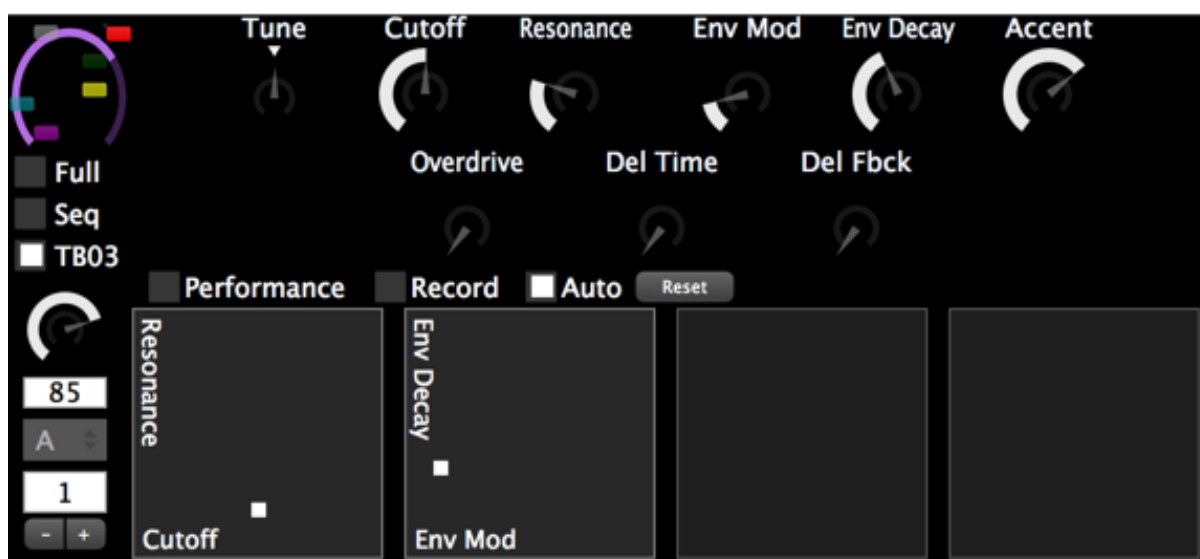
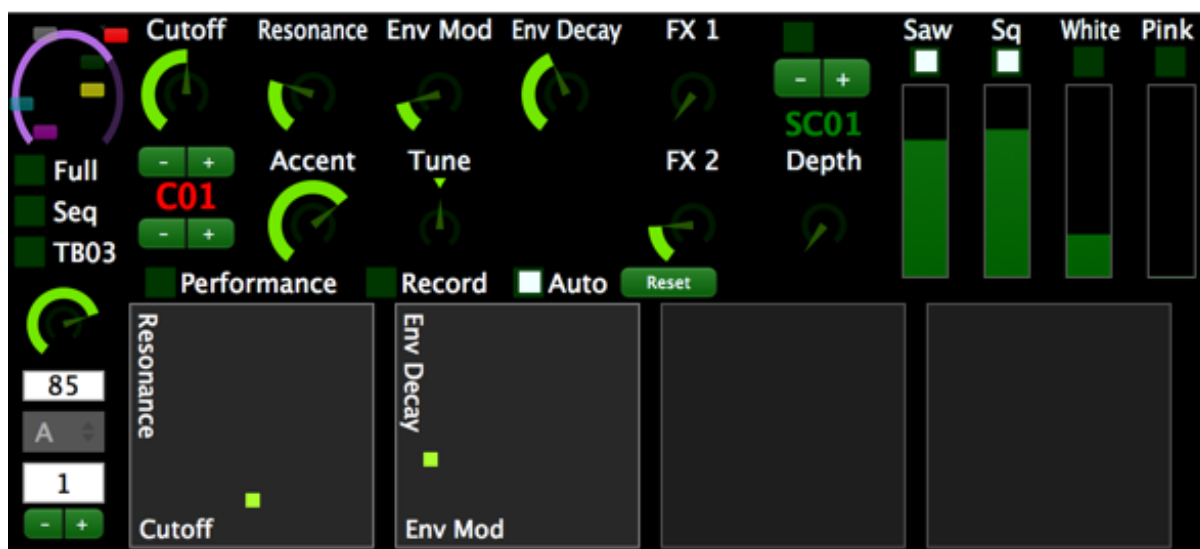


# MIDISynth TB-3/TB-03 1.1.0

## User Guide

<http://sigabort.co/midisynth.html>

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# 1 Overview

MIDISynth TB-3/TB-03 is a VST for Windows and OSX that allows you complete access to all parameters of the Roland TB-3, including mixer, distortion, and FX.

