5	-3	Blue
6	-2	Blue
7	-1	Blue
8	0	Blue
9	+1	Blue
10	+2	Blue
11	+3	Blue
12	+4	Blue
13	OCT 1	Orange
14	OCT 2	Orange
15	OCT 3	Orange
16	OCT 4	Orange
17	OCT 5	Orange
18	OCT 6	Orange
19	RANDOM	Orange
20	LFO 1/16	Green
21	LFO 1/8	Green
22	LFO 1/4	Green
23	LFO 1/2	Green
24	LFO 1/1	Green
25	PAT 1	Purple
26	PAT 2	Purple
27	PAT 3	Purple
28	PAT 4	Purple
29	PAT 5	Purple
30	PAT 6	Purple
31	PAT 7	Purple
32	RESET	Yellow

1. Keys 1-12 transpose from the lowest C (key 8 = none), from the next step on.
2. Keys 13-19: octave variations 1-7 (7 = a random octave each step).
3. Keys 20-24: the LFO (and its random S&H) restarts on a 1/16, 1/8, 1/4, 1/2 or 1/1 grid. The same key again stops the restart.
4. Keys 25-31: patterns 1-7, switched at the next step, at the same position.

NOTE

Key 32 alone clears the row (transpose, octaves, LFO sync); held + a key turns that function off. Every choice lands on the next step, never on the sounding note.

26 ROW 2: PITCH

SEQUENCER PLAY

PLAYING, TRANPOSE ON M

20-26: SCALE TYPE CYCLE PARTNER 28-31: COMBINE

1-7: REORDER NOTES 8-19: ROOT C-B RESET

Key	Function
2	REVERSE
4	ODD
6	FWD +1
8	C
9	C#
10	D
11	D#
12	E
13	F
14	F#
15	G
16	G#
17	A
18	A#
19	B
20	MAJOR
21	MINOR
22	DORIAN
23	LYDIAN
24	PHRYG
25	LOCRIAN
26	CYCLE
27	SUB
28	ADD
29	DIV
30	DIFF
31	RESET
32	RESET

LOAD PLAY DOWN U&D UP HOLD KEY TR.
OFF ON OFF OFF OFF ON OFF

PLAY lit. Key 2: the notes play in reverse order, the rhythm is kept.

1. Keys 1-7 reorder the notes: as written, reverse, cycle even, cycle odd, prime, and one forward / one back, which move one note further every loop pass.
2. Keys 8-19 set the quantizer root, keys 20-26 the type: major, minor, dorian, harmonic minor, lydian, phrygian, locrian. The quantizer acts after reorder and combine, so it scales the combined notes too. Its key again turns the scale off, and on again.
3. Key 27 cycles the partner pattern through the saved ones; keys 28-31 combine the pitches with it: add, subtract, divide, difference.

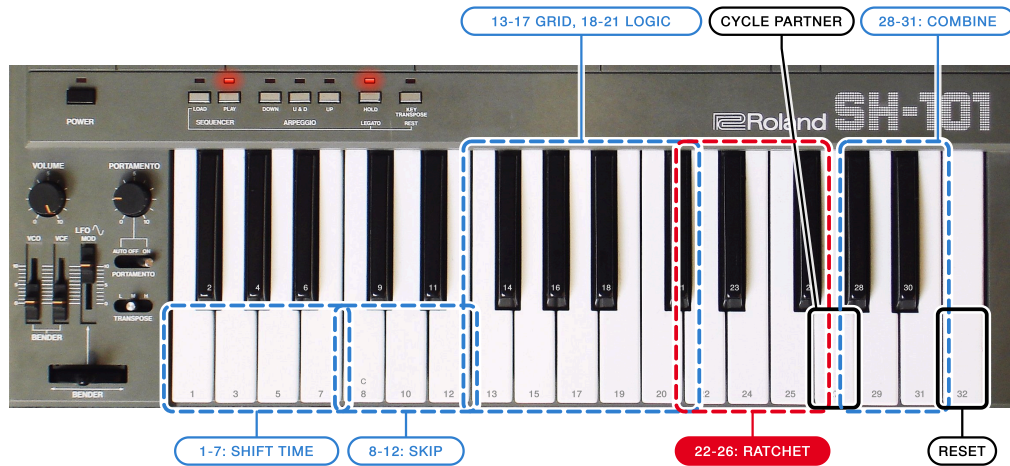
NOTE

A root alone uses major, a type alone uses C. With no partner picked, it is the next pattern. Key 32 alone clears the row; key 32 held + a key turns that function off.

