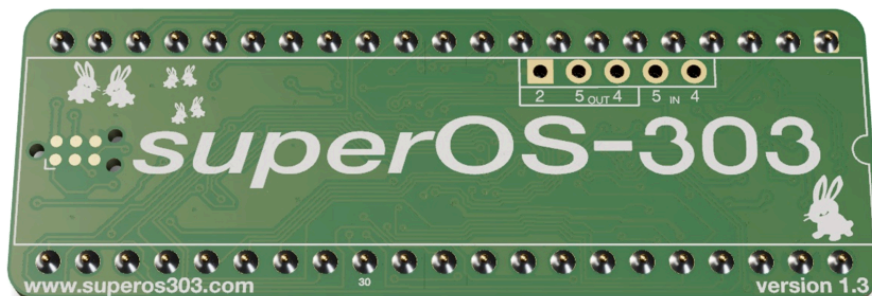


superOS-303

OWNER'S MANUAL



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PRECAUTIONS:

Installing the firmware and modifying your instrument are done at your own risk. Back up your patterns with the web editor before updating. Do not switch the power off during an update.

INTRODUCTION

1 ABOUT SUPEROS-303

superOS-303 is a new operating system for the TB-303. It replaces the original processor and keeps the way the instrument is played: the same panel, the same Pitch Mode and Time Mode, the same sound. It adds longer patterns, three variations per pattern, scales, probability, ratchets, chains, tracks, full MIDI and a web editor.

The firmware also holds **D650C mode**: the original TB-303 program, running on the new processor. Switch between the two from the panel at any time. Each keeps its own patterns.

A. TWO EDITIONS

superOS-303 comes in two editions. Everything in this manual applies to both, except the parts marked

FRAM EDITION.

EDITION	WHAT IT ADDS
Standard Edition	Everything not marked FRAM Edition.
FRAM Edition SuperOS CPU v1.3	512 KB FRAM memory, Time Scale, the Filter Lane with live cutoff over MIDI, and USB-C MIDI.

2 HOW TO READ THIS MANUAL

A. PANEL NAMES

Controls are written in boxes, as they are printed on the panel: **FUNCTION** **PITCH MODE** **TIME MODE** **CLEAR**

BACK **WRITE/NEXT** **RUN/STOP** **DOWN** **UP** **ACCENT** **SLIDE**.

- **Pitch keys** are the 13 keyboard keys, **C** to high **C**.
- **Pattern keys 1–8** are the eight white keys. The white keys are pattern keys outside Pitch Mode.
- **Black keys** are **C#** **D#** **F#** **G#** **A#**.
- The **Mode dial** selects Pattern Write, Pattern Play, Track Write or Track Play. The **Group dial** selects group I–IV (and the track in the Track modes).

B. KEY COMBINATIONS

FUNCTION + **CLEAR** means: hold the first control, then press the second. **Tap** means press and release quickly.

C. WORKS IN

The black **WORKS IN** tab at the top of a section says where the function works: the Mode dial position, and whether the sequencer is running or stopped.

3

HOW PATTERNS ARE ORGANIZED

LEVEL	HOW MANY	SELECTED WITH
Group	4 (I–IV)	Group dial
Pattern	8 per group	Pattern keys 1–8
Section	2 per pattern (A and B), up to 32 steps each	ACCENT = A, SLIDE = B
Variation	3 per section	Hold WRITE/NEXT , press C D E

That is 64 sections of up to 32 steps. Play sections A and B back to back in **A/B mode** for one pattern of up to 64 steps.

NOTE:

As on the original, a pattern has two separate parts: a list of **pitches** and a list of **rhythm steps** (note, tie or rest). Each note step plays the next pitch in the list. Changing the rhythm never deletes a pitch.