Other functionality includes storing a retrieval of up to 32 different presets, randomisation of parameters by section, morphing between presets and full blown step sequencer.

## 1.1 Installation

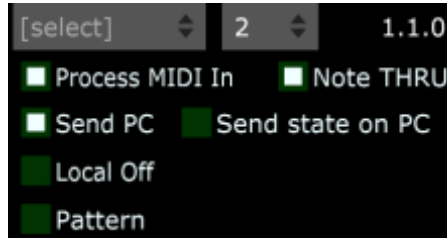
Copy the contents of the appropriate VST from the correct install folder to your VST folder.

Please make sure you install your license file (**midisynth\_tb3\_license.txt**) in the same location.

Whilst the automation of license generation is being completed the download zip will contain a temporary license. You will receive your full license within 48-72 hours of purchase. If you do not receive your license by the time the temporary license expires please contact [admin@sigabort.co.uk](mailto:admin@sigabort.co.uk).

# 2 Setup

Click on the setup button to bring up setup options.



## 2.1.1 MIDI Port

This can be the direct TB-3/TB-03 port or an MX-1 port if connected through the MX-1.

## 2.1.2 MIDI Channel

This default to the factory setting of 2 but can be changed if you have changed the channel on the unit.

## 2.1.3 Process MIDI In

Enabling this option will processing incoming MIDI data from the controller and update the GUI appropriately.

## 2.1.4 Note Thru

Select this to process note in information – this should be selected when a host sequencer (e.g. Live) is being used to send MIDI note information rather than using the TB-3 on-board sequencer.

## 2.1.5 Send PC

Select this to send all current settings from the UI to the synth at startup.

## 2.1.6 Send state on PC

Select this to send all current settings from the UI to the synth when a program change occurs on the UI.

Some synths may not be able to process all messages arriving immediately and some may be dropped. If settings are not reaching the synth as expected, try increasing this value.

## 2.1.7 Local Off (TB-3)

This option should be set for correct operation if the Local Off mode has been set on the TB-3.

## 2.1.8 Pattern Play

Whether incoming MIDI note messages are used to stop and start patterns.

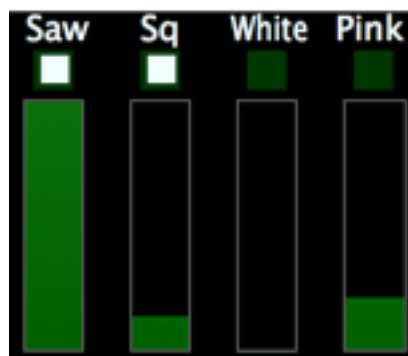
# 3 Operation

## 3.1 Main (Front Panel) Controls



This part of the UI represents the basic controls for the synth that are available from the front panel.

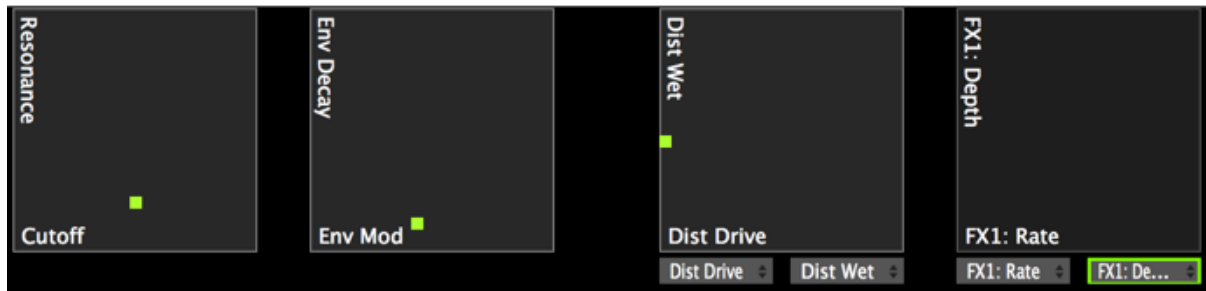
## 3.2 Mixer Controls (TB-3)



Enable/disable the four sound sources and change their relative volumes: Saw, Square, White Noise, Pink Noise.

