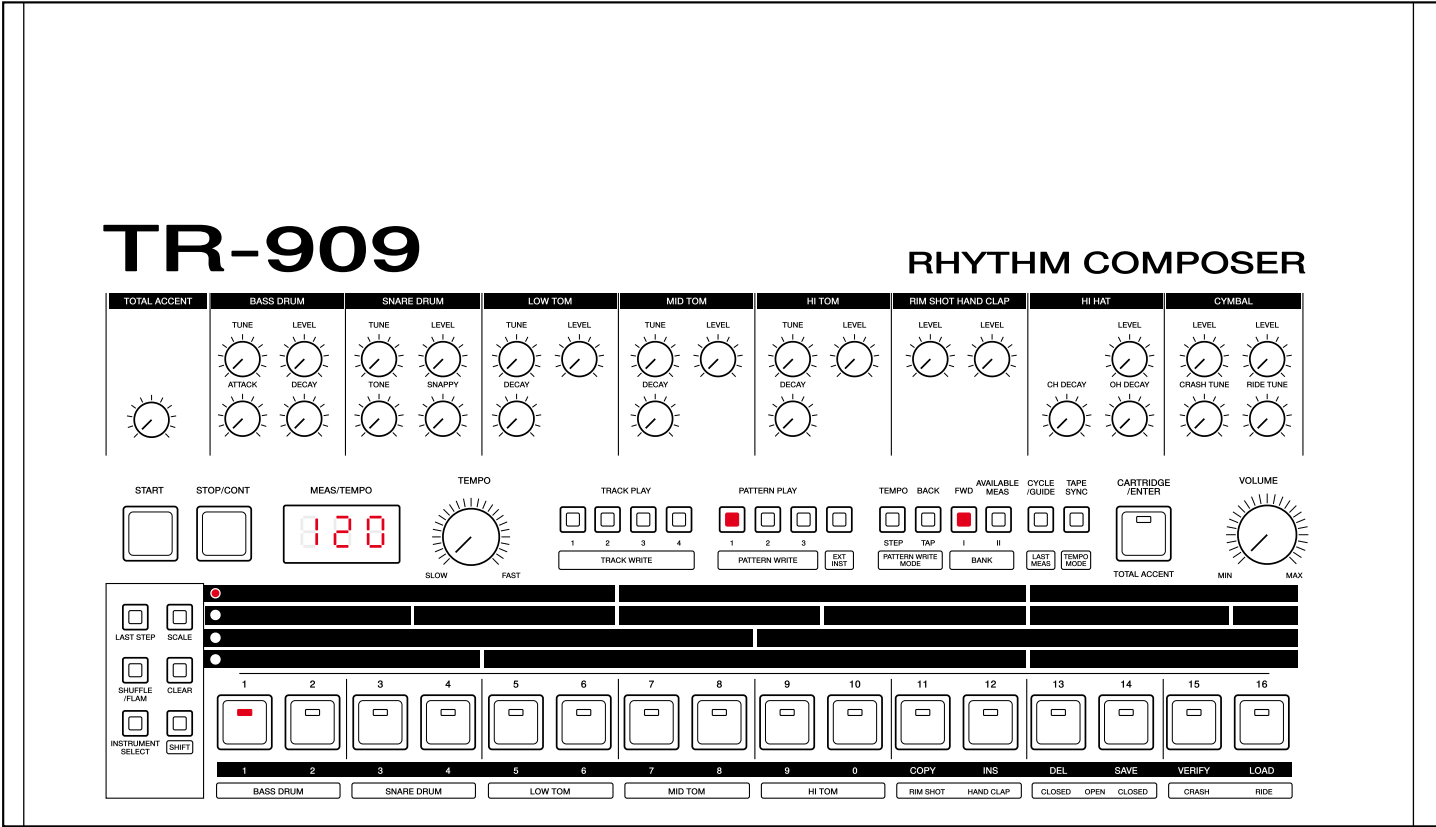


# superOS-909

## SHORTCUT GUIDE

BUILD 2026-10-08 · CUSTOM FIRMWARE FOR THE TR-909  
8 KB PROGRAM EPROM · NO BOARD CHANGES

Every superOS-909 function on one drawing each: the panel, the keys involved, the order to press them, and the the LEDs and display the machine shows while you do it. Find the function, look at the picture, follow the numbered steps.



READING THE DRAWINGS

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

LEDs AND DISPLAY

● lit    ● blinking    ○ off

The box beside each drawing is the three-digit display at that moment. Grey text under a key is its superOS-909 function.

WORDS

A + B: hold A, then press B. Tap: press and release with nothing else held.

Running: the sequencer is started.

Selected instrument: the one picked with INST SELECT + main key. The header gives the mode and when it works.

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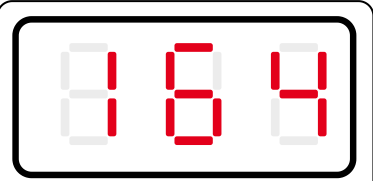
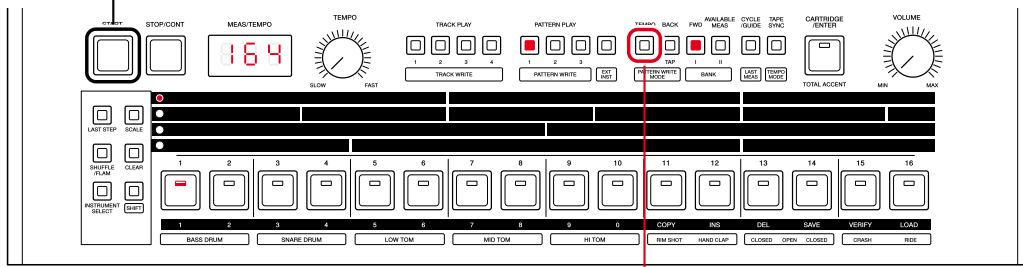
## REFERENCE

|  |                                      |    |
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## 1 POWER-ON

**PATTERN PLAY** **SWITCHING ON**

START PLAYS PATTERN 1



TEMPO held: the tempo. With MIDI or DIN sync it shows 1 or 2 instead.

**HOLD: TEMPO OR SYNC CODE**

1. Switch on. The 909 comes up in Pattern Play, group I, pattern 1, stopped, display blank.
2. Press START: pattern 1 plays. STOP/CONT stops it.
3. Hold TEMPO at any time to see the tempo, or the sync code when the clock is external.

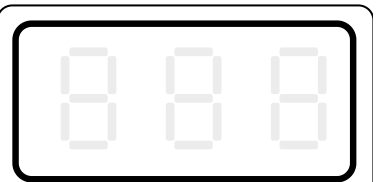
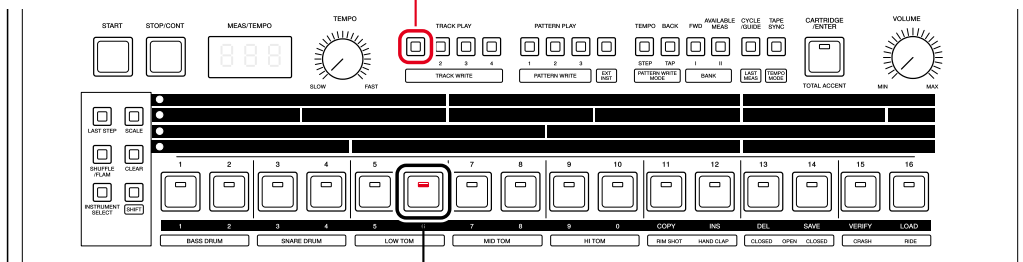
### NOTE

TRACK 1 takes you to Track Play. A machine with blank or random memory formats itself at power-on.

## 2 VERSION CHECK

**POWER-ON** **HOLD WHILE SWITCHING ON**

**HOLD TRACK 1, SWITCH ON**



Main key 6 blinking: superOS-909 is running.