BASIC COURSE

1 PREPARING A PATTERN

WORKS IN Pattern Write

1 Choose an empty place for a new pattern and clear it.			
	Operation	Result	Notes
1	Set the Mode dial to Pattern Write .	The unit is ready to write.	Make sure the sequencer is stopped.
2	Choose a group with the Group dial.		Groups I–IV.
3	Press a pattern key 1–8 , then ACCENT for section A.	The pattern LED blinks. The A LED lights.	Press SLIDE instead to work on section B.
4	Hold the pattern key and press CLEAR .	PITCH MODE , TIME MODE and A# flash.	Either order works. The section is now empty and 8 steps long.

Clearing erases the section's pitches, rhythm, ratchets, triplet and time scale settings, direction, scale, step probability and saved chain, and on the FRAM Edition its Filter Lane. A remembered A/B mode stays. With A/B mode on, both sections are cleared.

2 WRITING PITCHES

WORKS IN Pattern Write, stopped

2 Write the notes of the pattern, one after another.			
	Operation	Result	Notes
1	Press PITCH MODE .	The PITCH MODE LED lights.	
2	Press a pitch key for each note, in order.	Each note sounds and is written. The pattern gets one step longer for every note.	Hold an octave key while you press the pitch key (see below).
3	Hold ACCENT or SLIDE while you press a pitch key to add an accent or a slide.		Both can be held together.
4	Press FUNCTION when you are done.	The PITCH MODE LED goes out.	The mode also ends by itself when the section is full (32 steps) or you reach the first note again.

A. OCTAVES

HOLD WHILE PRESSING A PITCH KEY	OCTAVE
DOWN	Low
Nothing	Middle
UP	High
DOWN + UP	Highest

B. MOVING THROUGH THE NOTES

- **WRITE/NEXT**: press to hear the current note, release to move to the next one without changing it.
- **BACK**: go back one note.
- The pattern LEDs show where you are inside the current 8 steps. The black-key LEDs show how many pages of 8 the pattern has; the current page blinks.

C. FROM A MIDI KEYBOARD

While Pitch Mode is on, a note played on a MIDI keyboard replaces the note at the current step. Play harder (velocity 100 or more) to add an accent. Press **WRITE/NEXT** to move on to the next note.

NOTE:

With A/B mode on and section A full, writing continues into section B.

3 WRITING RHYTHM

WORKS IN Pattern Write, stopped

3 Write the rhythm, one step after another.			
	Operation	Result	Notes
1	Press TIME MODE .	The TIME MODE LED lights.	
2	For each step press DOWN (note), UP (tie) or ACCENT (rest).	The step is written and the next step comes up.	A tie holds the note before it.
3	Write every step of the pattern.	The mode ends after the last step.	Press FUNCTION to leave early.

The pattern is now written. Press RUN/STOP to hear it.

A. MOVING THROUGH THE STEPS

- **WRITE/NEXT**: move one step forward and hear it, without changing it.
- **BACK**: go back one step.
- **SLIDE**: add a ratchet to the current step (see Intermediate Course 6).

While you write, the **DOWN** **UP** **ACCENT** LEDs show what the current step holds.

4 SETTING THE LENGTH

WORKS IN Pattern Write, running or stopped

A section can be 1 to 32 steps long (1 to 24 in triplets). Hold **FUNCTION** to see the length: the pattern LED shows the last step, the black-key LEDs show the pages it covers. Shortening a pattern never deletes anything; lengthen it again and the steps come back.

A. SET IT DIRECTLY

Hold **FUNCTION**, press a black key for the page, then a white key for the step:

BLACK KEY	STEPS
C#	1–8
D#	9–16
F#	17–24
G#	25–32

The current page is already chosen, so a white key alone sets a step on that page.

B. STEP BY STEP, DOUBLE, HALVE

HOLD FUNCTION AND PRESS	LENGTH
WRITE/NEXT	One step longer
BACK	One step shorter
UP	Double. Past 32 steps, A/B mode turns on and section B is filled with a copy of section A.
DOWN	Halve

NOTE:

Writing pitches sets the length for you: one step for every note you enter.

