

Pattern303 Manual

Pattern editor, librarian and preview synth for the Behringer TD-3-MO.

1 Getting started

What you need

- A Mac (Apple silicon or Intel) running macOS 10.13 or later.
- A Behringer TD-3-MO connected by USB, if you want to read and write its patterns. Pattern303 also works without it: you can write patterns and hear them on the built-in preview synth.

Install

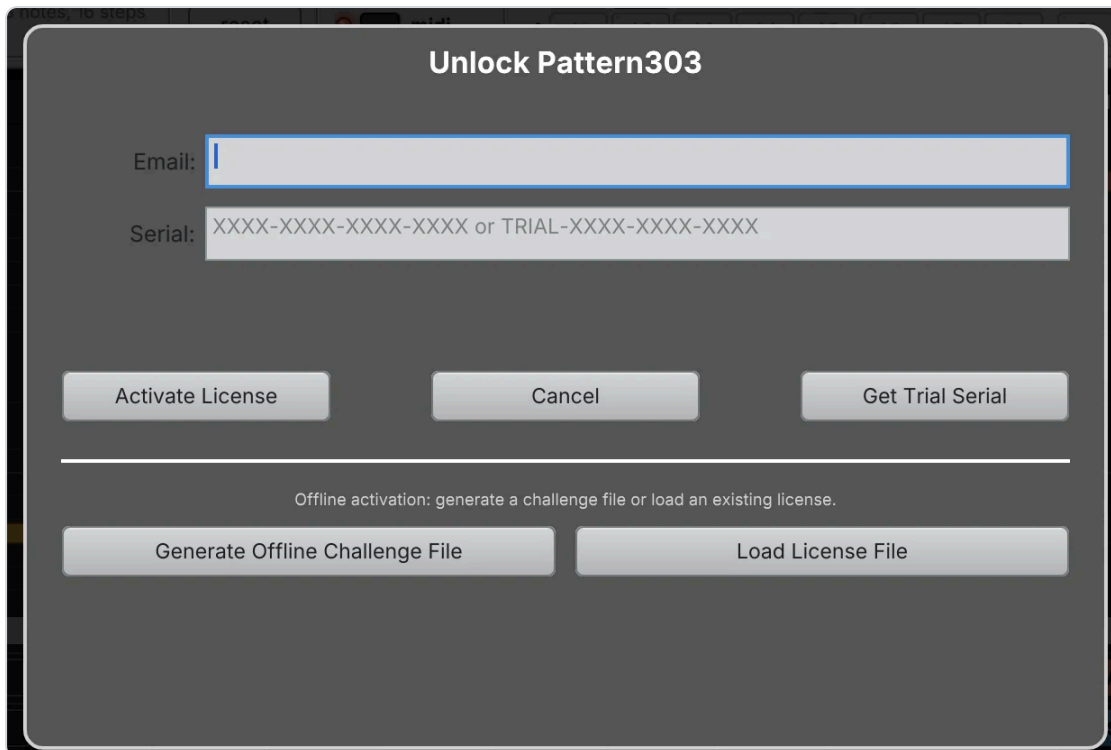
Open the Pattern303 disk image (the .dmg file you downloaded) and double-click **Install Pattern303.pkg**. It installs four parts; untick any you don't need:

- **Standalone app**, in Applications
- **Audio Unit**, for Logic, GarageBand, Live and other AU hosts
- **VST3**, for Live and other VST3 hosts
- **Manual and uninstaller**, so the manual opens from Pattern303 without an internet connection

In your DAW, Pattern303 is an instrument. Put it on an instrument track.

Activate

The first time you open Pattern303, it asks for your licence.



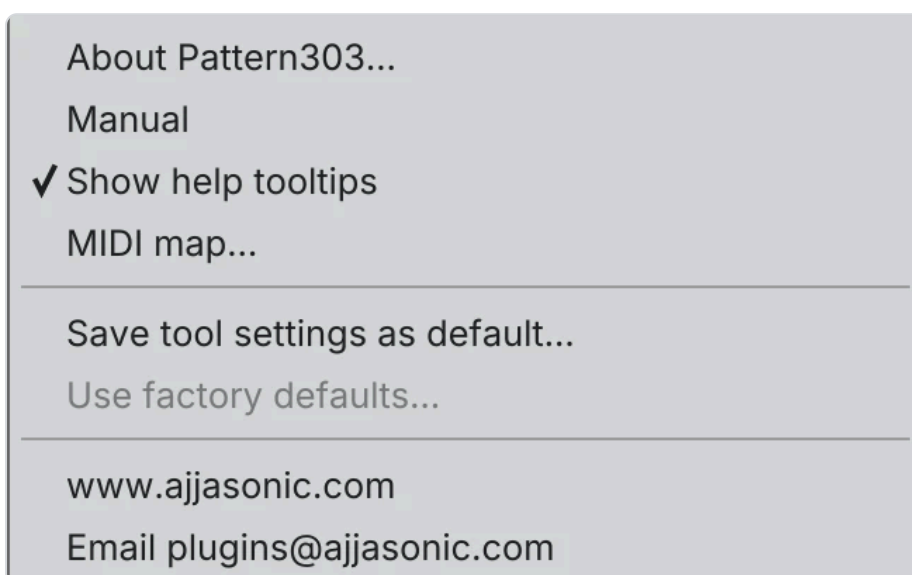
The dialog box is titled "Unlock Pattern303". It contains two input fields: "Email:" with a text box and "Serial:" with a text box containing the placeholder "XXXX-XXXX-XXXX-XXXX or TRIAL-XXXX-XXXX-XXXX". Below these are three buttons: "Activate License", "Cancel", and "Get Trial Serial". A horizontal line separates these from the bottom section, which has the text "Offline activation: generate a challenge file or load an existing license." and two buttons: "Generate Offline Challenge File" and "Load License File".