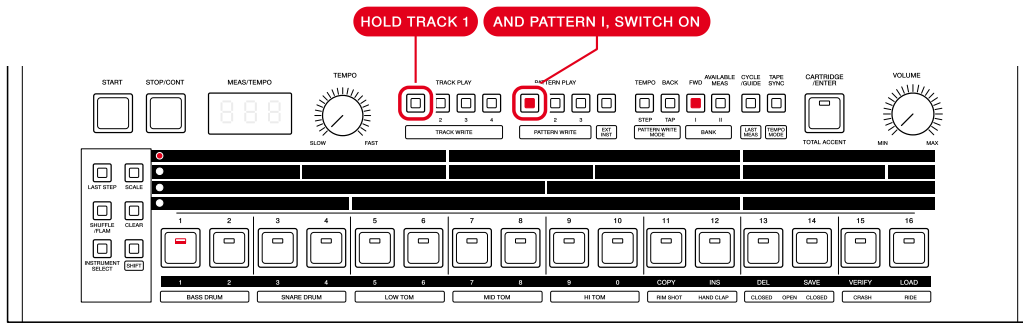
**KEY 6 BLINKS**

1. Hold TRACK 1.
2. Switch on and keep holding: main key 6 blinks. Let go to continue.

### 3 MEMORY FORMAT

POWER-ON

HOLD WHILE SWITCHING ON



Formatting erases every pattern and track in both banks.

1. Hold TRACK 1 and PATTERN GROUP I.
2. Switch on. Both banks are erased. There are no demo patterns.
3. The EXT INST notes go back to 36 to 51, MIDI thru to on and MIDI clock out to always.

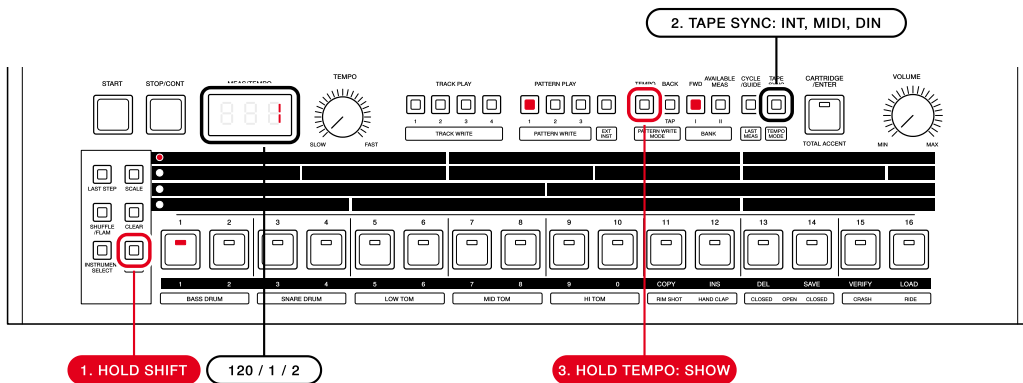
#### NOTE

Memory from the original firmware is formatted at the first start, so its patterns and tracks are lost. Memory from an earlier superOS-909 build keeps its patterns; its tracks are cleared once.

### 4 SYNC MODE

ANY MODE

STOPPED



Display 1: MIDI sync. Internal shows the tempo, DIN sync shows 2.

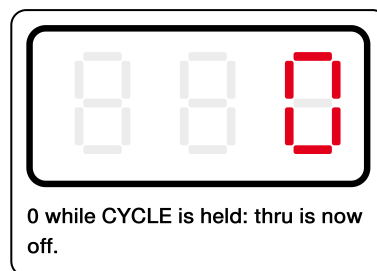
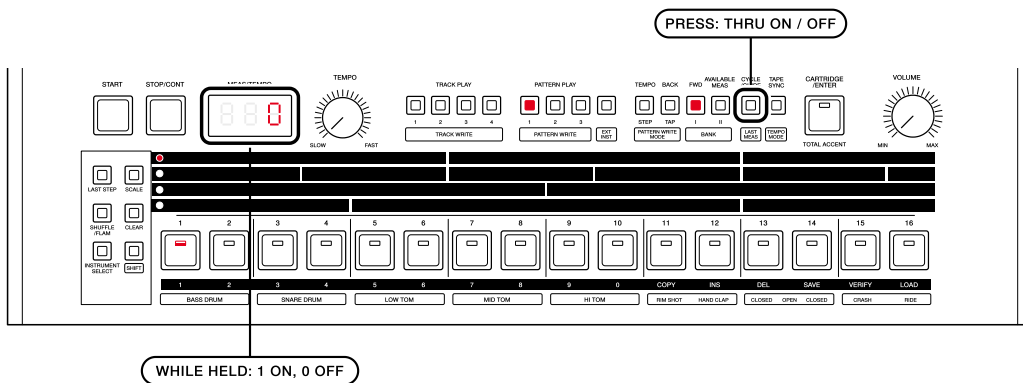
1. Hold SHIFT and press TAPE SYNC. Each press steps internal, MIDI, DIN.
2. The display shows the mode: the tempo (internal), 1 (MIDI) or 2 (DIN).
3. Hold TEMPO later to see it again.

#### NOTE

MIDI Start and Continue are obeyed only in MIDI sync. MIDI Stop stops in every mode. When a DIN master stops, the 909 stops at once. While running, SHIFT + TAPE SYNC is the reslice layer instead.

## 5 MIDI THRU ON / OFF

PATTERN PLAY STOPPED



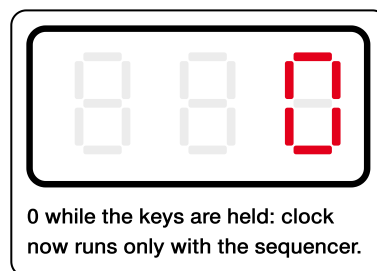
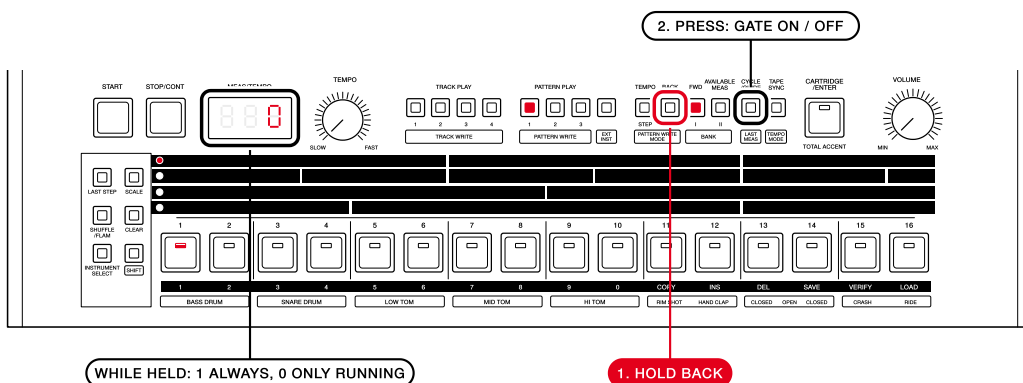
1. In Pattern Play, stopped, press CYCLE. Each press switches MIDI soft thru.
2. While you hold it the display shows the new state: 1 = on, 0 = off.

### NOTE

Thru off stops copying notes, controllers, program changes, bend and pressure; SysEx still passes. Start, Continue and Stop always pass, and clock passes in MIDI sync. Kept across power-off. CC 60 does the same.