5 PLAYING PATTERNS

WORKS IN Pattern Play or Pattern Write

A. START AND STOP

Press **RUN/STOP**. The pattern LED blinks in time. Tempo comes from the TEMPO knob, from DIN sync, or from MIDI clock.

B. CHOOSING A PATTERN

- **Stopped:** a pattern key selects that pattern at once.
- **Running, tap:** the pattern plays next, when the current one ends. Its LED lights while it waits.
- **Running, hold:** the pattern plays and loops for as long as you hold the key.
- **ACCENT** selects section A, **SLIDE** section B (running: at the end of the pattern).

C. A/B MODE: 64-STEP PATTERNS

Hold **ACCENT** and press **SLIDE**. Both section LEDs light and the pattern plays section A then section B as one pattern. The section that is playing blinks. Press **ACCENT** or **SLIDE** alone to leave A/B mode.

To remember A/B mode with the pattern: in Pattern Write, with A/B mode on, hold the pattern key and press **FUNCTION**. The pattern now starts in A/B mode whenever you select it. Do the same with A/B mode off to forget it, together with any chain saved on the pattern.

D. CHANGING GROUP

Stopped, the Group dial changes group at once. Running, turn the dial to look at another group and press a pattern key: that group and pattern play next.

NOTE:

Edits made while stopped are saved about two seconds after your last key press. Wait a moment before turning the Group dial.

INTERMEDIATE COURSE

1 CORRECTING STEPS

A. WHILE STOPPED

WORKS IN Pattern Write, stopped, in Pitch Mode or Time Mode

Hold **WRITE/NEXT** on the step you want to change.

- **Pitch Mode:** a pitch key replaces the note (same octave). **UP** / **DOWN** move it an octave. **ACCENT** / **SLIDE** switch the accent or slide on and off.
- **Time Mode:** **DOWN** / **UP** / **ACCENT** make the step a note, tie or rest. **SLIDE** changes the ratchet.
- **BACK** goes back one step.

B. WHILE RUNNING

WORKS IN Pattern Write, running

Press **PITCH MODE** or **TIME MODE**. Your edits land on the step that is playing.

- **Pitch Mode:** a pitch key changes the playing note. **UP** / **DOWN** move it an octave. **ACCENT** / **SLIDE** switch the accent or slide.
- **Time Mode:** **DOWN** / **UP** / **ACCENT** write a note, tie or rest. **SLIDE** changes the ratchet.
- Press **FUNCTION** to stop editing.

A/B MODE:

With A/B mode on, edits land on the section that is playing. To work on the other section, hold **CLEAR** and press **PITCH MODE**; do it again to switch back. The mode LED is lit for section A and blinks for section B. Variation 1 only.

2 STEP SELECT

WORKS IN Pattern Write, running or stopped

Step Select lets you go straight to any step and change it, even while the pattern plays. Hold **FUNCTION** and press **PITCH MODE** to open it; press **FUNCTION** to close it.

- **Pick a step:** a black key picks the page of 8 (**C#** 1–8, **D#** 9–16, **F#** 17–24, **G#** 25–32), a white key picks the step. **BACK** lets go of it.
- **The LEDs:** a note is bright, a tie is dim, a rest is dark. The selected step blinks.
- **Rhythm:** press **TIME MODE**. **DOWN** / **UP** / **ACCENT** set note, tie or rest. **SLIDE** changes the ratchet.

- **Pitch:** press **PITCH MODE**, pick a note step and press **WRITE/NEXT**. Now a pitch key sets the note, **UP** / **DOWN** the octave, **ACCENT** / **SLIDE** the accent and slide. **BACK** returns to picking.
- **Chains:** when a chain plays, **DOWN** **UP** **ACCENT** **SLIDE** pick chain pattern 1–4 to edit.
- **A/B mode:** hold **PITCH MODE** or **TIME MODE** and press **CLEAR** to switch between section A and B.