1. Enter the email address and serial from your purchase.
2. Click **Activate License**. The computer needs to be online for this.

To try Pattern303 first, click **Get Trial Serial**, then enter the trial serial you receive in the same way.

No internet on the studio computer? Click **Generate Offline Challenge File**, take that file to a computer that is online and upload it on the activation page at ajjasonic.com. You get a licence file back: bring it over and click **Load License File**.

Moving to another computer: click **options** (right of **read** and **send**) and choose **Deactivate this computer...** first. Then activate on the new one.



The options menu is a vertical list of items. The first four items are "About Pattern303...", "Manual", "✓ Show help tooltips", and "MIDI map...". The next two items are "Save tool settings as default..." and "Use factory defaults...". The last two items are "www.ajjasonic.com" and "Email plugins@ajjasonic.com".

The options menu (lower part). **Manual** opens this manual; **Show help tooltips** switches the tips off or on.

Save tool settings as default... keeps your scale and root, the switches (snap, transpose, global, fold to scale, by degree), the note weights and the randomizer settings: every new Pattern303 starts with them. Projects you already have keep their own. **Use factory defaults...** forgets them again.

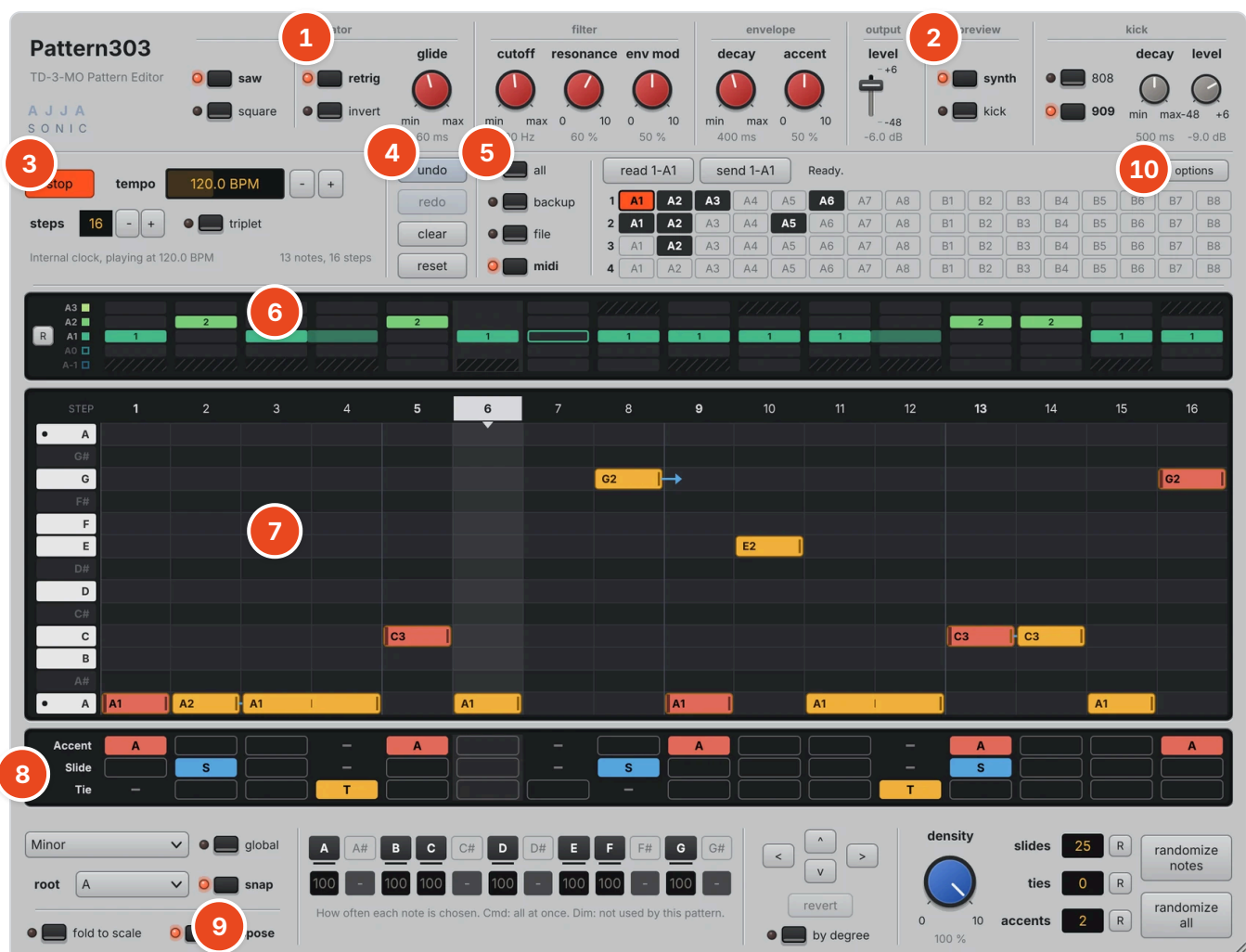