## 6 MIDI CLOCK GATE

PATTERN PLAY STOPPED

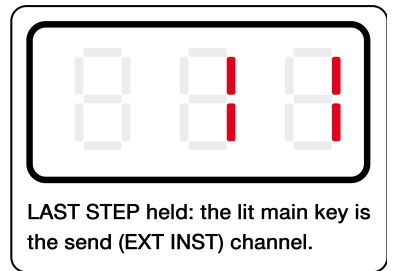
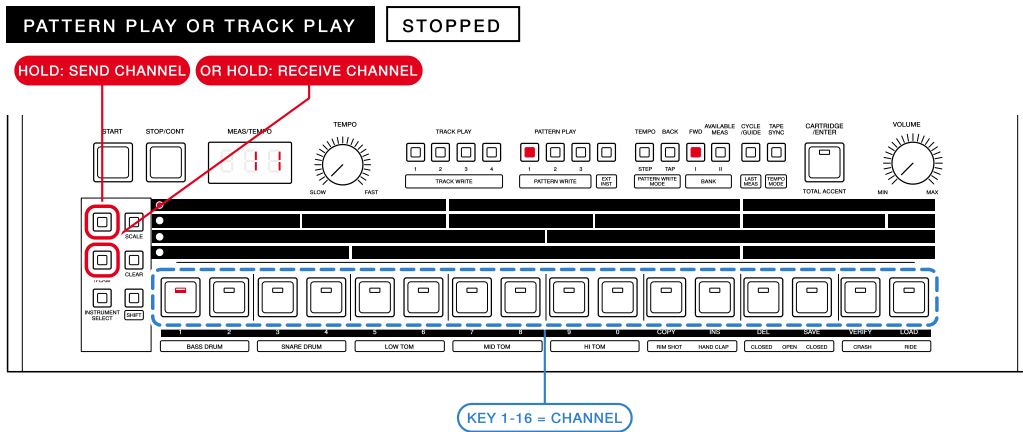


1. In Pattern Play, stopped, hold BACK and press CYCLE.
2. 1 = clock is sent all the time (the default). 0 = only while the sequencer runs.

### NOTE

Applies to the internal clock; in MIDI or DIN sync the master's clock is passed on. Kept across power-off. CC 59 does the same. CYCLE without BACK is the MIDI thru switch.

## 7 MIDI CHANNELS



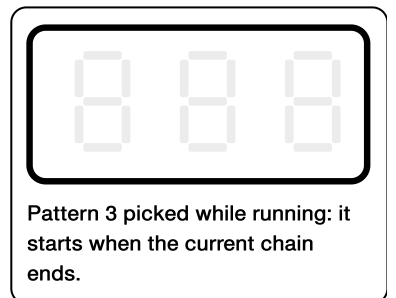
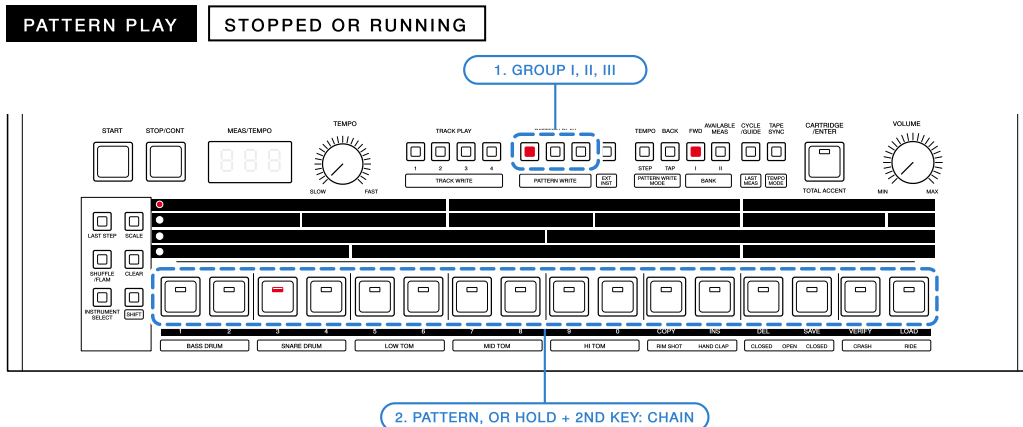
1. Hold LAST STEP to see the send channel, or SHUFFLE/FLAM for the receive (basic) channel.
2. Press main key 1 to 16 to set it. SHUFFLE/FLAM + key while stopped also sets omni off.

### NOTE

Now also in Pattern Play. Not kept at power-off: receive 10, send 11 at every start. Notes and mute CCs go out on the send channel.

## PATTERN PLAY

## 8 PATTERNS AND CHAINS

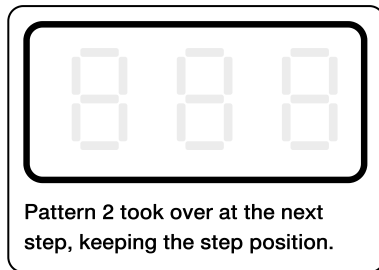
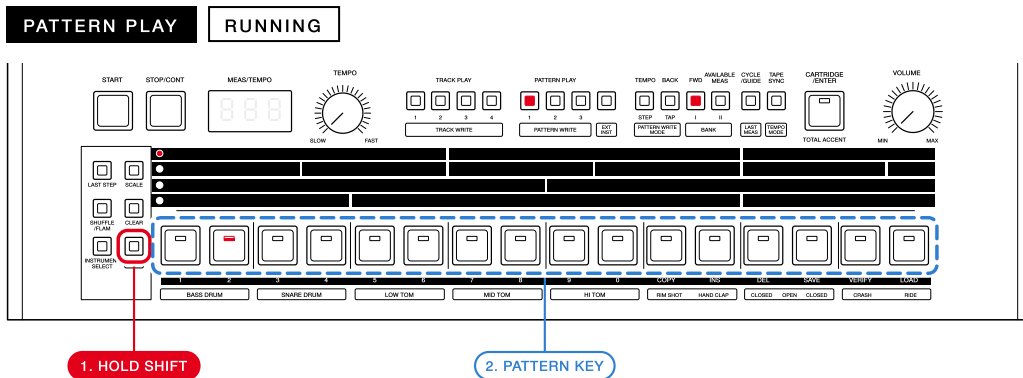


1. Press PATTERN GROUP I, II or III.
2. Press a main key for a pattern. For a chain, hold the first pattern and press the last.
3. Running, the new chain starts at the end of the current one.

### NOTE

MIDI program change 0 to 47 and notes 52 to 99 select patterns too (Reference).

## 9 INSTANT PATTERN CHANGE

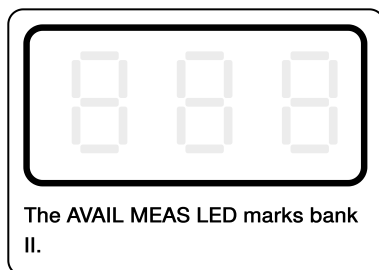
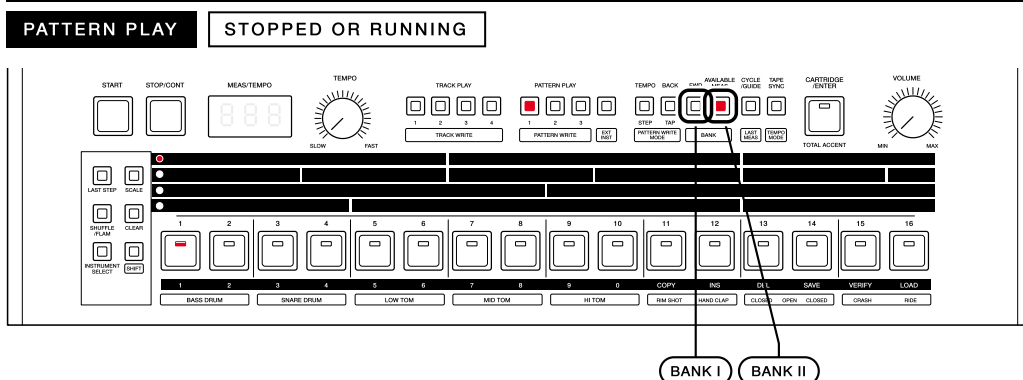


1. While running, hold SHIFT.
2. Press a main key: that pattern plays from the next step, on the same step number. The chain continues from there.

### NOTE

Last step, scale, shuffle and flam come from the new pattern from the next step on. Program change 64 to 111 does the same over MIDI.