27 ROW 3: TIME

SEQUENCER PLAY

PLAYING, TRANPOSE ON H



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit. Key 5: the pattern plays a sixteenth later.



- Keys 1-7 shift time: 1/4 right, left; 1/8 right, left; 1/16 right, left; 3/16 right.
- Keys 8-12 skip every 4th, every 8th, even, odd or every 5th clock: silent, the pattern waits.
- Keys 13-17 pick a grid (1/4 1/8 1/16 1/4T 1/16T), keys 18-21 how it meets the step clock (NOR OR AND XOR): OR adds steps, AND deletes them.
- Key 27 cycles the rhythm partner through the saved patterns; keys 28-31 combine the rhythm with it: AND OR NOR XOR.

NOTE

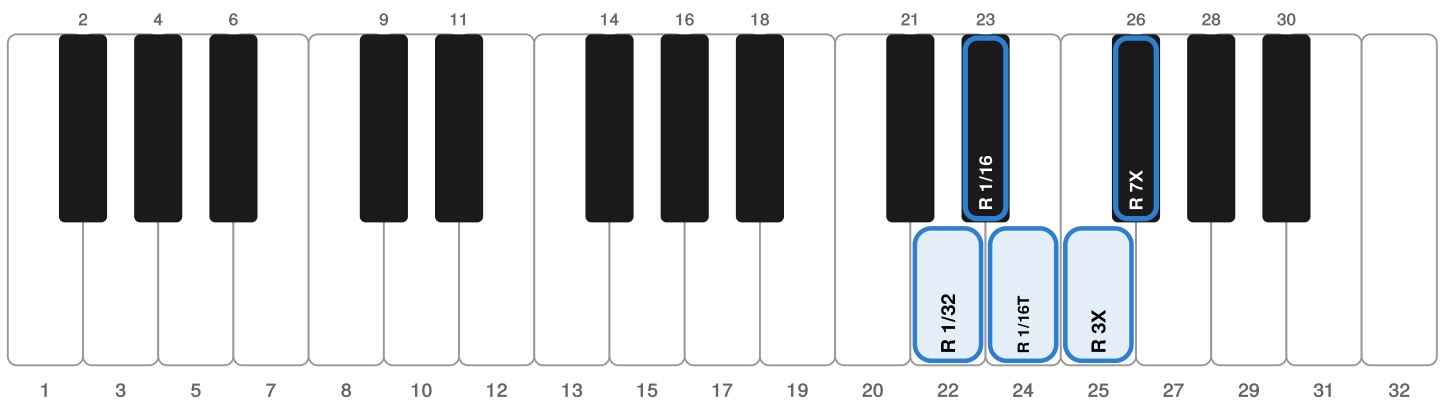
The grid follows the MIDI clock when it drives the SH-101. Ratchet (keys 22-26) is on the next page. Key 32 alone clears the row.



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit. Key 23 held: from the next step its note repeats every sixteenth.

HOLD 22-26: 1/32 1/16 1/16T 3x 7x



1. Hold one of keys 22-26: from the next step its note repeats at 1/32, 1/16, 1/16 triplets, 3 or 7 times a step.
2. The pattern runs on underneath: let go and it carries on where it would be.

NOTE

Ratchet is the one function that does not latch.

SEQUENCER PLAY
PLAYING

2. LOAD: WRITE WHAT PLAYS

1. HOLD KEY TRANSPOSE



HOLD 1 S: RESET ALL ROWS

☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit: still playing, now from the written pattern.

1. KEY TRANSPOSE + LOAD while playing writes one pass of what plays into the pattern: reorder, quantizer, combine, octave variation, shift and transpose become its notes.
2. Those settings are then cleared, so the new pattern is the baseline and sounds the same. The LFO/S&H sync and the timing ones (skip, add/delete) stay on.
3. Key 32 tapped clears its row; held for 1 second it clears all three rows.