3 PATTERN OPERATIONS

WORKS IN Pattern Write, running or stopped

Hold **CLEAR** and press:

CLEAR +	WHAT IT DOES
ACCENT	New random pattern (follows the scale, if one is on)
SLIDE	Mutate: makes 2 to 4 small random changes
DOWN / UP	Move the rhythm one step left / right (pitches stay)
PITCH MODE + DOWN / UP	Move the pitches one note left / right (rhythm stays)
BACK / WRITE/NEXT	Move the whole pattern one step left / right
F#	Reverse the pattern
G#	Reset all pitches to C (rhythm stays)
A#	Clear the rhythm (pitches stay)
PITCH MODE + C D E F G A	Randomize only the notes / octaves / accents / slides / all pitch data / the rhythm
PITCH MODE + C# D# F# G# FRAM EDITION	Randomize the Filter Lane: value / keytrack / glide / all three

None of these stop or move the playhead. Ratchets and probability move with their steps.

A. COPY AND PASTE

- **Copy:** hold **CLEAR** + **C#** and press a pattern key.
- **Paste:** hold **CLEAR** + **D#** and press a pattern key.

Copy and paste work within the current group and section (A or B), on variation 1.

4 TRIPLETS

WORKS IN Pattern Write, Time Mode

Hold **FUNCTION** and press **UP** to switch the section between straight steps and triplets. The **UP** LED shows triplets while **FUNCTION** is held. A triplet section is up to 24 steps long; steps past 24 are kept for when you switch back.

5 TIME SCALE FRAM EDITION

WORKS IN Pattern Write, Time Mode

Play a pattern at half or double speed without touching the tempo. In Time Mode press **TIME MODE** again (its LED blinks), then press:

KEY	SPEED
C	Normal
D	Half
E	Double

Press **TIME MODE** to close. While running, the change waits for the end of the pattern (its key blinks until then). The setting is saved with the section.

6 RATCHETS

WORKS IN Pattern Write, Time Mode or Step Select

A ratchet plays a note step 2 or 3 times in quick succession. Press **SLIDE** on a step to go through off, 2× and 3×. The **SLIDE** LED shows it: off, lit (2×) or blinking (3×).

NOTE:

Ratchets play on variation 1, on a plain note only: not on a tie, and not on a note that slides.

7 TAP-WRITE

WORKS IN Pattern Write, running

Tap the rhythm in along with a metronome, the way you would play it. The pitches you wrote stay.

1 Tap in a new rhythm.			
	Operation	Result	Notes
1	With the pattern running, hold CLEAR and press TIME MODE .	The rhythm is cleared. The TIME MODE LED blinks.	Pitches are kept.
2	Wait for the start of the pattern.	The metronome clicks: a low click at the start of the pattern, a high click on every other step.	
3	Tap WRITE/NEXT on each note.	You hear the note. Hold the key longer for a longer note.	Hold a pattern key to tie through the gaps.
4	Keep playing.	After one full pass the take ends by itself.	A pass with no taps starts over.

Doing the gesture again starts a new take. Stopping the sequencer or leaving Pattern Write ends it.

8 CHAINS

WORKS IN Pattern Play or Pattern Write

A chain plays up to four patterns one after another, then starts again.

A. PATTERNS NEXT TO EACH OTHER

Hold the first pattern key and press the last one. Every pattern in between joins the chain (up to four). Stopped, the chain starts when you let go. Running, it plays when the current pattern or chain ends.

B. ANY ORDER

Hold **ACCENT** + **SLIDE** and tap up to four pattern keys in the order you want. The same pattern may appear twice. Let go to start the chain.

C. SAVING A CHAIN

- **Pattern Write:** while holding the chain's pattern keys, press **FUNCTION**.
- **Pattern Play:** hold **ACCENT** + **SLIDE** and press **WRITE/NEXT**. With no chain playing, this forgets the saved chain.