Uninstall

Open **Uninstall Pattern303**, from the disk image or from /Library/Application Support/Ajja Sonic/Pattern303. It removes the app, the plug-ins and the manual, and asks for your Mac's password. It then asks whether to remove your licence and settings too, and, separately, your backups in Documents/Pattern303. Both are kept unless you choose to remove them.

To use your licence on another computer, deactivate this one first (**options > Deactivate this computer...**). Uninstalling doesn't free the activation.

2 The window

Everything is on one page. Drag the bottom-right corner to make the window bigger or smaller.



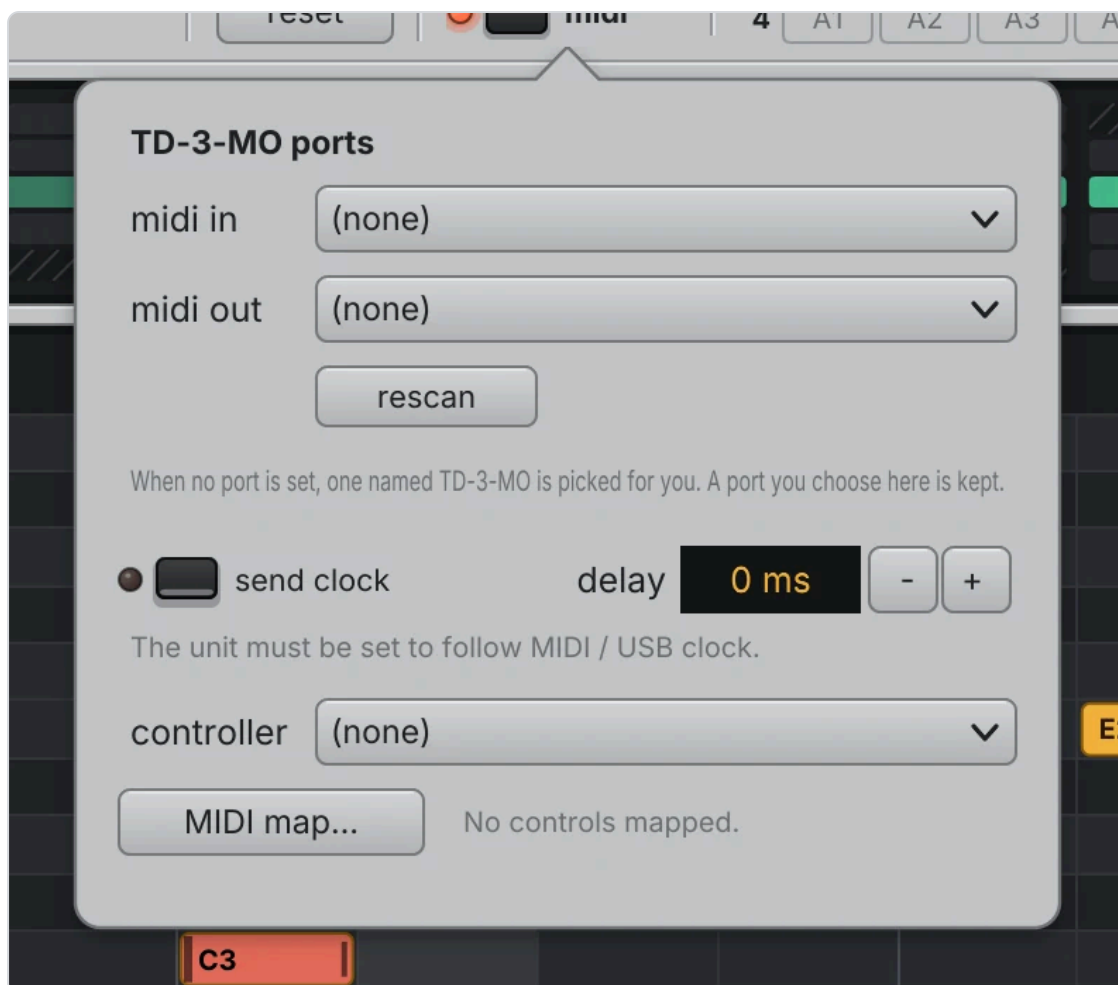
- 1 **Preview synth:** the sound you hear when no TD-3-MO is playing (10)
- 2 **Preview and kick:** synth on/off and a reference kick drum
- 3 **Transport:** play, tempo, step count and triplet (11)
- 4 **undo, redo, clear, reset**
- 5 **The unit and the memory:** read and send, the flyouts, and the 64 pattern slots (7)
- 6 **Octaves:** which octave each note is in (5)
- 7 **Piano roll:** the pattern's notes, one octave (5)
- 8 **Accent, Slide and Tie lanes** (6)
- 9 **Tools:** scale, shift, note weights and the randomizer (9)
- 10 **options:** licence, about, this manual, website and support

Switches are square buttons with a lamp: a lit lamp means on. Click the Pattern303 name or the Ajja Sonic logo to see the version.