**Note:** The noise sources are LOUD relative to the wave sources so be aware if you are messing around on headphones!

## 3.3 XY Controls



Four XY controls are provided for easy control of multiple parameters at the same time. The first two controls are fixed as Cutoff/Resonance and End Mod/End Decay controls, and the 2<sup>nd</sup> set of two can be freely assigned to any available parameters from the front panel controls, distortion parameters, or FX parameters.

Holding down **SHIFT** when moving the XY will fix the control at horizontal movement only and holding down **CTRL** will fix it at vertical.

## 3.4 Distortion Controls (TB-3)

Select from 1 of 25 distortion types:

Mid Boost, Clean Boost, Treble Bst, Blues OD, Crunch, Natural OD, OD-1, T-Scream, Turbo OD, Warm OD, Distortion, Mild DS, Mid DS, RAT, GUV DS, DST+, Modern DS, Solid DS, Stack, Loud, Metal Zone, Lead, 60s FUZZ, Oct FUZZ, MUFF FUZZ





## 3.5 FX Controls (TB-3)



### 3.5.1 FX Architecture

Whilst there are 2 FX units in the TB-3 and there are 2 FX send controls, there is not a direct 1-1 relationship between these and the 2 send knobs do different things under different circumstances.

Different presets have the FX2 send (i.e. the front panel control) mapped to different destinations – it is possible to see this by selecting a preset, pressing Sync, changing the FX2 knob and then pressing Sync again. The majority of the time the control is mapped to the 'Wet' component of the effect, but this is not always the case, e.g.

- B24 – Control mapped to delay feedback
- B27 – Control mapped to distortion drive
- B28 – Control mapped to chorus depth

It is not possible to change these mappings so you may wish to bear this in mind when creating your own patches.

Additionally, it appears as though when selecting a different effect for FX-2 from the preset default, the FX2 send knob becomes disconnected and no longer controls the effect send – as this point you will need to adjust the Wet levels manually in the effect section.

I will work on providing some mapping options for the next release. Until this is completed it may be best to choose a relevant starting preset, i.e. if you want to create a new preset with a delay as the FX2 effect then choose a preset that already has this and modify that one. As the FX1 send knob doesn't appear to be directly to the FX1 unit this should not matter.

Please bear with me in this area as it is completely undocumented and so this is all trial-by-error.

### 3.5.2 FX 1

Select from 1 of 10 effect types:

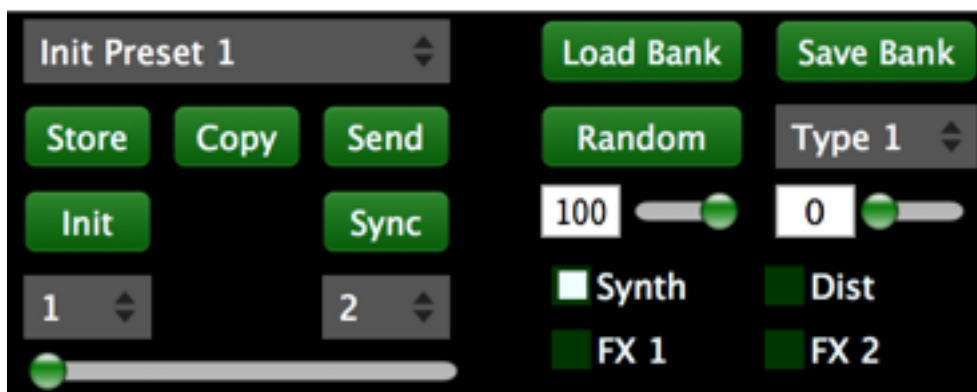
Compressor, Ring Mod, Bit Crusher, Tremelo, Chorus, Flanger, Phaser, Delay, Pitch Shifter, EQ

### 3.5.3 FX 2

Select from 1 of 9 effect types:

Compressor, Ring Mod, Bit Crusher, Tremelo, Chorus, Flanger, Phaser, Delay, Reverb

## 3.6 Preset/Morphing/Randomisation



### 3.6.1 Preset Management

#### 3.6.1.1 Preset Selector

Select a preset or rename the current preset.

