

Toolbox User Manual



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Welcome

Thank you for buying our toolbox. Every good craftsman needs a toolbox that contains some standard tools that help them do their work. We think Eurorack musicians need a toolbox for their craft as well. This toolbox contains sequencers and function generators that provide CV and MIDI outputs for use in controlling other modules. You can't create music with toolbox alone, but it certainly offers some tools to help you work with your other materials to create the music you imagine.

In this manual, we will start by giving you an overview of the front panel hardware and the Main screen so you know what you have to work with. After that, we will set up the module. Next we will quickly discuss basic preset usage and muting capabilities. Then we will walk you through how to use each of the sequencers and function generators, followed by a discussion of using modulators with the sequencers. Then we will cover how to synchronize toolbox with other modules. Finally, we will go into more depth about preset management tasks and discuss how to upgrade your firmware.

If you would rather get a quick overview of how to use the module, see the Toolbox Quick Start Guide that came with the module and that is also available online at <https://1010music.com/toolbox-documentation-software>.

We use the following text formatting conventions in this document:

On Screen References:	Used for text that refers to names of screens or on screen graphical elements.
Front Panel Hardware:	Used for text that refers to physical elements on the front panel of the module, but not on the touchscreen.

This document applies to version 1.0.3 of the toolbox firmware.

Overview

Toolbox is a musically intelligent control module capable of driving a rack full of gear. It features both MIDI and Control Voltage interconnects for interfacing with all kinds of different hardware. Toolbox takes full advantage of the integrated 3.5" touch screen to give immediate access to sequences, parameters, and events. The screen provides a full overview of all the active notes and events. It even offers touch based scrolling and zooming, just like a smart phone, to make editing easy and fun. Toolbox is a great way to be creative on your terms.

Front Panel Overview

The front panel of toolbox contains a touch screen, control knobs, HOME and INFO buttons, MIDI input and output jacks, and CV input and output jacks as shown in Figure 1. The **INFO** and **HOME** buttons at the top of the front panel of toolbox are used to navigate the screens. Press **INFO** to view the information screen for the current selection. In some cases, you can press **INFO** more than once to get to deeper information. The **HOME** button generally takes you back a screen. If you get lost, you can press **HOME** until you get back to the Main screen. The **Control Knobs** are used to cycle through options on the screen. When there are several parameters on the screen, use the **Control Knob** closest to a parameter to set its value. Below the screen there are a series of mini TS audio jacks that are used for MIDI and Control Voltage input and output.