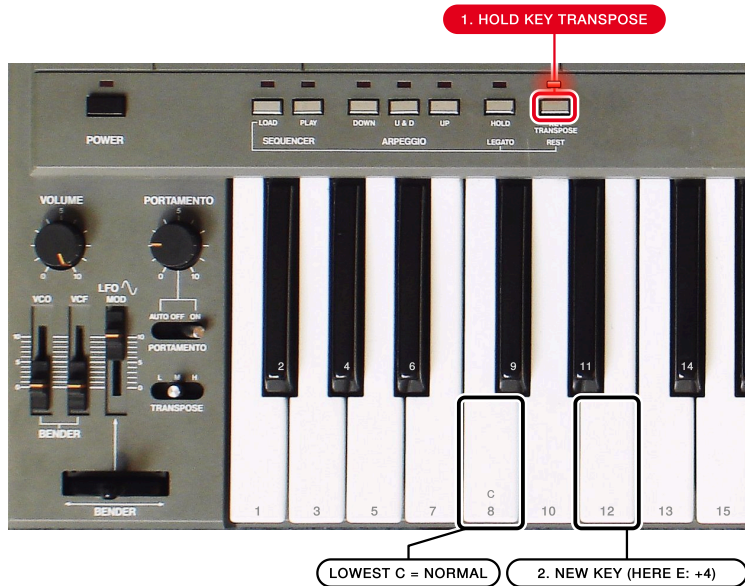
NOTE

Writing changes the stored pattern; everything else in the overlay never does.

30 KEY TRANPOSE

ANY MODE BUT LOAD

ANY TIME



☐	☐	☐	☐	☐	☐	☒
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	OFF	OFF	OFF	ON

KEY TRANPOSE lit: transposed up 4 semitones (key 12 = E).

1. Hold KEY TRANPOSE and press a key: everything that plays moves by its distance from the lowest C (key 8). The LED stays lit.
2. It stays after you let go: keyboard, arpeggio and sequencer all follow.
3. KEY TRANPOSE + key 8 returns to normal and the LED goes out.

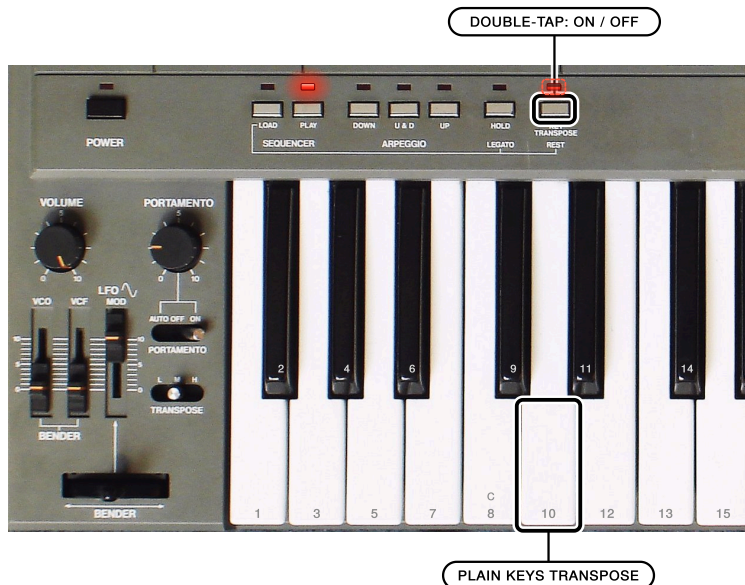
NOTE

Unlike the stock SH-101 the transpose also reaches CV OUT and MIDI OUT.