## 10 BANKS

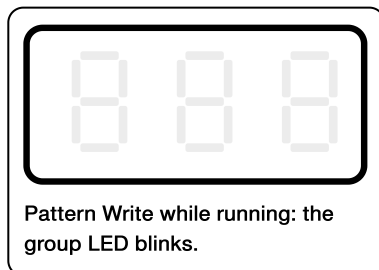
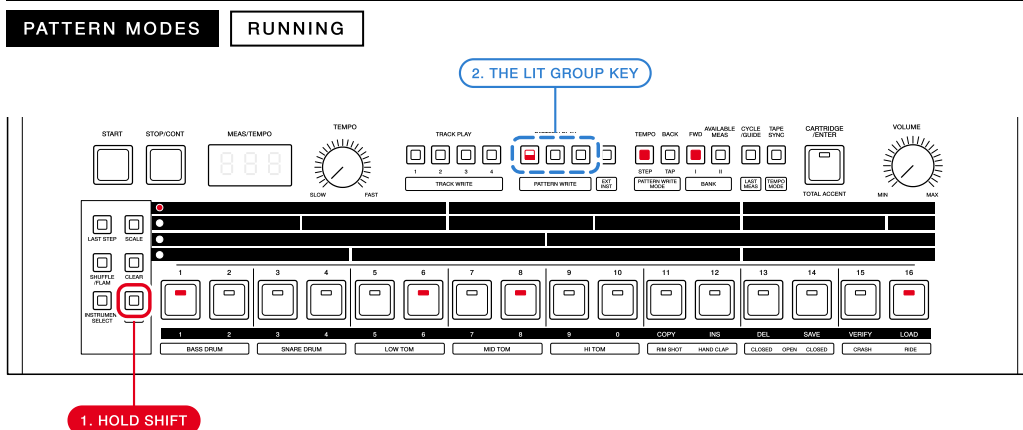


1. Press AVAIL MEAS for bank II, FWD for bank I.
2. Stopped: the bank changes at once. Running: at the end of the current chain.

### NOTE

The bank keys are ignored while the mute layer or the note editor is on.

## 11 PLAY AND WRITE WHILE RUNNING



1. Hold SHIFT and press the lit PATTERN GROUP key: Play becomes Write and back, keeping the position.
2. The group LED blinks in write mode.

## 12 STEP WRITE AND TAP WRITE

PATTERN WRITE
STOPPED OR RUNNING

1. HOLD SHIFT

2. STEP WRITE OR TAP WRITE

Step write: the STEP LED (TEMPO) is lit.

1. In Pattern Write, hold SHIFT.
2. Press TEMPO for step write or BACK for tap write. The STEP or TAP LED lights.
3. Works while running too; entering write mode selects BD. Steps are written while the pattern runs.

## 13 SELECT AN INSTRUMENT

PATTERN WRITE
STOPPED OR RUNNING

1. HOLD INST SELECT

CLEAR + KEY: ERASE (TAP)

2. INSTRUMENT KEY

SD selected in step write: the main keys now show SD's steps.

1. Hold INST SELECT and press the instrument's main key (1/2 BD, 3/4 SD, 5/6 LT, 7/8 MT, 9/10 HT, 11 RS, 12 HC, 13 CH, 14 OH, 15 CR, 16 RD).
2. In step write the main keys now set that instrument's steps.
3. In tap write, CLEAR + main key erases that instrument at the playing step.

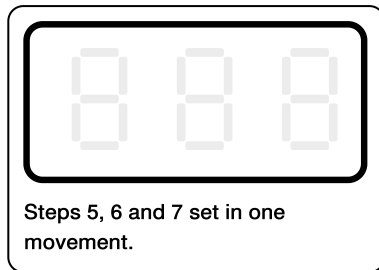
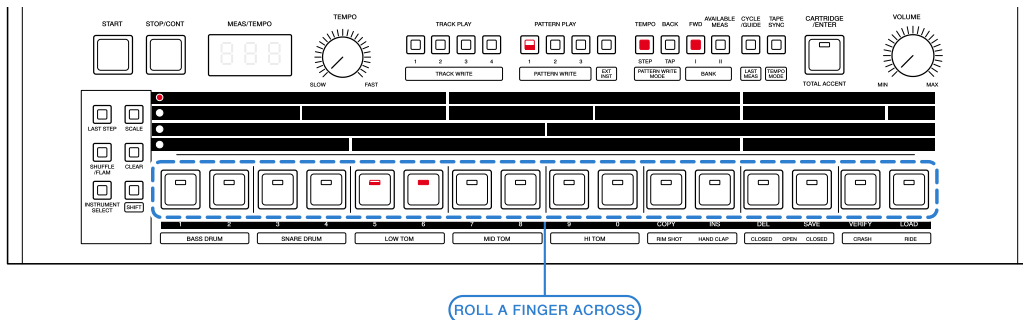
### NOTE

The selected instrument is the one the length, polymeter, nudge and randomize functions act on.

## 14 ROLL THE KEYS

PATTERN WRITE, STEP WRITE

RUNNING



1. In step write, run a finger across the main keys. Every key you touch sets its step.
2. You do not have to lift between keys, so a run of steps takes one movement.

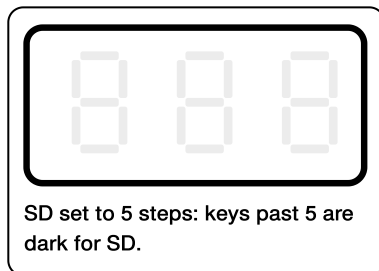
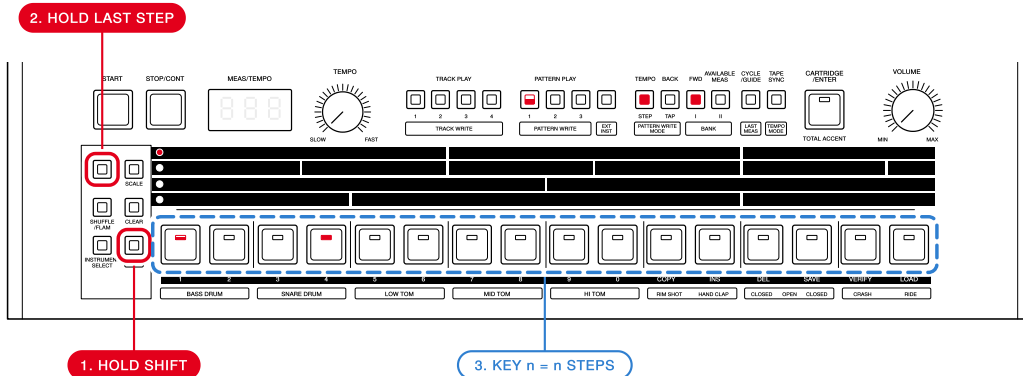
### NOTE

Only in step write. Every other mode reads the keys as before, so the chords are unchanged.

## 15 INSTRUMENT LENGTH

PATTERN WRITE, STEP WRITE

RUNNING



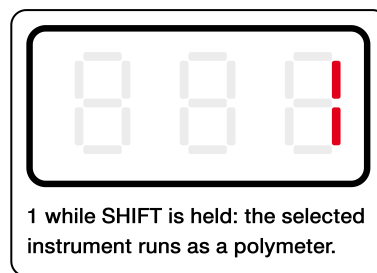
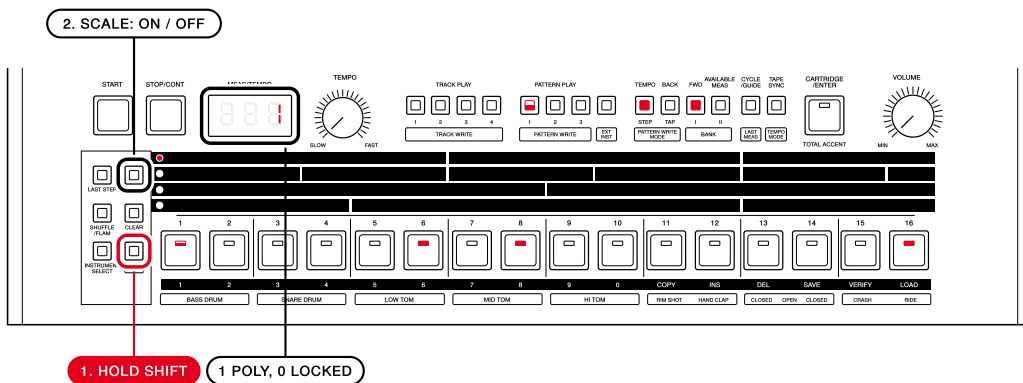
1. Start the pattern and select the instrument (INST SELECT + key).
2. Hold SHIFT and LAST STEP, press main key n: the instrument plays n steps.
3. Steps past its length are dark and cannot be set. They are kept; a longer length brings them back.