#### 3.6.1.2 Store

Store current settings at the specified slot.

#### 3.6.1.3 Copy

Copy the current state to a new preset location.

#### 3.6.1.4 Send

Send selected preset to synth.

#### 3.6.1.5 Init

Initialise the state to defaults.

#### 3.6.1.6 Sync

Sync the UI to the current settings of the TB-3.

#### 3.6.1.7 Load Bank

Load a bank of presets from a file.

#### 3.6.1.8 Sync

Store a bank of presets to a file.

### 3.6.2 Morphing

It is possible to morph between 2 presets, or over a range of presets, using the slider provided. You can use the dropdowns to select the start and end point.

**Please Note: Morphing is fixed to the front panel controls for this release – Distortion and FX will be added in a future update.**

#### 3.6.2.1 Start Preset

Preset to start morphing at

### 3.6.2.2 End Preset

Present to end morphing at

## 3.6.3 Randomisation

Two randomisation algorithms are provided for discovering new sounds. Which elements of the synth are to be randomised can be controlled via the Synth, Dist, FX1 and FX2 check boxes.

### 3.6.3.1 Random 1

This randomiser will generate completely random values with no context as to the current state of the synth. It has 2 values:

Max – this determines the max upper value – a random value will be chosen between 0 and this %age of the value set in the data screen

Minimum – this constant %age will be supplied as a minimum value and added to the random %age generated above

### 3.6.3.2 Random 2

This randomiser will generate random values based on the current values in the synth.

%age – this determines the %age movement (either +ve or -ve) from the current value. This works appropriately for scalar and bipolar controls.

# 4 User Presets

You can store any changes you make in the user presets on the TB-3 (firmware version 1.10 and later).

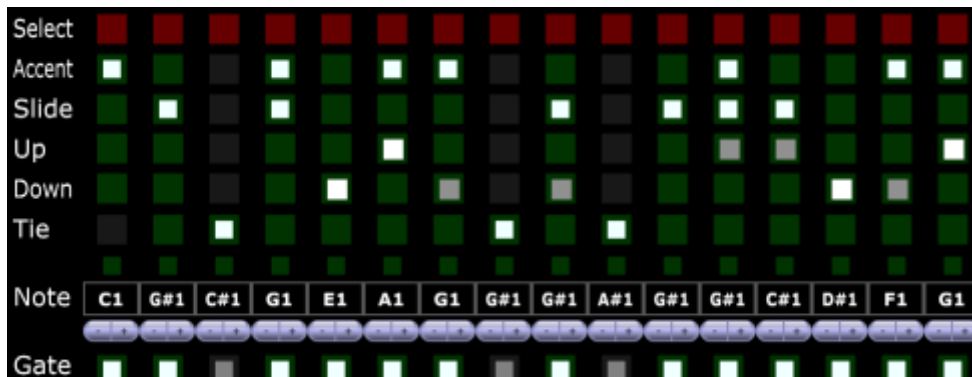
To do this:

- Make the changes you require
- Stop the sequencer
- Turn the **[VALUE]** knob while holding down the **[ENV MOD]** button to select the user bank destination(U01–U15)
- Press the **[PLAY/STOP]** button to save or any other buttons to cancel

Some users have reported problems with recalling stored user presets after a power cycle. Whilst nothing to do with the MIDISynth software they have also reported that doing a factory restore on the TB-3 allows the presets to be stored and recalled correctly.

# 5 Sequencer

An inbuilt sequencer is provided for programming the TB-3. The sequencer provides 8 banks of 16 patterns for organisational purposes and each pattern is up to 32 steps.



Randomisation is provided for all aspects of the sequence as well as traditional features such as transpose (in key or chromatic) etc...