The chain is saved with its first pattern. Selecting that pattern brings the chain back. Every start begins with the first pattern of the chain.

9

PLAYBACK DIRECTION

WORKS IN

 Pattern Play or Pattern Write

Hold **FUNCTION** and press **TIME MODE**. The six direction keys light, the current one blinks. Press a key, then **FUNCTION** to close.

KEY	DIRECTION
C	Forward
D	Reverse
E	Ping-pong: forward, then back
F	Random
G	Half random: half of the steps jump somewhere random
A	Brownian: each step moves one forward or one back at random

While running, a new direction starts after one full length of the pattern. The random directions never slide. Variations 2 and 3 keep their own direction with the pattern.

ADVANCED COURSE

1 THREE VARIATIONS

WORKS IN Pattern Write

Every section holds three variations that play at the same time.

VARIATION	PLAYS ON
1	The TB-303 voice, and MIDI on the main channel
2	MIDI only, on its own channel (2 unless changed)
3	MIDI only, on its own channel (3 unless changed). Can play chords.

To choose the variation you edit, hold **WRITE/NEXT** and press **C**, **D** or **E**. The chosen one blinks. Pitch Mode, Time Mode, Step Select, the CLEAR operations and the scale then work on that variation. Changing pattern returns to variation 1.

Each variation has its own notes, length and scale. All three follow the clock of variation 1, including its triplet and time scale settings.

2 CHORDS ON VARIATION 3

WORKS IN Pattern Write, stopped

Variation 3 can play up to four notes on each step. To switch chord mode on or off, hold **WRITE/NEXT**, press **E** (variation 3) and press **SLIDE**. The **SLIDE** LED lights in chord mode.

Then press **PITCH MODE** to write chords:

- Pitch keys add or remove notes on the current step.
- **UP** / **DOWN** change the octave the keys play in.
- **ACCENT** / **SLIDE** set accent and slide.
- **TIME MODE** makes the step a note, tie or rest.
- **WRITE/NEXT** / **BACK** move to the next or previous step and play the chord.

3 SCALES

WORKS IN Pattern Write

A scale moves every note of a pattern to the nearest note in that scale. It never changes what you wrote: switch the scale off and the original notes are back. Random patterns follow the scale too.

Hold **FUNCTION** and press **ACCENT** to open the scale editor.

- The lit pitch keys are the notes in the scale. Press **C** to **B** to add or remove a note.
- High **C** switches the scale on or off. Its LED is lit when the scale is on.
- Hold **FUNCTION** and press a note to load a ready-made scale on that root. Press the same note again for the next scale (35 in all).
- Tap **FUNCTION** to close.

Each variation has its own scale.

4 STEP PROBABILITY

WORKS IN Pattern Write, variation 1

Give a step a chance of an accent, a slide, or an octave jump. The dice are rolled every time the step plays, so the pattern keeps changing.

Hold **FUNCTION** and press **SLIDE** to open the editor; press **FUNCTION** to close it.

1 Give one step a chance of an accent.			
	Operation	Result	Notes
1	Pick the step: a black key for the page, a white key for the step.	The step blinks.	
2	Press ACCENT .	The ACCENT LED lights.	The chance starts at 13 out of 13: always.
3	Hold WRITE/NEXT , tap ACCENT , then press a pitch key.	The pitch LEDs show the chance as a bar.	C = 1 in 13 ... high C = 13 in 13.

KEY	CHANCE OF
ACCENT	An accent
SLIDE	A slide
DOWN	Dropping one octave
UP	Jumping up. Press again to go from one octave to two (the LED blinks), and again for off.

CLEAR + **ACCENT**, **SLIDE**, **DOWN** or **UP** sets random chances for that kind on every step; **CLEAR** + **WRITE/NEXT** does all four.