### NOTE

LAST STEP + key without SHIFT is still the pattern's last step. CH and OH share one length; accent and the EXT INST lane follow the pattern. The running light follows the selected instrument.

## 16 POLYMER

PATTERN WRITE, STEP OR TAP WRITE RUNNING



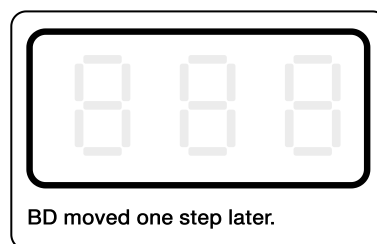
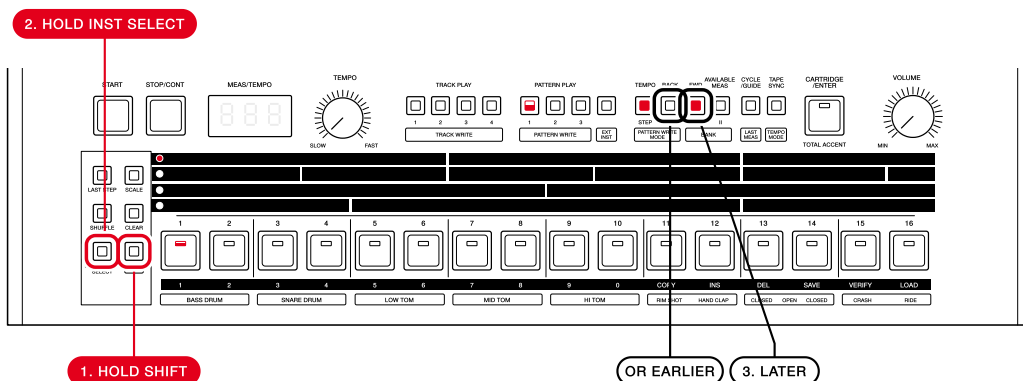
1. Select the instrument.
2. Hold SHIFT and press SCALE. While SHIFT is held the display shows 1 (polymer) or 0 (locked to the pattern).

### NOTE

Locked (default): the instrument restarts with every pass. Polymer: it loops on its own and snaps to its step 1 only at START and every 8th bar, never mid-bar.

## 17 NUDGE

PATTERN WRITE, STEP WRITE RUNNING



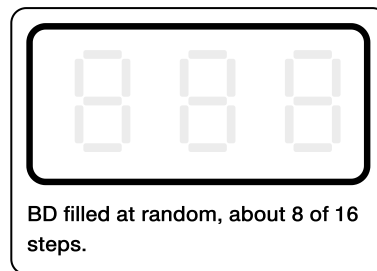
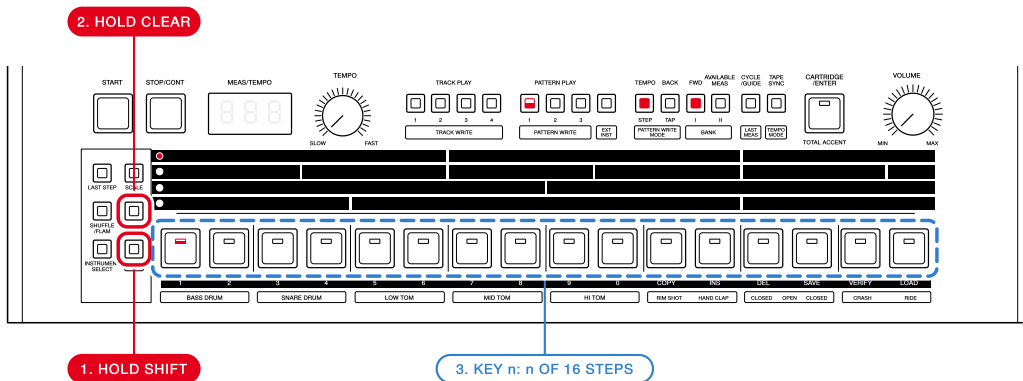
1. Select the instrument.
2. Hold SHIFT and INST SELECT.
3. FWD moves its steps one place later, BACK one place earlier, wrapping inside its length.

### NOTE

SHIFT + BACK does not switch to tap write while INST SELECT is held. CH and OH move together.

## 18 RANDOMIZE

PATTERN WRITE STOPPED OR RUNNING



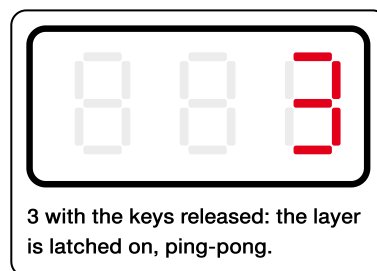
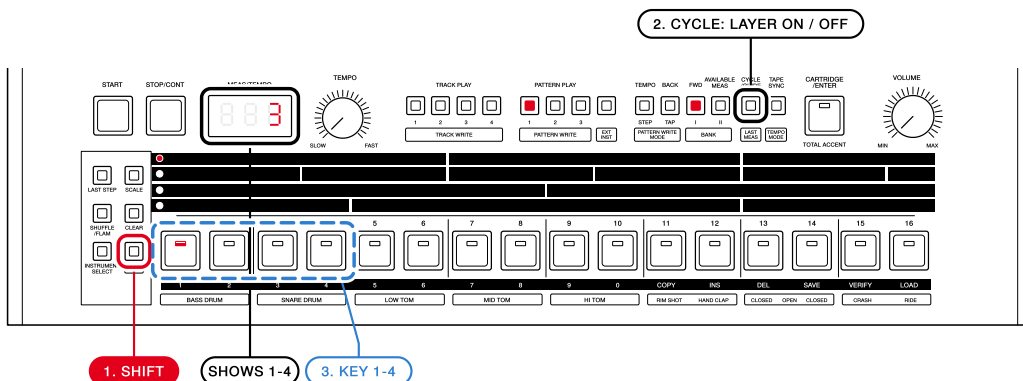
1. Select the instrument.
2. Hold SHIFT and CLEAR, press main key n: about n of every 16 steps are filled (16 = every step). Each press makes a new fill.

### NOTE

Hits use the level the selecting key gives on a first press in step write. Only the shown steps change. Not for accent or the EXT INST lane; does nothing in Pattern Play.

## 19 PATTERN DIRECTION

PATTERN PLAY OR PATTERN WRITE STOPPED OR RUNNING



1. SHIFT + CYCLE turns the direction layer on and leaves it on: a latch, not a hold.
2. Then main key 1 forward, 2 backward, 3 ping-pong (a bar each way), 4 random. The display keeps showing it. Stored with the pattern.
3. SHIFT + CYCLE again closes it, and so does any mode change.

### NOTE

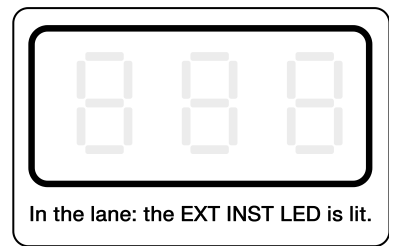
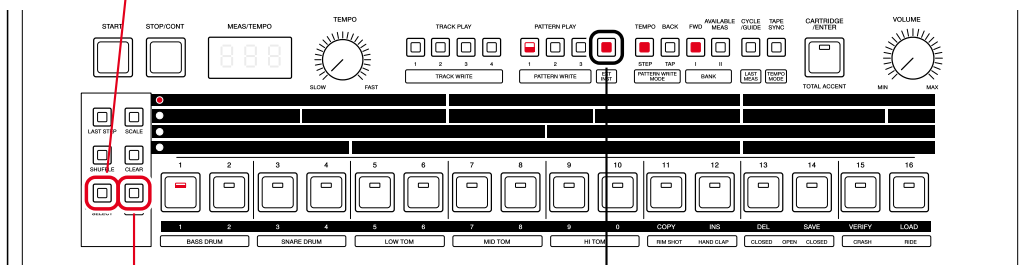
The layer owns the main keys while it is open: no pattern change, no tap recording. The beat always runs forward, so a change lands on the next step in time. Locked instruments, accent and the EXT INST lane follow; polymeter instruments keep looping forward. MIDI thru is not touched.