Future versions of the sequencer will introduce:

- Swing
- Pattern chain

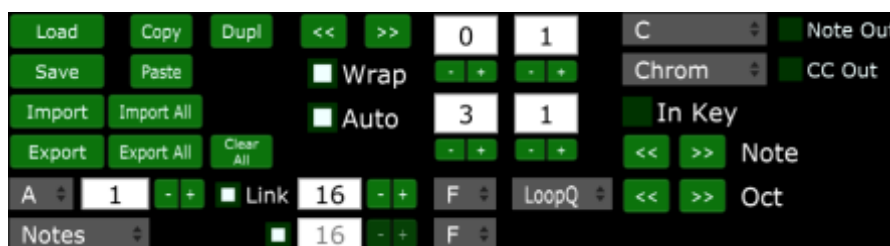
The sequencer can be displayed or hidden using the Seq toggle switch on the main display.

The gate time, playing pattern bank and playing pattern select controls are always visible and accessible from the main panel.



Pattern changes will occur at the end of the sequence – if a pattern change is currently waiting to occur then the control will flash.

## 5.1 Sequencer Controls & Options



## 5.1.1 Shift Left/Right

Shift the contents of the pattern one step left or right.

The toggle switches at the far right of the sequencer can be used to lock individual lanes so that these are not shifted.

## 5.1.2 Shift Wrap

Determines whether notes wrap around when shifted off the left/right hand side.

## 5.1.3 Shift Auto

Determines whether automation data is shifted when shifting pattern data.

## 5.1.4 Pattern Length

Number of steps in the pattern.

## 5.1.5 Automation Length

Number of steps in the automation data.

## 5.1.6 Automation Length Link

If checked the length of the automation sequence always follows the length of the pattern.

## 5.1.7 Pattern Play Direction

Allows the pattern to be played forward, backwards, or random steps.

## 5.1.8 Automation Play Direction

Allows the automation data to be played forward, backwards, or random steps.

## 5.1.9 Pattern Mode Play Type

Select from 1-Shot, 1-Shot Quantised, Loop, Loop Quantised, Gate.

## 5.1.10 Note Out

Send note information out of VST MIDI output for recording into host sequencer.

## 5.1.11 CC Out

Send controller information out of VST MIDI output for recording into host sequencer.

## 5.1.12 Rand Min Steps

Minimum number of active steps in a lane when randomised.

## 5.1.13 Rand Max Steps

Minimum number of active steps in a lane when randomised.

## 5.1.14 Rand Root Octave

Root octave of notes when randomising.

## 5.1.15 Rand Octave Range

Number of octaves used when randomising.

## 5.1.16 Root Note

Root note of pattern.

## 5.1.17 Scale

Scale of pattern.

## 5.1.18 Transpose Note Up/Down

Transpose notes up/down.

## 5.1.19 In Key

Whether notes are kept in key when transposing and randomising.

## 5.1.20 Transpose Octave Up/Down

Transpose notes up/down one octave.

## 5.1.21 Copy

Copy current pattern.

## 5.1.22 Paste

Paste copied pattern into current pattern.

## 5.1.23 Dupl

Duplicate current pattern into next slot.

## 5.1.24 Edit Pattern Bank

Selects the bank for editing patterns.

## 5.1.25 Edit Pattern

Selects the current pattern for editing.

## 5.1.26 View Playing Pattern

If this toggle box is enabled, whenever a new pattern is played the UI will update to show the contents of the pattern. If not enabled, the UI will always show the edit bank/pattern.

## 5.1.27 Load

Load patterns from file.

## 5.1.28 Save

Save patterns to file.

## 5.1.29 Import

Import a single pattern from a PRM file.

## 5.1.30 Export

Export a single pattern to a PRM file.

## 5.1.31 Import All

Import all patterns from a directory.

## 5.1.32 Export All

Export all patterns to a directory.

## 5.1.33 Clear

Clear automation on currently selected step.

## 5.1.34 Clear All

Clear all automation.

# 5.2 Additional Controls & Options

Additional sequencer controls can be found above the XY controls and are always available.



## 5.2.1 Performance

Enter performance mode.

## 5.2.2 Record

Enter record mode for recording screen control and device knob movements.

## 5.2.3 Auto

Playback any recorded automation.