5 FILTER LANE FRAM EDITION

WORKS IN Variation 1, with the filter wire fitted at installation

The CPU can move the CUT OFF FREQ of the TB-303 by itself: live over MIDI, or from a lane of values that plays along with the pattern. It adds to the panel knob; the knob still sets where the filter sits.

A. LIVE OVER MIDI

Send **CC 74** on the main channel, 1–127, to move the cutoff. **CC 74 = 0** hands the filter back to the knob.

B. THE LANE

Each step can have its own filter setting:

PER STEP	WHAT IT DOES
Value (1–127)	The cutoff for this step. Plays only when the step is switched on.
Keytrack (1–127)	Opens the filter more for higher notes.
Glide	Slides smoothly into the next step's value.

The pattern also has a default value and keytrack for steps without their own. Ties keep the setting of the note they hold. On a rest, and when the sequencer stops, the filter goes back to the knob.

C. EDITING THE LANE

WORKS IN Pattern Write

1 Open the filter setting of one step.			
	Operation	Result	Notes
1	Hold FUNCTION , press PITCH MODE .	Step Select opens.	
2	Pick a note step and press WRITE/NEXT .	The note editor opens.	
3	Press PITCH MODE .	The PITCH MODE LED blinks: you are editing the filter.	Press PITCH MODE again to go back to the note.

KEY	ACTION
C# / D#	Edit this step's value / keytrack
FUNCTION + C# / D#	Edit the pattern's default value / keytrack
F# / G# / A#	Choose the hundreds / tens / ones digit
White keys 1 – 8 , DOWN , UP	Type the digit 1–8, 9, 0
FUNCTION + UP / DOWN	Value up / down by one
ACCENT	Switch the step on or off
SLIDE	Glide on or off
WRITE/NEXT / BACK	Next / previous step
CLEAR + C# / D# / SLIDE / WRITE/NEXT	Randomize values / keytrack / glide / all

FLOOR:

The Floor is the value where the filter is just closed. Lane values and keytrack are spread between the Floor and 127, so every value you enter does something. It is set per pattern in the web editor (54 unless changed).

6

TRANPOSE AND FORCE ACCENT / SLIDE**A. TRANPOSE****WORKS IN** Pattern Play

Hold **PITCH MODE** and press a pitch key: the pattern plays transposed to that key (low **C** = no change). While holding **PITCH MODE**, each press of **UP** or **DOWN** moves the transpose one octave, from one octave down to two up. While running the change starts at the end of the pattern. Selecting another pattern resets the transpose.

B. FORCE ACCENT AND FORCE SLIDE**WORKS IN** Pattern Play or Track Play, running

Hold **PITCH MODE** together with **ACCENT** to accent every step, or with **SLIDE** to slide every step, for as long as you hold them. This affects the TB-303 voice only.

7

KEYBOARD PLAY**WORKS IN** Pattern Play, running or stopped

Play the TB-303 from its own keys. Hold **FUNCTION** and press **PITCH MODE** to switch it on; press **FUNCTION** to switch it off.

- Overlapping keys slide from one note to the next.
- Hold **ACCENT** or **SLIDE** while playing to accent or slide.
- Tap **DOWN** / **UP** to change octave. Press **TIME MODE** to make the octave keys work only while held (TIME MODE LED off).
- The notes are sent over MIDI as well.

8

TRACKS

A track is a song: a list of up to 64 bars, each one pattern with its own transpose. There are 8 tracks. In the Track modes the Group dial picks the track; each track uses the patterns of one group.

A. WRITING A TRACK

WORKS IN Track Write

1 Record the bars of a track while it plays.			
	Operation	Result	Notes
1	Set the Mode dial to Track Write and pick a track with the Group dial.		
2	Press RUN/STOP and choose a pattern with a pattern key.	The pattern plays (a new choice waits for the end of the bar).	ACCENT / SLIDE pick section A or B.
3	Press WRITE/NEXT .	The playing pattern is written into the current bar; the next bar comes up.	To transpose a bar, hold PITCH MODE and press a pitch key.
4	For the last bar press CLEAR , then WRITE/NEXT .	The bar is written and marked as the end.	
5	Press RUN/STOP .	The track is saved.	