## 20 EXT INST LANE

PATTERN WRITE

STOPPED OR RUNNING

INST SELECT + KEY: TRACK



1. HOLD SHIFT

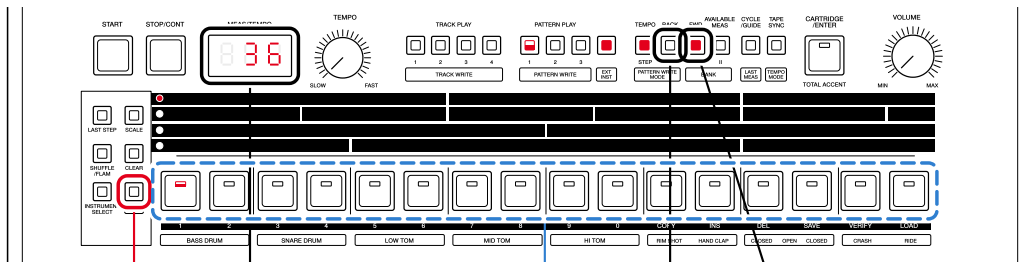
2. EXT INST: LANE ON / OFF

1. Hold SHIFT and press EXT INST. The main keys now write the 16 EXT INST tracks.
2. INST SELECT + main key picks which track you write.
3. SHIFT + EXT INST again leaves. It also leaves the mute layer.

## 21 EXT INST NOTES

EXT INST LANE

STOPPED OR RUNNING



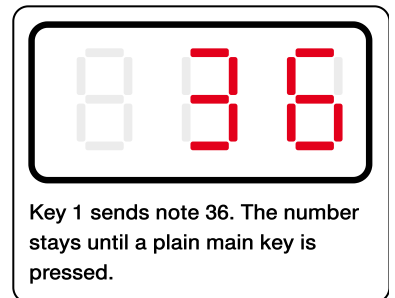
1. HOLD SHIFT

NOTE

2. KEY TO SET

NOTE -1

3. NOTE +1



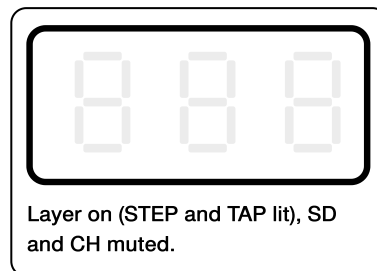
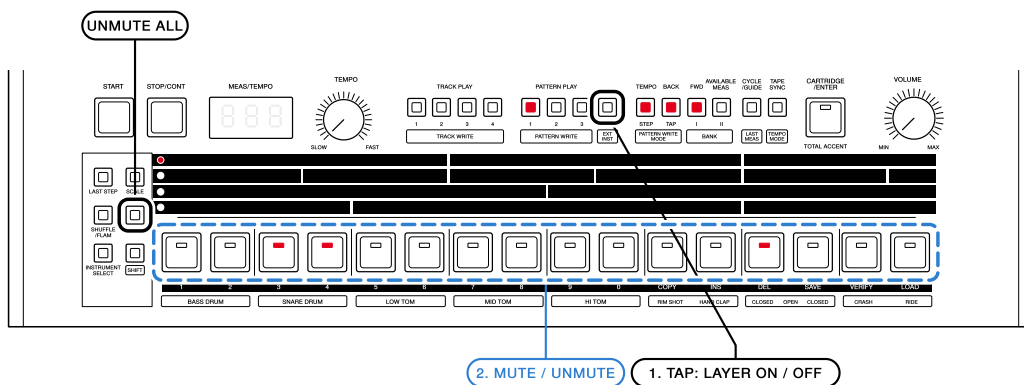
1. In the lane, hold SHIFT and press a main key: its note shows and stays.
2. FWD raises it, BACK lowers it (0 to 127, no wrap). Stored at once.
3. Press any main key without SHIFT to finish; that key also writes its step.

NOTE

The channel is the EXT INST channel (LAST STEP + key, stopped). A memory format restores 36 to 51.

## 22 MUTE LAYER

PATTERN PLAY OR PATTERN WRITE STOPPED OR RUNNING



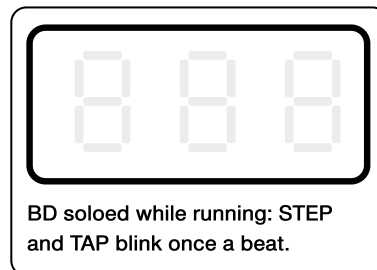
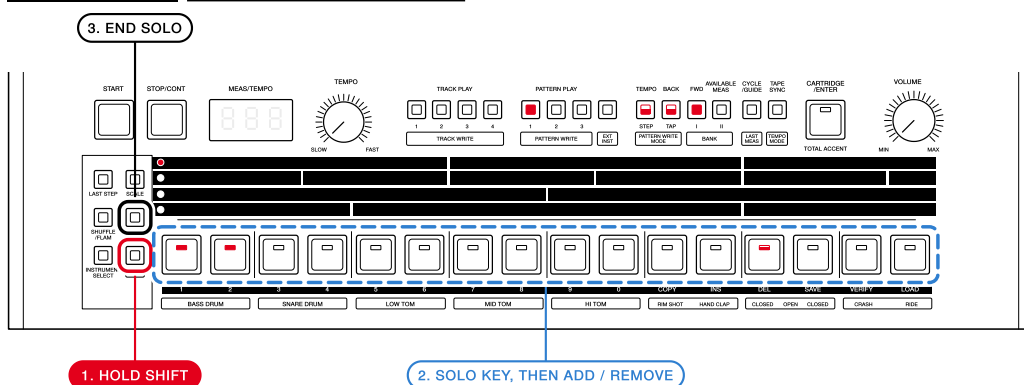
1. Tap EXT INST. STEP and TAP light: the main keys are mute keys now.
2. Press main keys to mute (LED lit) and unmute. Keys flash as their instrument plays.
3. CLEAR unmutes everything. Tap EXT INST again, or change mode, to leave; the mutes stay.

### NOTE

Mutes cut the trigger and send CC 48 to 58; received CCs set them too. Not stored, not in Track modes. Muting CH silences both closed hat levels, OH only open hats.

## 23 SOLO

MUTE LAYER STOPPED OR RUNNING

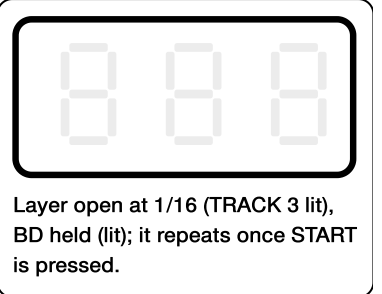
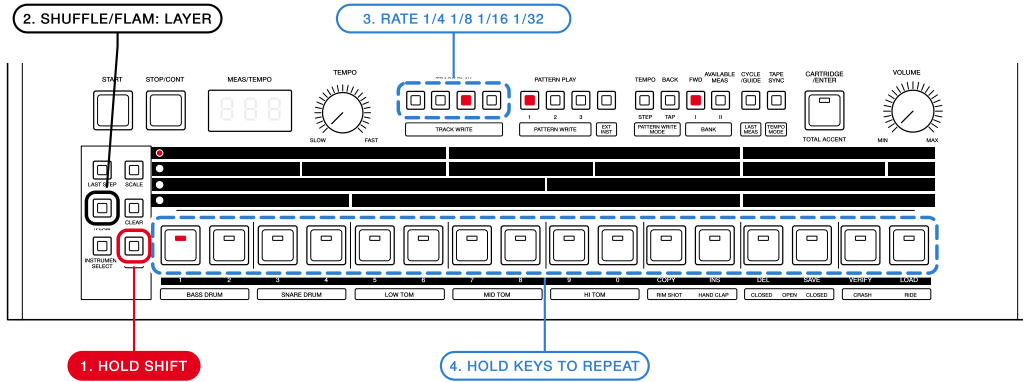


1. In the mute layer, hold SHIFT and press a main key: only that instrument plays.
2. Plain main keys now add or remove soloed instruments.
3. CLEAR, or removing the last one, ends the solo and brings your mutes back.