3 Connecting the TD-3-MO

1. Connect the TD-3-MO to the Mac with a USB cable and switch it on.
2. Open Pattern303. It finds the unit by name and opens its MIDI ports. The **midi** lamp lights when both its input and output are open, and the status line says **Ready**.

If you plugged the unit in after opening Pattern303, or the lamp stays off, click **midi** and then **rescan**. You can also pick the ports yourself there.



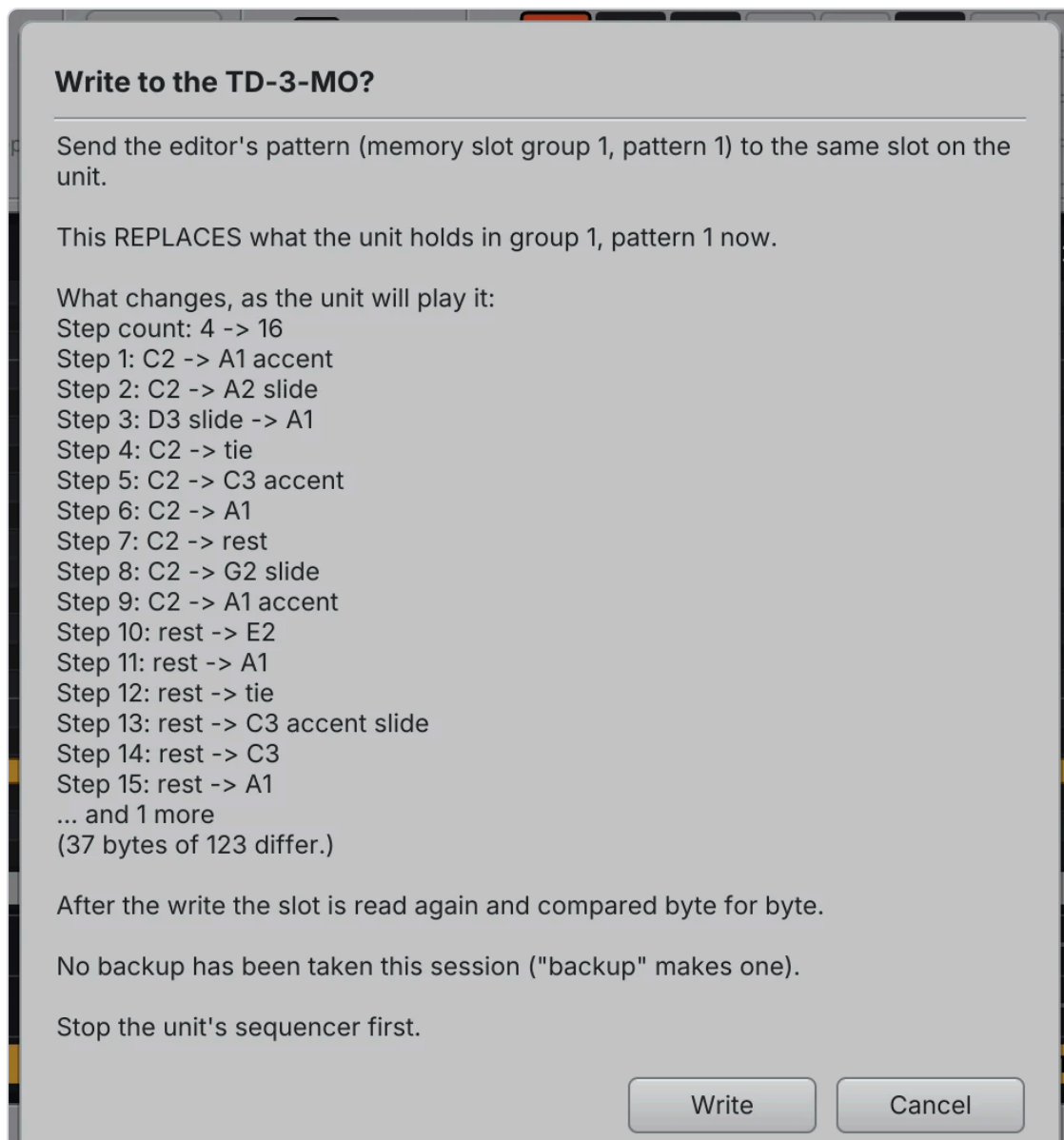
The midi flyout. With the unit connected, its ports show here instead of "(none)".

Pattern303 talks to the unit directly over USB, not through your DAW, so you don't need to set up anything in the DAW for reading and writing patterns.