Stopped, **WRITE/NEXT** and **BACK** step through the bars and **CLEAR** returns to bar 1.

B. PLAYING A TRACK

WORKS IN Track Play

Press **RUN/STOP**. The track plays bar by bar and starts again after the last bar. Stopped, **CLEAR** returns to bar 1.

9 SETTINGS MENU

Hold **FUNCTION** and press **CLEAR**. Press **CLEAR** or **FUNCTION** to leave. Settings are kept when the power is off.

CONTROL	SETTING
Pattern keys 1 – 8	Main MIDI channel 1–8 (notes in, variation 1 out). Default 1.
D#	Pattern keys pick channels 9–16 instead (LED lit)
PITCH MODE held + pattern key	Variation 2 channel. Default 2.
SLIDE held + pattern key	Variation 3 channel. Default 3.
TIME MODE	MIDI clock. LED off: follow MIDI clock when it arrives. LED lit: ignore MIDI clock (TEMPO knob or DIN sync only).
ACCENT	MIDI thru. LED lit: thru off.
F#	SysEx (web editor link). LED lit: on.
A# held + UP / DOWN	LED brightness, 1–8
G#	Switch to D650C mode
C# held 2 seconds	Factory reset: erases all patterns and settings. Standard Edition only.

REFERENCE

1 D650C MODE

D650C mode runs the original TB-303 program on the new processor, so the instrument behaves exactly like a stock unit. Its patterns are kept apart from the superOS patterns.

- **Switching:** in superOS, open the settings menu and press **G#**. In D650C mode, open its menu and press **G#** to come back. Both modes save before switching.
- **First use:** the original program has to be loaded once from the web editor. Until then the low and high **C** LEDs blink in turn.

A. D650C MENU

Hold **FUNCTION** and press **CLEAR**. The music pauses while the menu is open.

CONTROL	SETTING
Pattern keys 1 8 , D#	MIDI channel, as in superOS
TIME MODE	Clock: internal, MIDI, DIN sync (press to step through)
ACCENT	MIDI thru
A# held + UP / DOWN	LED brightness
G#	Back to superOS

2 MIDI

MIDI works over the MIDI IN and OUT jacks. The FRAM Edition also has **USB-C MIDI** **FRAM EDITION** : it appears on a computer as a MIDI device named “SuperOS-303”, no driver needed. Both work at the same time.

A. RECEIVED

MESSAGE	WHAT IT DOES
Notes (stopped)	Play the TB-303 voice. Velocity 100 or more accents; overlapping notes slide.
Notes (Pitch Mode)	Replace the note at the current step.
CC 0, CC 32, Program Change 0–7	Select a pattern: CC 0 = group (0–3), CC 32 = section (0 = A, 1 = B), then Program Change = pattern 1–8. It switches at once.
CC 74 FRAM EDITION	Filter cutoff, 1–127. 0 returns the filter to the knob.
Clock, Start, Stop, Continue	Followed when MIDI clock is on in the settings menu.

B. SENT

- Variation 1 on the main channel, variations 2 and 3 on their own channels. Accent = velocity 127, otherwise 80. Slides overlap the notes.
- With the internal clock: Start, Stop and Clock.

FRAM EDITION:

When clock arrives on both USB and the DIN jack, the first one is followed and the other is ignored until it has been silent for half a second.

3

WEB EDITOR

The free editor at superos303.com/editor connects to the unit over MIDI in a desktop browser. Use it to edit patterns, variations, chords, probability and the Filter Lane on screen, to back up and restore all patterns, to load the original program for D650C mode, and to update the firmware. SysEx must be on in the settings menu (**F#** lit).