31 TRANPOSE MODE

SEQUENCER PLAY OR HELD ARPEGGIO

ANY TIME



☐	☒	☐	☐	☐	☐	☒
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	OFF	BLINK

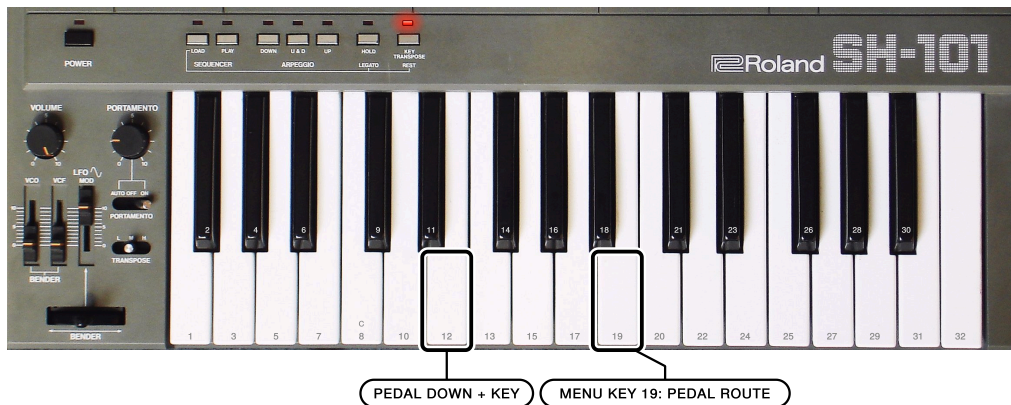
KEY TRANPOSE blinking: transpose mode. Key 10 moved the pattern up 2.

1. Tap KEY TRANPOSE twice quickly: its LED blinks.
2. While the sequencer plays, or an arpeggio runs latched by HOLD, plain keys transpose: no button to hold.
3. Double-tap again to leave; the last transpose stays.

32 PEDAL AS KEY TRANSPOSE

CONFIG MENU, THEN ANY MODE

SET ONCE



☐	☐	☐	☐	☐	☐	☒
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	OFF	OFF	OFF	OFF	OFF	ON

Pedal down + key 12 after key 19:
KEY TRANSPOSE lit, transposed.

1. In the config menu press key 19: the HOLD pedal jack now acts as the KEY TRANSPOSE button.
2. Hold the pedal and press a key to transpose; double-tap it for transpose mode; in LOAD it enters a rest.
3. Key 19 again in the menu: back to HOLD.

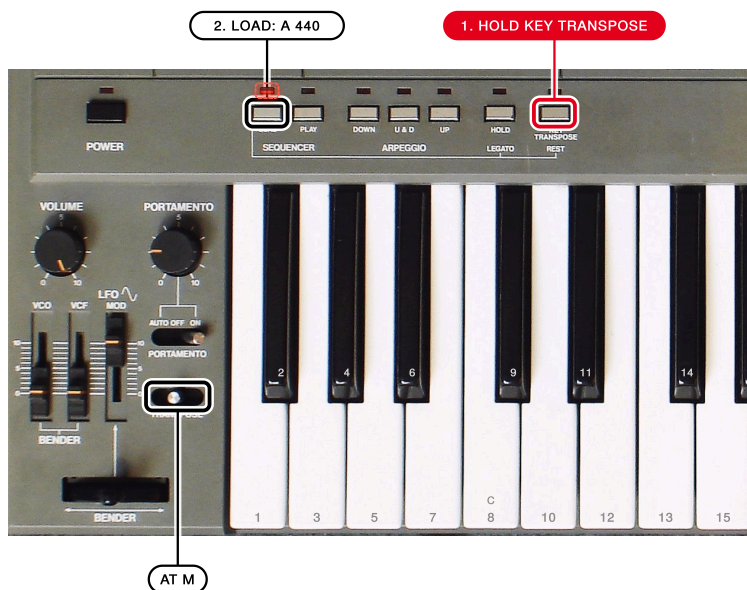
NOTE

Kept across power-off. The HOLD button keeps working as HOLD.

33 TUNE

KEYBOARD

KEYBOARD MODE



☒	☐	☐	☐	☐	☐	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
BLINK	OFF	OFF	OFF	OFF	OFF	OFF

LOAD blinking: the tune note is
sounding.

1. From keyboard mode, hold KEY TRANSPOSE and press LOAD: the LOAD LED blinks and an A sounds with the gate open.
2. At 8' with TRANSPOSE on M it is 440 Hz; MIDI OUT sends note 69 for a tuner.
3. Set TUNE, then press any function button to leave.