4 Read, edit, send

The basic job: take a pattern off the TD-3-MO, change it, and put it back.

1. **Pick the slot.** Click a key in the memory grid, for example **A1** in row 1 (group 1, pattern A1). The buttons above it change to **read 1-A1** and **send 1-A1**.
2. **Read.** Click **read 1-A1**. The pattern appears in the piano roll.
3. **Edit** it (5, 6). Press play to hear it on the preview synth.
4. **Send.** Stop the unit's sequencer, then click **send 1-A1**.



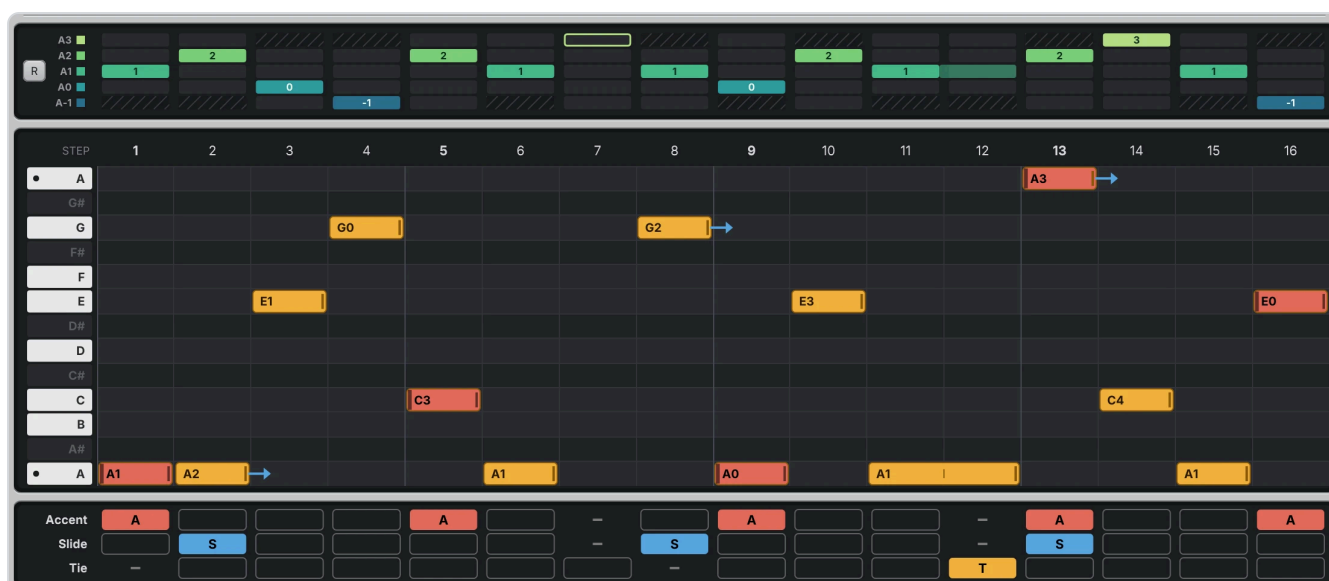
Before anything is written, you see exactly what changes.

When you send, Pattern303 first reads the slot on the unit, then shows what will change, step by step. Nothing is written until you click **Write**. Afterwards it reads the slot back and compares it with what was sent:

STATUS	MEANING
Verified	The unit holds exactly what was sent.
MISMATCH	The unit holds something else. Click restore to put back what the slot held before.
UNKNOWN	The unit didn't answer the check. Click read to see what it holds, or restore .

If the pattern on the unit was changed since you read it (on the unit itself, or in SynthTribe), Pattern303 stops and writes nothing, so you never overwrite work by accident.

5 Drawing notes



Steps run across. The roll shows one octave, from the scale's root at the bottom to the same note an octave up at the top. Each note is named with its octave (A1, C3). Red notes are accented, a blue arrow is a slide. The step in the light box is the one playing.

The octave box above the roll shows each step's octave, one colour per octave and its number. A tie shows its note's octave, fainter; a rest shows an outline: the octave a note painted there will get. Notes can go from C0 to C4; hatched cells are outside that.

DO THIS	TO
Click an empty cell	Add a one-step note
Drag across empty cells	Paint a run of notes; the note follows the mouse
Shift -drag	Draw one long note
Drag a note	Move it (it stays in its octave)
Drag a note's right edge	Make it longer or shorter
Double-click a note	Delete it
Double-click another row inside a long (tied) note	Break it into single notes; that step gets the new note
Hold Alt while drawing	Ignore the scale (notes snap to it otherwise)
Click a cell in the octave box	Put that step in that octave (its note moves with it)
Click R left of the octave names	Spread the notes over the allowed octaves at random
Drag across the octave box	Set several steps, each to the octave under the mouse (Shift : all on one row)

A note goes in its step's octave: the one you set in the octave box, or else the octave of the step before it. The top row is the root an octave up, and a note there stays on the top row.

With a note selected (click it): **↑** **↓** move it a semitone (**Shift**: an octave), **←** **→** move it a step, **A** and **S** switch accent and slide, **Delete** removes it.