4

SAVING AND MEMORY

There is no save button. Everything is saved automatically:

- when the sequencer stops,
- about two seconds after your last edit while stopped,
- after edits from the web editor,
- before switching to D650C mode or updating the firmware.

EDITION	MEMORY
Standard Edition	The processor's own flash memory.
FRAM Edition	512 KB FRAM on the board. Saving never interrupts the music and the memory does not wear out. No battery.

BACK UP BEFORE UPDATING:

Most updates keep your patterns. An update that changes how patterns are stored erases them. Back up with the web editor before every update.

5 UPDATING THE FIRMWARE

1 Install a new firmware version.

	Operation	Result	Notes
1	Back up your patterns with the web editor.		
2	Hold WRITE/NEXT while switching the power on.	The PITCH MODE, TIME MODE, FUNCTION and A# LEDs light: the unit is ready for an update.	On the FRAM Edition the web editor can also do this step for you.
3	Send the update file from the web editor.	The update installs and the unit restarts.	Over the MIDI jacks, or USB-C on the FRAM Edition. Do not switch off during the update.

6 QUICK REFERENCE

GESTURE	FUNCTION
PATTERN WRITE	
Pattern key + CLEAR	Clear the section
PITCH MODE	Write pitches
TIME MODE	Write rhythm
TIME MODE in Time Mode FRAM EDITION	Time scale
FUNCTION + black key, white key	Set the length
FUNCTION + WRITE/NEXT / BACK	Length +1 / -1
FUNCTION + UP / DOWN	Double / halve the length
FUNCTION + UP in Time Mode	Triplets on / off
FUNCTION + PITCH MODE	Step Select
FUNCTION + ACCENT	Scale editor
FUNCTION + SLIDE	Step probability
WRITE/NEXT held + C D E	Pick variation 1 / 2 / 3
CLEAR + TIME MODE (running)	Tap-write
CLEAR + ...	Pattern operations (Intermediate Course 3)
Pattern key + FUNCTION	Remember / forget A/B mode and chain
PLAYING	
ACCENT / SLIDE	Section A / B
ACCENT + SLIDE	A/B mode
Hold one pattern key, press another	Chain
ACCENT + SLIDE held, tap pattern keys	Chain in any order
FUNCTION + TIME MODE	Playback direction
PATTERN PLAY	
PITCH MODE + pitch key	Transpose

GESTURE	FUNCTION
PITCH MODE + ACCENT / SLIDE (running)	Force accent / slide
FUNCTION + PITCH MODE	Keyboard play
ACCENT + SLIDE + WRITE/NEXT	Save the playing chain
ANYWHERE	
FUNCTION + CLEAR	Settings menu
WRITE/NEXT held at power-on	Firmware update

7 SPECIFICATIONS

■ PATTERNS

4 groups × 8 patterns × 2 sections = 64 sections. Each section 1–32 steps (24 in triplets); A/B mode plays 64.

■ PER STEP

Pitch over four octaves, accent, slide, note / tie / rest, ratchet (2× or 3×), probability.

■ VARIATIONS

3 per section. Variation 1 on the TB-303 voice and MIDI, 2 and 3 on MIDI. Variation 3 plays chords of up to 4 notes.

■ SCALES

12-note scale per variation, 35 ready-made scales.

■ PLAYBACK

6 directions, chains of up to 4 patterns, 8 tracks of up to 64 bars.

■ MIDI

DIN in and out; USB-C on the FRAM Edition. 3 note channels, clock in and out, pattern select, MIDI thru.

■ SYNC

TEMPO knob, DIN sync or MIDI clock.

■ FILTER

FRAM Edition: cutoff from MIDI CC 74 or a per-step lane with keytrack and glide.

■ MEMORY

Standard Edition: on-chip flash. FRAM Edition: 512 KB FRAM, no battery.

■ MODES

superOS and D650C mode (the original TB-303 program).