34 ENTER AND LEAVE

CONFIG MENU

ANY TIME



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

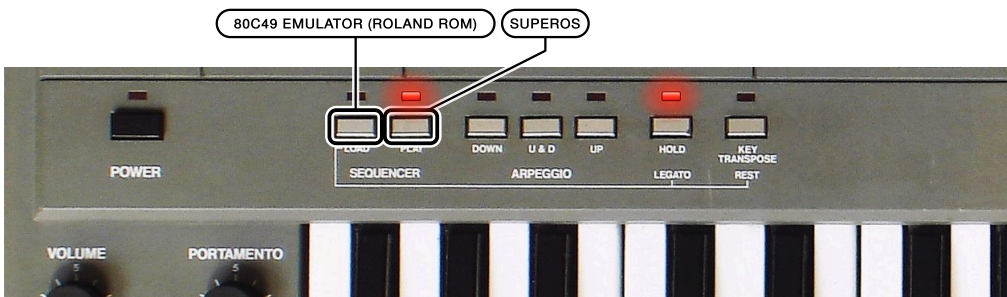
Menu: HOLD lit; PLAY lit =
SuperOS is running.

1. Hold HOLD and KEY TRANSPOSE together for 2 seconds (or while switching on).
2. The HOLD LED lights, the gate closes, and LOAD (80C49 emulator) or PLAY (SuperOS) shows the firmware that is running. KEY TRANSPOSE lit = MIDI clock sync on.
3. Press KEY TRANSPOSE to leave. Every setting is kept across power-off.

35 FIRMWARE: SUPEROS OR ORIGINAL

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit: SuperOS is running.

1. In the menu, LOAD restarts into the 80C49 emulator: the original Roland program.
2. PLAY restarts into SuperOS.
3. The choice is kept; the menu works the same way in both.

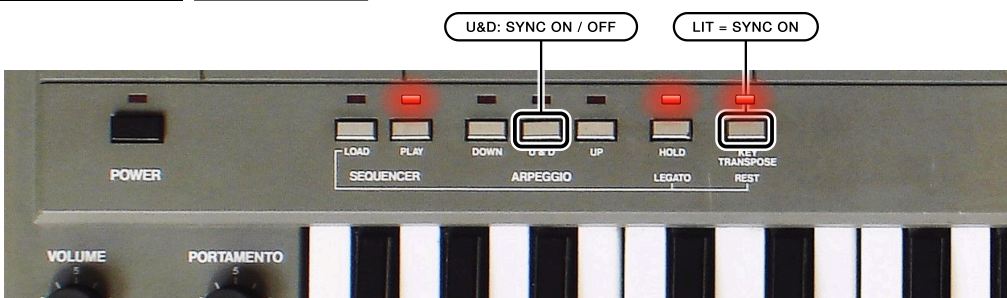
NOTE

In emulator mode the stock SH-101 behaves as from the factory (100 steps, stock arpeggio), with MIDI and clock sync added. Its power-on test mode (LOAD + KEY TRANSPOSE) works there.

36 MIDI CLOCK SYNC

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☒
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	ON

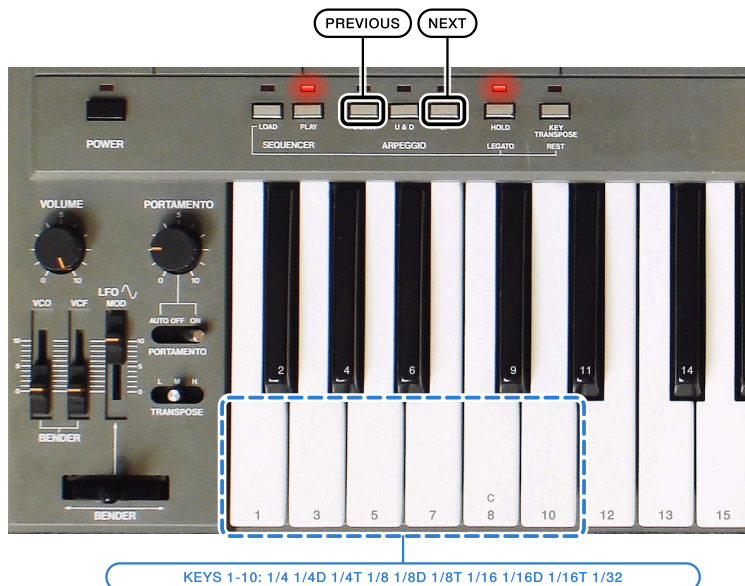
KEY TRANSPOSE lit: MIDI clock
sync is on.