## 5.2.4 Reset

Reset disabled automation and play all.



## 5.3 Randomisation

By using the R buttons, it is possible to randomise each of the lanes of control. Using the top R button (on the select lane) will randomise all other lanes (use can lock lanes so they are not randomised using this option by using the lock buttons on the right hand side of the sequencer).

## 5.4 Automation

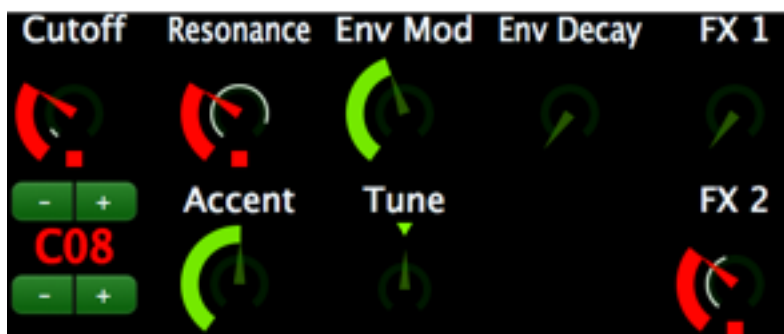
Per-step automation is available for the main front-panel controls.

The inner white ring in each control shows the automated value of the control at each playing step.

**Please Note: Automation is currently only supported for the main controls for the TB-3. Distortion and FX will be added in a future update.**

### 5.4.1 Setting Step Automation

Selecting a step to edit via the Select lane will display the current automation values for the step in red if a value has been set for that step.



You can move the control dials, the XY controls, or the physical controls on the TB-3 as normal to set the values for the currently selected step.

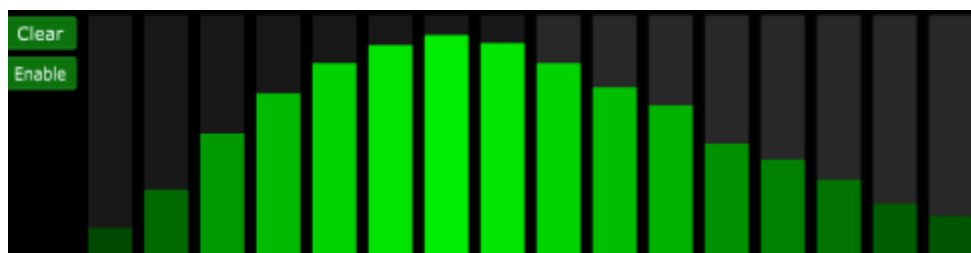
The small red button shown on each control that has automation is called the context button (as it changes colour depending on context).

### 5.4.2 Setting Multi-Step Automation

Another way to set automation information is via the automation selector control.



This enables the automation value for a particular parameter to be easily set for multiple steps via a multi-slider control.



### 5.4.3 Recording Automation

Turning on the **Record** switch will enter automation record mode. Here, any movements of the front panel controls, the XY controls, or the physical controls on the TB-3 will be recorded so that a sequence can be replayed.

### 5.4.4 Deleting Automation

All automation for all controls in the pattern can be deleted by pressing the **Clear All** button.

Automation for a single control can be deleted by hitting the red context button underneath the control.

### 5.4.5 Overriding Automation

If a front panel control is operated with a control that has automation, then automation play for that control will be suspended. This can be seen on the UI with the automation indicator being displayed in a darker grey.

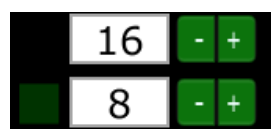


When a control is overridden the context button will turn green. Pressing this button will cause the control to start playing its automation again.

Pressing the **Reset Auto** button will return all controls to play automation.