The roll shows what the unit plays. On the TD-3-MO, ties and rests don't use up a note, so later notes keep their pitch when you add a tie or a rest. Pattern303 handles this for you: what you see is what the unit plays.

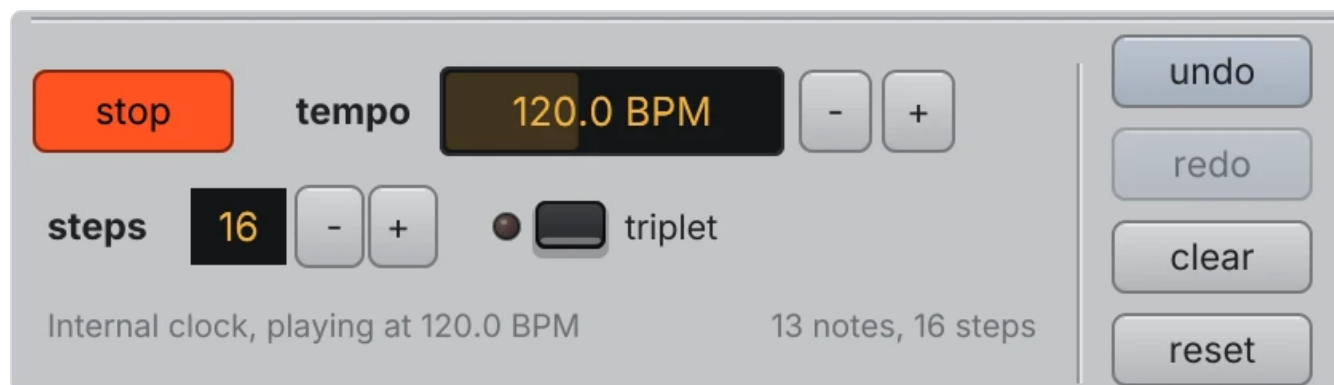
6 Accent, slide, tie, steps

The three lanes under the roll belong to the steps. Click a box to switch it; drag along a lane to paint several.

- **Accent** (A): the step is played louder and brighter.
- **Slide** (S): the note glides into the next one.

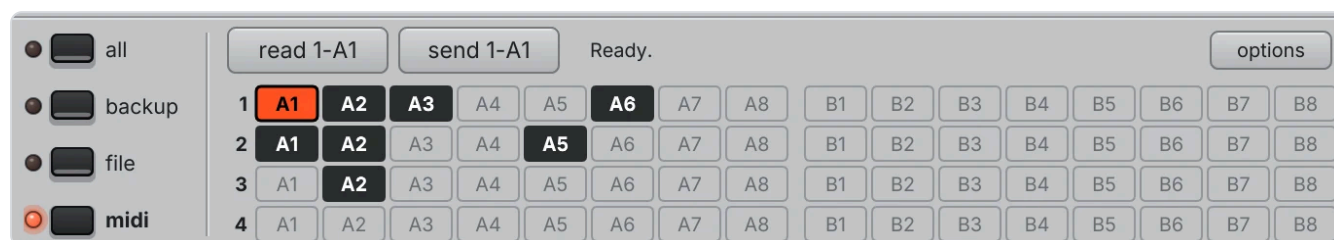
- **Tie (T):** the step holds the note before it. Switching a tie off turns it back into a note.

A dash means the step can't take it: a tie or rest has no accent or slide of its own, and step 1 has nothing before it to tie.



- **steps:** how many steps play (1 to 16). Use - +, drag on the number, or click a step number above the roll. Steps past the end are shaded but kept.
- **triplet:** plays the steps as triplets (12 steps make a bar).
- **clear** makes every step a rest. **reset** also sets 16 steps and triplet off, and puts every step back in the middle octave. Both can be undone.

7 The pattern memory



The grid holds 64 patterns, laid out like the TD-3-MO: groups 1 to 4 down the side, A1 to A8 and B1 to B8 across. The editor shows the slot that's lit orange. Each slot keeps its own undo history and its own scale.

- **Orange:** the slot you're editing.
- **Dark:** holds a pattern (read, loaded or edited).
- **Outline:** empty.
- * after the name: differs from what the unit holds.

DO THIS

TO

Click a slot

Edit it

Drag a slot onto another

Move it

Alt-drag / **Shift**-drag

Copy it / swap the two

Right-click a slot

Copy, cut, paste, swap, clear

Slot 1-A2 (group 1, pattern 2)

Edit this slot

Copy
[Cmd+C]

Cut
[Cmd+X]