1. In the menu, press U&D to switch MIDI clock sync on or off.
2. KEY TRANSPOSE lit = on. The arpeggio and sequencer then follow MIDI clock (MIDI Sync).

37 CLOCK DIVISION

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Key 7: one step per 1/16 (the default).

1. In the menu, press one of keys 1-10 for the step length: 1/4, 1/4 dotted, 1/4 triplet, 1/8, 1/8 dotted, 1/8 triplet, 1/16, 1/16 dotted, 1/16 triplet, 1/32.
2. Or step through them with UP and DOWN.

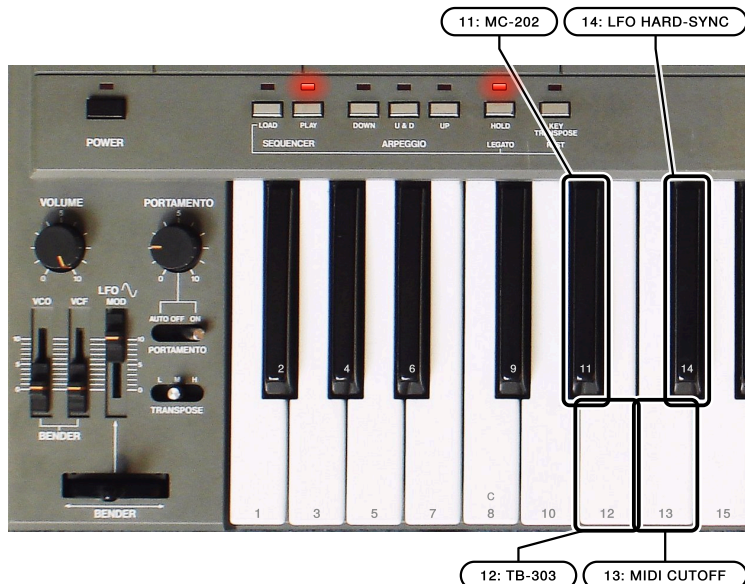
NOTE

No LED shows the division. It applies with MIDI sync on.

38 ACCENT, CUTOFF, LFO SYNC

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Key 12: TB-303 accent model.

1. Key 11 / 12: accent model, MC-202 or TB-303 style, for notes with a high MIDI velocity (on the filter and the VCA).
2. Key 13: MIDI filter cutoff (CC 74) on / off.
3. Key 14: LFO hard-sync on / off. On: with MIDI sync the LFO is reset to the clock. Off: the LFO runs free for modulation while the steps still follow the clock.

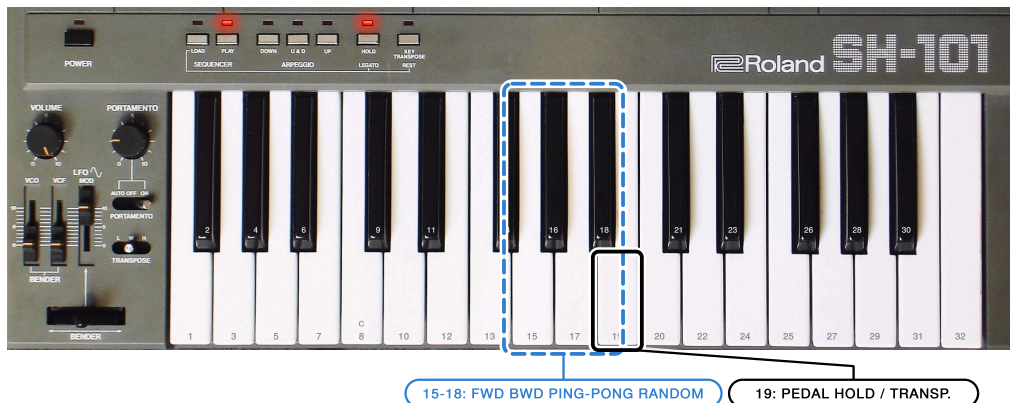
NOTE

Accent and cutoff need the CV DAC (board v1.1 and later). No LED shows these settings.