## 24 NOTE REPEAT

PATTERN PLAY OR PATTERN WRITE

PLAYS WHILE RUNNING



1. Hold SHIFT and press SHUFFLE/FLAM.
2. TRACK 1 to 4 pick 1/4, 1/8, 1/16, 1/32. 1/16 after power-on.
3. Hold any main keys: those voices repeat while running. 1/4 to 1/16 ride the steps and swing; 1/32 is a straight grid with every second 32nd swung by SHUFFLE.
4. SHIFT + SHUFFLE/FLAM again closes it, as do SHIFT + TEMPO, SHIFT + BACK, a mode change and opening the mute or reslice layer.

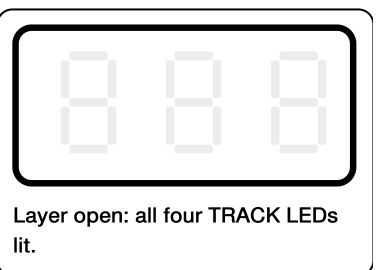
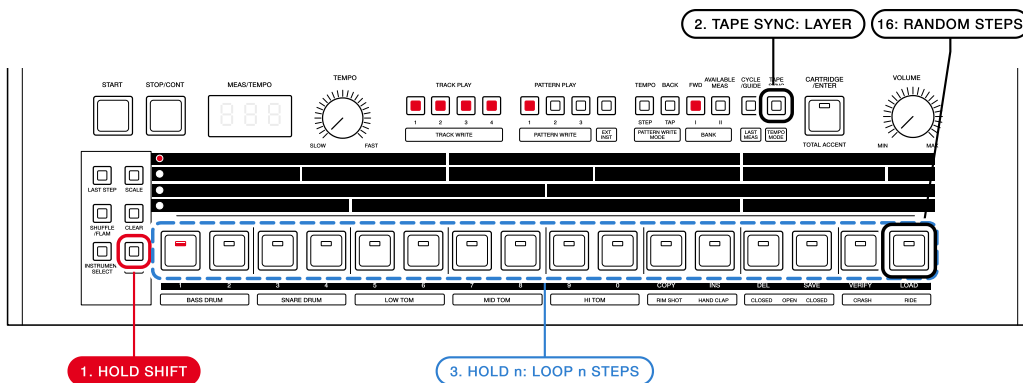
### NOTE

Stopped, the layer opens but stays silent. Repeats between steps play without accent. Pattern keys, tap recording and instrument select belong to the layer. Mutes apply.

## 25 RESLICE

PATTERN MODES

RUNNING

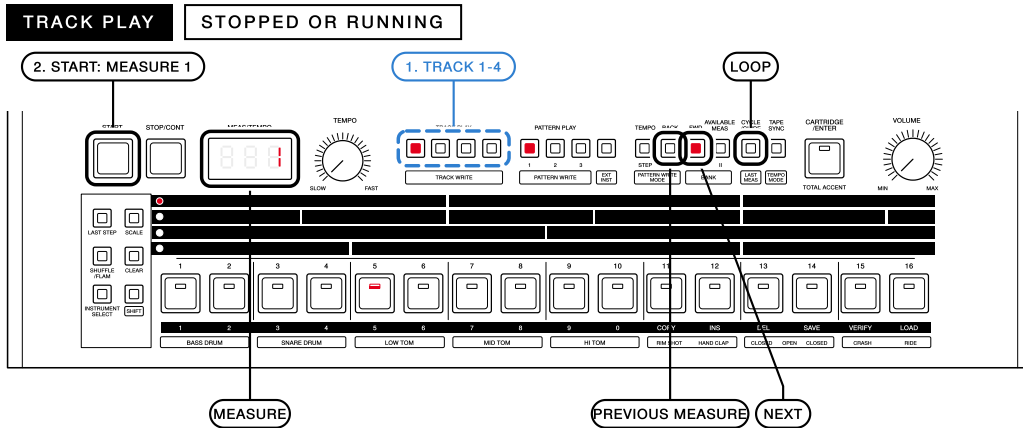


1. While running, hold SHIFT and press TAPE SYNC.
2. Hold main key n: the pattern loops n steps from the step that was playing.
3. Hold 16: a random step every step.
4. Let go: playback continues where the pattern is by then, on the beat.
5. SHIFT + TAPE SYNC, STOP/CONT or a mode change closes it.

### NOTE

Stopped, SHIFT + TAPE SYNC is still the sync mode.

## 26 TRACK PLAY



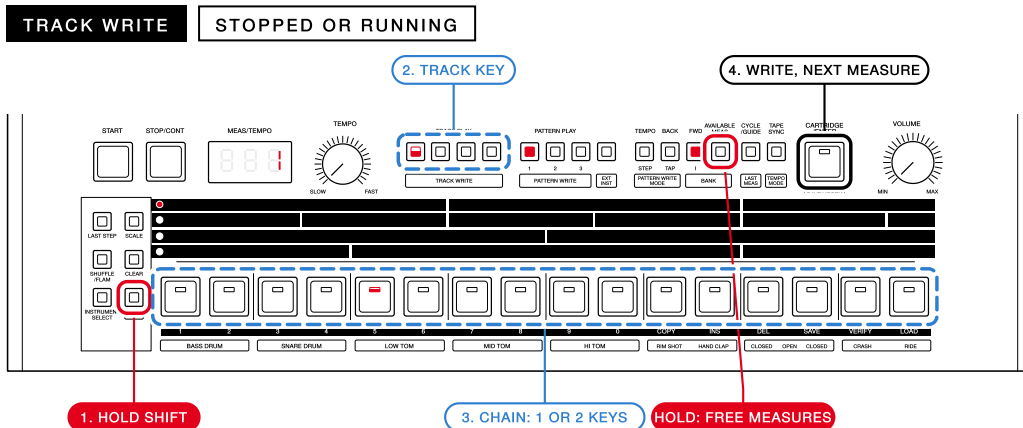
Track 1, measure 1.

1. From a pattern mode, stopped, press TRACK 1 to 4.
2. START plays from measure 1. STOP/CONT stops; press again to continue from the shown measure.
3. FWD / BACK step the measures. 0 = empty track (START is ignored).
4. CYCLE LED lit: the track starts over at the end. PATTERN GROUP returns to Pattern Play.

### NOTE

SHIFT + FWD / AVAIL MEAS change the bank. Tracks work as on the original firmware with 362 measures per bank.

## 27 TRACK WRITE



Track Write: the TRACK LED blinks.

1. Stopped, hold SHIFT and press a TRACK key.
2. Pick the chain: a main key, two keys for a range, PATTERN GROUP for the group.
3. ENTER writes it over the shown measure and moves on; past the end it appends. A range writes one measure per chain.
4. FWD / BACK move through the measures. Hold AVAIL MEAS for the free measures.