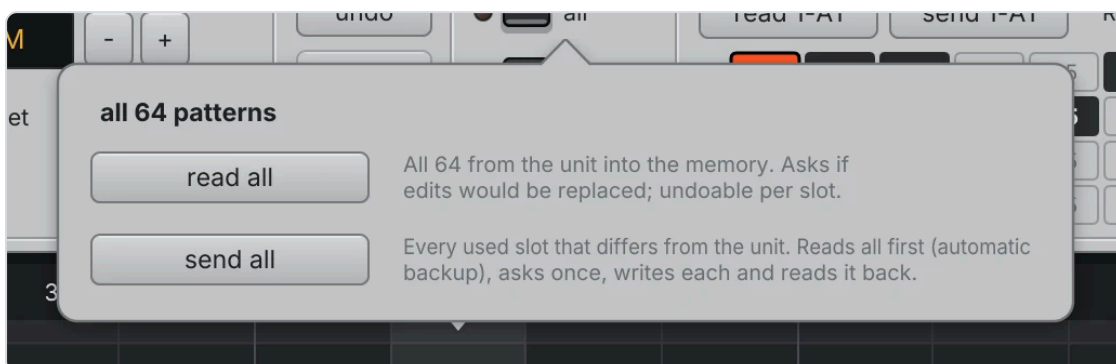
Paste
[Cmd+V]

Swap with the copied slot

Clear
[Delete]

Nothing in the grid is sent to the unit until you click **send** or **send all**. The memory is saved with your DAW project.

All 64 at once



- **read all** reads every slot from the unit into the memory.
- **send all** sends every slot you've used that differs from the unit. It first saves a backup of all 64, asks once, then writes and checks each slot. It stops at the first one that doesn't check out.

8 Backups and files

Backups

Click **backup**, then **back up all 64**. Every pattern on the unit is saved to a new folder in Documents/Pattern303/Backups. Nothing else changes. Do this before your first write, and now and then after.

load backup... loads a backup's all.sysx into the memory (not onto the unit). From there you can send any slot back.

Files

Click **file** to open or save the slot you're editing:

- **open...** a **.syx** (SysEx dump) or a SynthTribe **.seq** file. If a **.syx** holds several patterns, you pick one.
- **save .syx...** saves the pattern as a SysEx dump that any SysEx tool can send.
- **save .seq...** saves it for Behringer's SynthTribe app.
- **export .mid...** saves it as a MIDI file, to play with other instruments in your DAW. Accents are louder notes; slides overlap the next note.
- **import .mid...** turns a MIDI file into the pattern (one note per step). A file with several bars can fill several slots. Anything that had to change to fit is listed.

all > export all .mid... saves every pattern you've used, one file each and all together in one file.

Quicker: drag a slot from the pattern memory out of the Pattern303 window onto a MIDI track in your DAW.

9 Scale and pattern tools



Scale

- Pick a **scale** and **root**, or switch single notes on and off with the note buttons. The roll starts on the root. New notes snap to the scale. The keyboard down the side of the roll darkens notes outside it and marks the root with a dot.
- **snap** (on): changing the scale moves the existing notes to the nearest notes of the new one. Undo puts them back.
- **global**: one scale for all 64 slots. Off, each slot keeps its own.
- **fold to scale**: the roll shows only the notes in the scale, with taller rows.
- **transpose** (on): when on, changing the root moves the whole pattern into the new key, so it looks the same on screen. When off, the notes stay where they are (and **snap** fits them to the new scale).
- The scale menu has many scales, grouped: modes, pentatonic and blues, trance (including a Goa scale), Middle Eastern, Indian, Eastern European, Japanese and more. **Save this scale as yours...** keeps the current notes under a name of your own, in every project.

Shift

< > move the whole pattern a step earlier or later (it wraps round). **v ^** transpose it a semitone, or a scale step with **by degree** on. **revert** goes back to how it was before

you started shifting.

Random

- **randomize all** writes a new pattern from the scale. Density starts at 100, so the first one fills every step. Ties start at 0, slides at 25 and accents at 2.
- **randomize notes**, above it, keeps your rhythm and only picks new notes: ties, accents, slides and each step's octave stay. Press again for another try. With no notes yet, it makes a whole pattern. Afterwards the weights re-pick its notes as you change them.
- Then reshape it: **density** (how many notes), and **slides**, **ties** and **accents** (0 to 100). Changing one changes the same pattern, it doesn't roll a new one. Low settings place ties, slides and accents three steps apart, funk style; higher ones fill in between.
- **Octaves**: click an octave's name in the octave box (A1, A2...) to let the randomizer use it, or not. A filled square means it may. Most notes stay in the middle octave; about one in five goes to another one you allowed. Switch the middle one off too and notes spread evenly over the ones left. One octave always stays on.
- **R** beside slides, ties or accents rolls only that one again, at the amount in its box. Everything else stays. Press again for another try; **undo** takes each one back.
- **R** at the left of the octave box moves the notes to other octaves at random, only the ones you allowed. The notes and rhythm stay.
- These also work on a pattern you drew or read: turn one back to where it was and you get your pattern back exactly.
- **weights**: the number under each note, 0 to 100, is how often it is chosen. 0 means never. Hold **Cmd** while you click, drag or type to set every note at once. Dim numbers mean the weights can't change the pattern on screen right now (you drew or changed it yourself); they still count for the next randomize.
- Number boxes: drag up or down, or double-click and type a number.

10 Preview synth and kick



The preview synth lets you hear patterns without the TD-3-MO. It's a simple bassline synth for auditioning, not a copy of the TD-3-MO's sound.