39 DIRECTION AND PEDAL

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

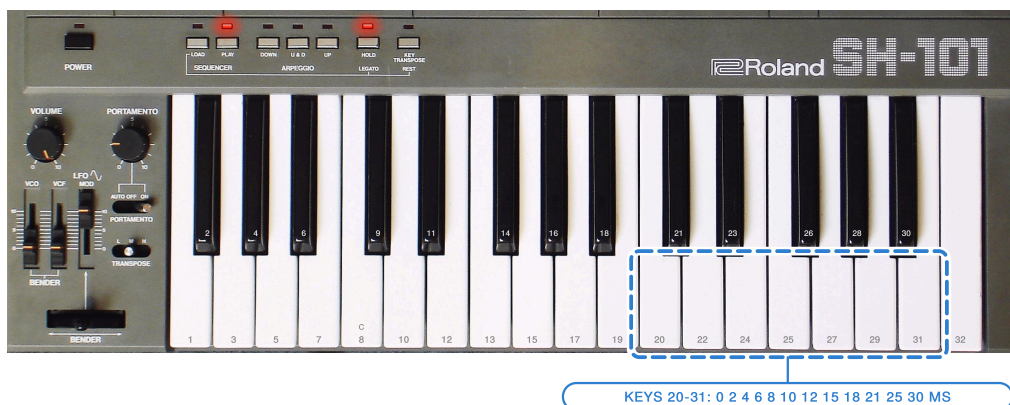
Key 17: ping-pong.

1. Keys 15-18 set the sequencer direction: forward, backward, ping-pong (the end steps repeat), random (the same setting as the buttons while playing).
2. Key 19 switches the pedal jack between HOLD and KEY TRANSPOSE.

40 SYNC DELAY

CONFIG MENU

IN THE MENU



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

Key 24: 8 ms later than the clock.

1. Keys 20-31 set how much later than the incoming MIDI clock the SH-101 plays: 0, 2, 4, 6, 8, 10, 12, 15, 18, 21, 25 or 30 ms.
2. Use it to line the SH-101 up with slower gear or a delayed listening path.

NOTE

Only with MIDI sync on. The editor can set 0 to 60 ms.

41 HOST TRANSPORT

SEQUENCER, SYNC ON

MIDI CLOCK SYNC ON

LIT FROM MIDI START; LOCAL PRESS ARMS



☐	☒	☐	☐	☐	☒	☐
LOAD	PLAY	DOWN	U&D	UP	HOLD KEY TR.	
OFF	ON	OFF	OFF	OFF	ON	OFF

PLAY lit: the host's Start started the sequencer.

1. With sync on, MIDI Start starts the sequencer from the first clock, MIDI Stop stops it.
2. Pressing PLAY yourself only arms it: the first step waits for the host's clock.
3. A synced SH-101 never runs on its own: no clock, no steps. The arpeggio follows the clock too.

NOTE

Start does not interrupt a running arpeggio or LOAD. With sync off, Start only rewinds a pattern that is already playing.

LEDS

LED	MEANING
LOAD lit	Recording (LOAD); in the menu: 80C49 emulator running
LOAD blinks	Tune
PLAY lit	Sequencer playing (or armed); in the menu: SuperOS running
PLAY + LOAD alternate	Real-time record
DOWN / U&D / UP lit	Arpeggio direction
U&D blinks	Random arpeggio
HOLD lit	HOLD button or pedal down; in the menu: the menu is open
KEY TRANSPOSE lit	A transpose is active; in the menu: MIDI clock sync on
KEY TRANSPOSE blinks	Transpose mode

PLAYING

GESTURE	FUNCTION
Keys	play; the lowest held key sounds
HOLD button or pedal down + keys	keys latch while it is down
TRANSPOSE switch L / M / H	octave down / normal / up
PORTAMENTO switch AUTO	only legato notes glide

ARPEGGIO

GESTURE	FUNCTION
UP / DOWN / U&D	arpeggio; same button again = off
DOWN + U&D together	random arpeggio; again = off
Arp on: KEY TRANSPOSE + UP / DOWN	octave range 1-3
Arp + HOLD or pedal + chord	latched arpeggio