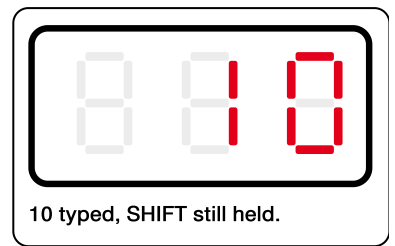
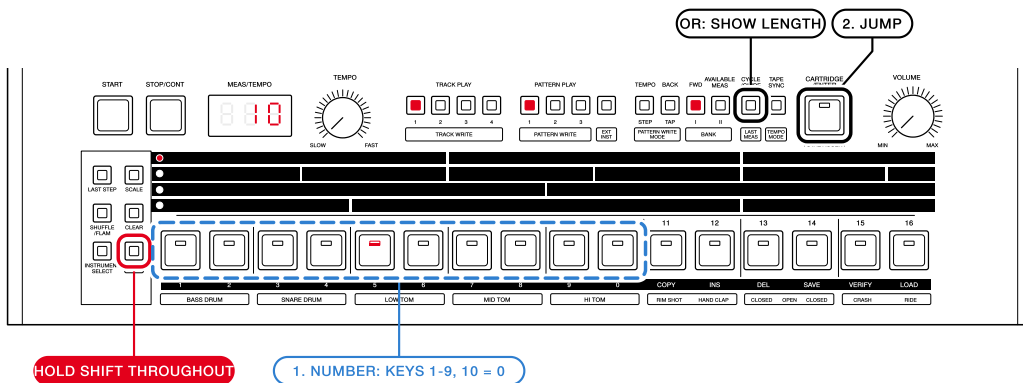
### NOTE

A full memory shows 0 and nothing is written. While running, the current chain loops and ENTER writes as when stopped.

## 28 JUMP TO A MEASURE

TRACK PLAY OR TRACK WRITE

STOPPED

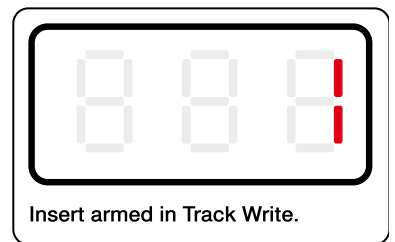
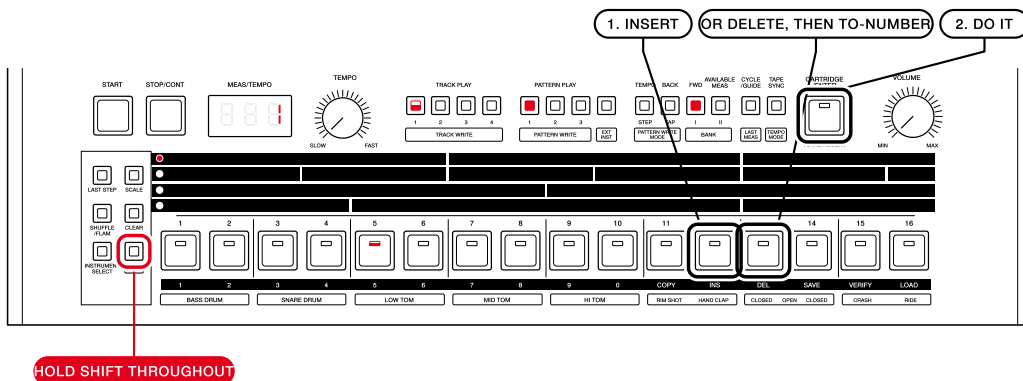


1. Hold SHIFT and keep holding it: releasing cancels.
2. Type the measure number on keys 1 to 9 (key 10 = 0), or press CYCLE to show the track length.
3. Press ENTER: the track jumps there (after CYCLE, to the last measure).

## 29 INSERT AND DELETE

TRACK WRITE

STOPPED OR RUNNING



1. Pick the chain as for writing.
2. Hold SHIFT, press 12 (insert), then ENTER: the chain goes in before the shown measure.
3. Or hold SHIFT, press 13, optionally type the last measure to delete, then ENTER: the measures from the shown one are removed.

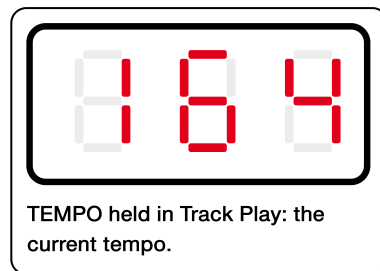
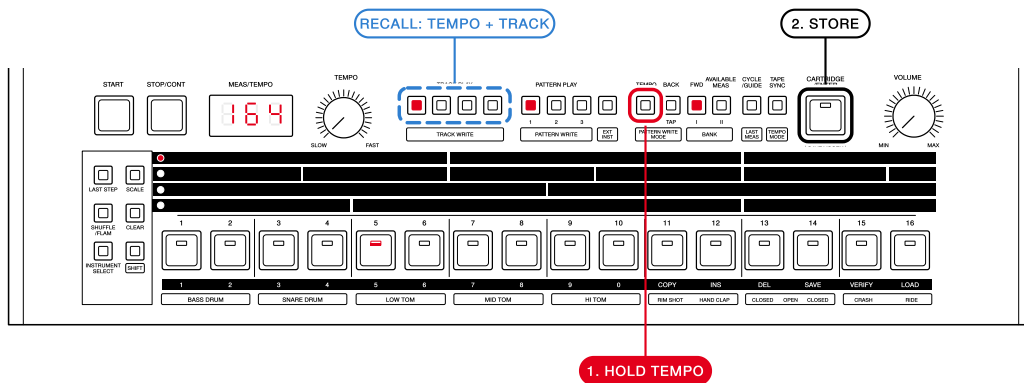
### NOTE

An insert or delete near the start of a long track can make a running Track Write play a few steps late.

## 30 TRACK TEMPO

TRACK PLAY

STOPPED



1. Hold TEMPO and press ENTER: the tempo is stored with the track (internal clock only).
2. Holding TEMPO while you pick the track recalls it; the knob takes over once you turn it past that value.

## DISPLAY CODES

| SHOWS  | MEANING                                                                    |
|--------|----------------------------------------------------------------------------|
| 120    | Tempo (internal clock), TEMPO held                                         |
| 1 / 2  | MIDI / DIN sync, TEMPO held or after SHIFT + TAPE SYNC                     |
| 1 / 0  | CYCLE held: MIDI thru on / off. SHIFT held after SCALE: polymeter / locked |
| 1 to 4 | Direction layer (SHIFT + CYCLE): the pattern's direction                   |
| 36     | EXT INST note of a key (lane, SHIFT + key)                                 |
| 12     | Track modes: measure number; 0 = empty track or memory full                |

## MIDI IN (RECEIVE CHANNEL)

| MESSAGE               | FUNCTION                                                          |
|-----------------------|-------------------------------------------------------------------|
| Program change 0-47   | Pattern 1-48; running: at the chain end                           |
| Program change 64-111 | Pattern 1-48 at once                                              |
| Note 52-99            | Pattern 1-48 at once (52, 68, 84 = pattern 1 of group I, II, III) |
| Note 35-51            | Voices                                                            |
| CC 48-58              | Mutes BD SD LT MT HT RS HC CH OH CR RD; 64-127 muted              |
| CC 59                 | 64-127: clock out only while running                              |
| CC 60                 | 64-127: MIDI thru off                                             |
| CC 124-127            | Omni off, omni on, mono, poly (omni off at power-on)              |

Program change and notes select patterns in Pattern Play only. Mute changes made on the panel send CC 48-58 on the send channel (127 muted, 0 unmuted). START and STOP/CONT send MIDI Start, Continue and Stop (no Stop when following MIDI sync). Song position and song select are not used.

## BACKUP

Stopped, the whole memory (both banks, lengths, directions, tracks, EXT INST notes, settings) goes out and in as 32 SysEx pages: F0 7D 09 01 F7 requests a dump. The superOS-909 Studio editor does this for you and also fetches, sends, saves and loads single patterns. Dumps from other firmware are not accepted.

## REMOVED

Cassette save, verify and load (SHIFT + 14 to 16 in the Track modes); the original SysEx dump; cartridge copy; MIDI song position and song select. Tape sync stays.

## ABOUT THESE PAGES

The LEDs and digits in every drawing are what the firmware shows after the keys of that function. The drawings show the sequencer part of the panel. Everything not described here works as on the original firmware. Details: superOS-909 Owner's Manual.