- **saw / square**: the waveform. **glide**: how fast slides move.
- **cutoff, resonance, env mod**: the filter. **decay**: note length. **accent**: how much harder accented notes hit.
- **retrig** (on): every note starts the same way. Off, notes vary slightly, like an analogue oscillator.
- **invert** flips the polarity. Useful when you layer the preview with the unit or a kick.

- **level**: output volume.

Double-click a knob's value to type a number. All these controls can be automated in your DAW.

- **synth** (in preview) mutes the preview synth, for example while the TD-3-MO is playing the pattern. The pattern keeps running.
- **kick** plays a four-on-the-floor kick in time, as a reference. Choose **808** or **909**, and set its **decay** and **level**.

The preview synth also plays MIDI notes sent to it from your DAW. Velocity 100 or above plays an accent.

11 Playing, MIDI clock and controllers

In a **DAW** (AU or VST3), the DAW plays the pattern. Press play in the DAW: the pattern follows its tempo and position, loops included. The play button and tempo in Pattern303 are disabled.

To play the preview synth from a MIDI track instead, switch off **options** > **Play the pattern with the DAW**. The pattern then stays silent, and the notes on the track play the synth (velocity 100 or above is an accent; overlapping notes slide). The kick still follows the DAW. The setting is saved with the project.

In the **standalone app**, use **play** and **tempo**, or press **Space**. Choose audio and MIDI devices under **Options** > **Audio/MIDI Settings** at the top left of the window.

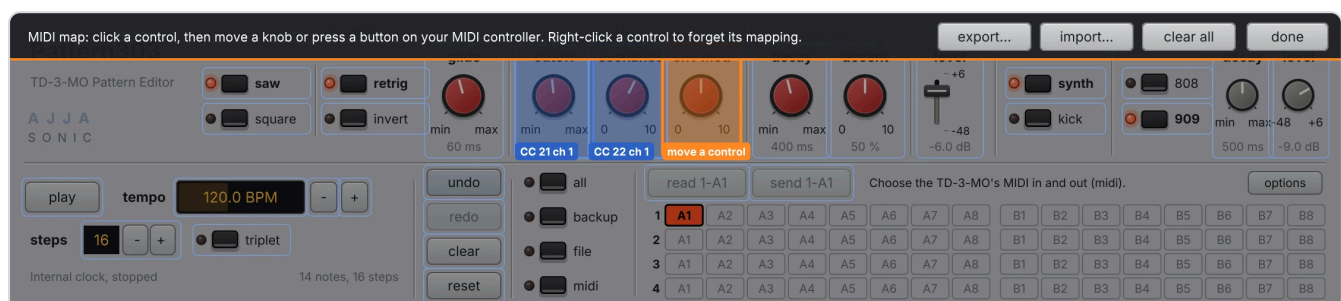
Syncing the TD-3-MO (standalone app)

In the **midi** flyout, switch on **send clock**. The unit then follows Pattern303's play, stop and tempo, starting on the bar. Set the TD-3-MO to follow MIDI/USB clock.

If the unit sounds ahead of or behind the kick, adjust **delay**: raise it if the unit is ahead, lower it if behind.

In a DAW, send clock to the unit from the DAW's own MIDI sync settings instead.

MIDI controllers



Choose **options** > **MIDI map...** (or **midi** > **MIDI map...**). Click a control, then move a knob or press a button on your controller. Mapped controls show their CC. Right-click

a control to forget it; **done** when finished.

Quicker for one control: right-click it anywhere and choose **Learn** or **Forget**.

- Mappings are saved with your project. **export...** and **import...** take them to another one.
- Choose your controller under **midi > controller**. Its MIDI can also come from your DAW track.

12 Keyboard shortcuts

KEYS	ACTION
Cmd + Z / Shift + Cmd + Z	Undo / redo (in the slot you're editing)
Space	Play / stop (standalone app)
PIANO ROLL, WITH A NOTE SELECTED	
↑ ↓	Semitone up / down (Shift : octave)
← →	Step earlier / later (Shift : shorter / longer)
A / S	Accent / slide on or off
Delete	Delete the note
MEMORY GRID, AFTER CLICKING IT	
Cmd + C / X / V	Copy / cut / paste the current slot
Delete	Clear the current slot
Arrow keys	Move between slots

13 Troubleshooting

The midi lamp stays off

Check the USB cable and that the unit is on, then click **midi > rescan**. If more than one port is named TD-3-MO, pick the right one yourself.

"No reply" when reading

The unit didn't answer. Check that both **midi in** and **midi out** are the TD-3-MO, and that no other app (SynthTribe, for example) is using its ports.

A write says MISMATCH or UNKNOWN

Click **restore** to put the slot back as it was, or **read** to see what the unit holds. Stop the unit's sequencer before writing.

No sound

Check that **synth** is lit and **level** is up. In a DAW, press play in the DAW; in the standalone app, check the audio device under **Options > Audio/MIDI Settings**.

Support

Email plugins@ajjasonic.com or visit www.ajjasonic.com. This manual is always under **options > Manual**.

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