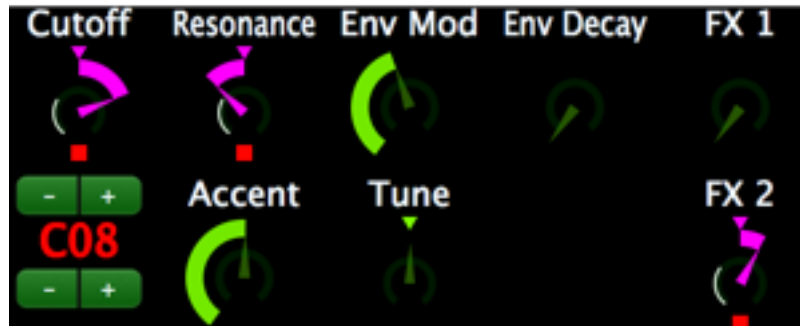
### 5.4.6 Automation Sequence Length

It is possible to decouple the length of the automation sequence from the pattern sequence by disabling the automation length link toggle and specifying the length of the sequence.



## 5.5 Performance Mode

Performance mode allows you to tweak your recorded automation whilst keeping the relative changes the same.



When engaged the main front panel controls will turn magenta and will become bipolar, if there is any automation data for that control. It is then possible to adjust the overall level of the automation from -64 to +63. Controls that have no automation will remain in their original colour and will operate as normal.

For performance mode to work correctly from the TB-3 you will need to make sure that the unit is in **LOCAL OFF** mode.

To set LOCAL OFF mode:

- Stop the sequencer on the TB-3
- Turn the **[VALUE]** knob whilst holding down the **[SCATTER]** button until the display reads Off.
- For the rest of MIDISynth TB-3 to operate correctly, make sure the Local Off option is selected in settings.

As the TB-03 has no Local off option the unit itself is not really suited to Performance Mode, but this can still be utilised from the GUI or via another MIDI mapped controller.

## 5.6 Pattern Play Mode

Pattern play mode allows patterns to be played via MIDI coming from your DAW or another external MIDI source.

Note on and note off messages on MIDI channel 1 are used to control the playback, which is determined by the Pattern Play Type setting:

- **1-Shot:** Upon receiving a note-on message the pattern plays for 1 cycle and then stops. Note-off messages are ignored. Receiving another note-on message will cause the pattern to restart playing at the beginning. This is available in quantised and non-quantised operation.
- **Loop:** Loops are toggled on and off via note-on messages. Upon receiving the first note-on message the pattern plays and loops. Receiving a second note-on message for the same note will stop the looping and playback will terminate at the end of the current loop. Receiving another note-on message for a different note will cause that pattern to start playing and looping. This is available in quantised and non-quantised operation.

- Gate: Upon receiving a note-on message the pattern will start playing and will play until a note-off message is received.

Note values 0-95 can be used to launch patterns in banks 1-6.

Note values 96-127 can be used to launch the corresponding Pattern Chain. The modes of operation are the same as described above for individual patterns.

## 5.7 Pattern Chain (1.2.0 update)

Pattern chains allow a sequence of patterns to be specified which can be played by a single MIDI note message.

A pattern chain can have up to 16 steps. Each step consists of a pattern to play and the number of times that the pattern should be repeated before moving on to the next step.

## 5.8 Pattern Import/Export

Patterns can be imported and exported in the format supported by the TB-3 and TB-03.

### 5.8.1 Import Single Pattern

The imported pattern will overwrite the currently selected pattern – any pattern file can be loaded.

### 5.8.2 Export Single Pattern

The currently selected pattern will be exported – the pattern will be exported to the correctly named file.

### 5.8.3 Import All

All 64 patterns for TB-3 and 96 patterns for TB-03 will be imported from the specified directory.

Patterns are imported in the following way:

TB-3:

Bank 1 -> Bank A 1-8  
Bank 2 -> Bank A 9-16  
Bank 3 -> Bank B 1-8  
Bank 4 -> Bank B 9-16  
Bank 5 -> Bank C 1-8  
Bank 6 -> Bank C 9-16  
Bank 7 -> Bank D 1-8  
Bank 8 -> Bank D 9-16

TB-03:

Group 1 -> Bank A 1-16; Bank B 1-8  
Group 2 -> Bank B 9-16; Bank C 1-16  
Group 3 -> Bank D 1-16; Bank E 1-8  
Group 4 -> Bank E 9-16; Bank F 1-16

## 5.8.4 Export All

Patterns are exported to the specified directory as detailed in the previous section.

# 6 Lemur Script

The Lemur script is still in development and should be available in the near future.