SEQUENCER

GESTURE	FUNCTION
Stopped: LOAD, keys, LOAD	record a new pattern
In LOAD: HOLD + key / KEY TRANSPOSE / UP / DOWN	legato / rest / ratchet / undo
PLAY	play / stop
Playing: LOAD	re-record from the next step
Playing: PLAY + LOAD	real-time record on / off
PLAY + key 1-8	pattern (stopped: starts; playing: at loop end)
PLAY + several keys 1-8	song, up to 16, loops
SuperOS mode, playing: key 1-16	switch to pattern 1-16 now
Playing: UP / DOWN / U&D / DOWN + U&D	forward / backward / ping-pong / random
Playing: KEY TRANSPOSE + UP / DOWN	shift a step ahead / back
Playing: HOLD button + UP / DOWN	nudge the notes a step right / left
Playing: HOLD button + key n	loop the first n steps; again = full

RANDOMIZE AND SCALE

GESTURE	FUNCTION
PLAY + U&D / UP / DOWN	new pattern / new pitches / mutate
PLAY + KEY TRANSPOSE + key / tap	scale root (again = next scale) / scale on-off

PERFORMANCE MODES

GESTURE	FUNCTION
HOLD + LOAD	performance mode (HOLD LED lit while playing) / SuperOS mode
Playing: TRANSPOSE L / M / H	performance row Global / Pitch / Time
Row 1 (L): keys 1-12 / 13-19 / 20-24 / 25-31 / 32	transpose / octaves / LFO sync / patterns / reset
Row 2 (M): keys 1-7 / 8-19 / 20-26 / 27 / 28-31	reorder / root / scale / partner / combine pitch
Row 3 (H): keys 1-7 / 8-12 / 13-21 / 27 / 28-31	shift / skip / add-delete / partner / combine rhythm
Row 3 (H): hold key 22-26	ratchet from the next step
Playing: KEY TRANSPOSE + LOAD / key 32 held 1 s	write what plays / reset every row

TRANSPOSE AND TUNE

GESTURE	FUNCTION
KEY TRANSPOSE + key	transpose; + key 8 (lowest C) = normal
Double-tap KEY TRANSPOSE	transpose mode on / off
Menu key 19	pedal acts as KEY TRANSPOSE
Keyboard mode: KEY TRANSPOSE + LOAD	tune note A 440; any button exits

CONFIG MENU

GESTURE	FUNCTION
HOLD + KEY TRANSPOSE 2 s	config menu; KEY TRANSPOSE exits
Menu: LOAD / PLAY	80C49 emulator / SuperOS
Menu: U&D	MIDI clock sync on / off
Menu: keys 1-10, UP / DOWN	clock division
Menu: keys 11-14	accent MC-202 / TB-303, MIDI cutoff, LFO hard-sync
Menu: keys 15-18 / 19	sequencer direction / pedal route
Menu: keys 20-31	sync delay 0-30 ms

MIDI SYNC

GESTURE	FUNCTION
Sync on: MIDI Start / Stop	run the sequencer; PLAY only arms

MIDI

Notes 53 to 84 on the receive channel act as keys 1 to 32 (they arpeggiate and record); other notes 36 to 99 play the voice. Program change 0 to 7 selects pattern 1 to 8. Everything played goes out on MIDI OUT. The web editor (tools/web-editor) edits patterns and settings over USB-C or DIN.

RESYNC

The editor's Resync button (SysEx 0x65 id 9) puts the sequence back on the one. It has no panel gesture. Direction, loop length, pattern switches and clock-division changes never move the sequence off the grid.

ABOUT THESE PAGES

The LEDs in every drawing are what the SuperOS-101 firmware (rev e5e9b18*) shows in the host simulator (sim/superos101-sim, the real firmware source) after the keys of that function, on a fresh machine, drawn on a photo of a production SH-101 (lit LEDs glow red; a blinking LED is half lit inside a dashed ring). Most drawings show the button strip, controllers and keyboard. Details: README.md.

Panel photo: Wikipedia user 909 bd, Wikimedia Commons, CC BY-SA 3.0. The panel images in this guide are adaptations of that photo, under the same license (creativecommons.org/licenses/by-sa/3.0).