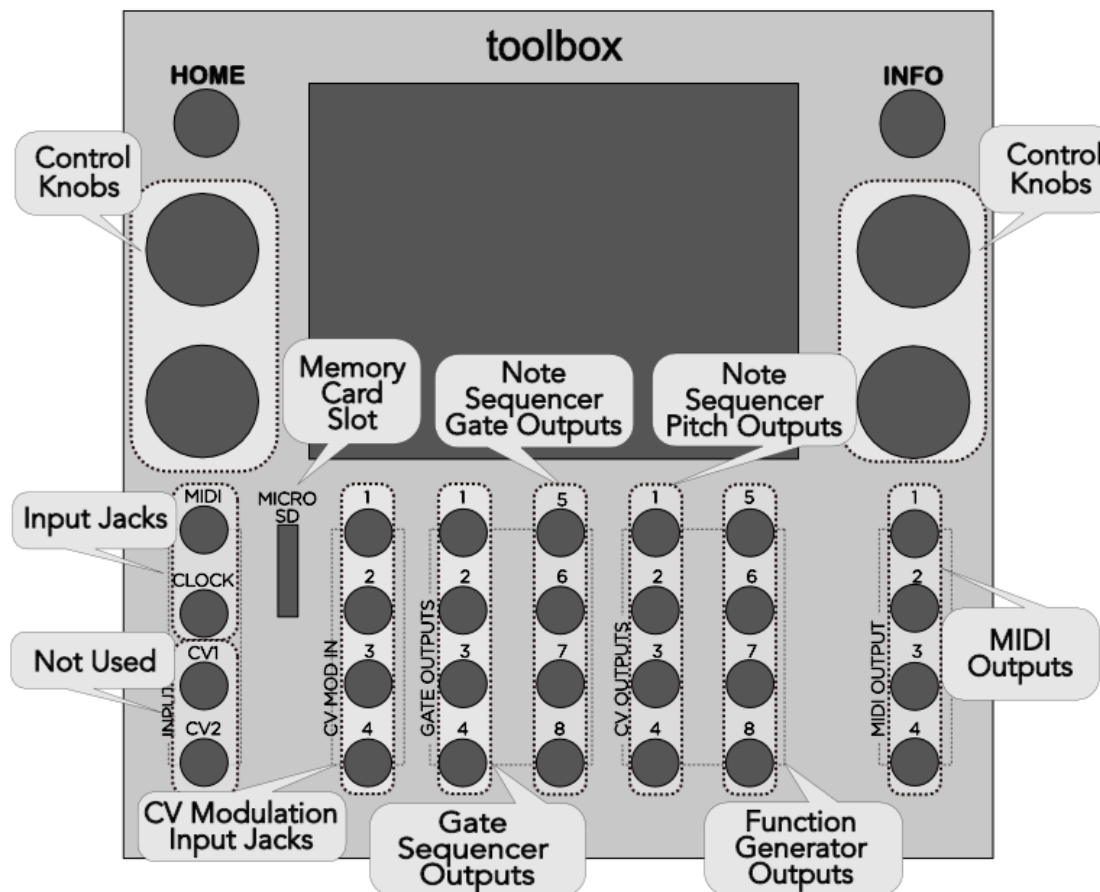


Figure 1: Front Panel Overview

Main Screen Overview

The toolbox Main screen shows a representation of each of the different sequencer and function outputs. The columns of the screen display are mapped to the input and output jacks below the screen. You can touch the individual elements on the screen in columns 2 through 4 to access parameter screens for each element. Each row of input and output jacks corresponds to a row of controls on the screen. You can also touch the **Play** button in the lower left corner to toggle playback of the sequences on and off. The **Play** button has a blue bar across the bottom when the module is playing.

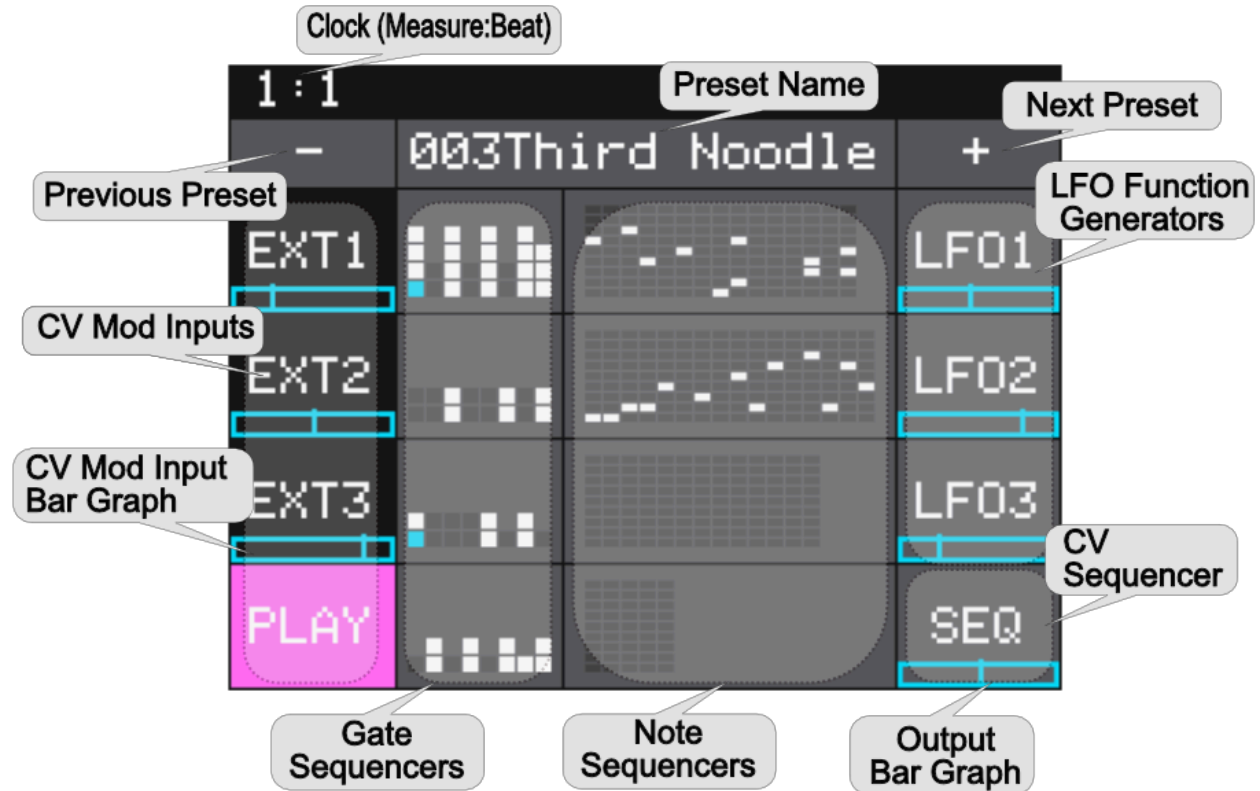


Figure 2: Main Screen Overview

From left to right, the columns display the following:

Column	Name	Description
1	CV Mod In	Displays the state of the external control voltage modulation inputs in rows 1 through 3. Row 4 displays the state of CV Mod In 4 that controls playback.
2	Gate Sequencers	Displays a small representation of the four gate sequences. Touch each row to configure the corresponding sequencer.
3	Note Sequencers	Displays a small representation of the note sequences. Touch each row to configure the corresponding note sequence. The left column of output jacks below this column outputs the gate signal, and the right column outputs the pitch.
4	Function Generators	Displays a representation of the CV voltage currently output by the corresponding function generator or sequencer. The LFO range is from -5V to +5V. The SEQ range is 0V to +5V. Touch an LFO or SEQ button to configure the parameters.

Series Compatibility

Toolbox is not part of the Series 1 group of modules from 1010music. It uses a different hardware platform that is more focused on providing outputs. Therefore, toolbox cannot run the firmware for Series 1 modules.

Setup Toolbox

In this section we will discuss how to install toolbox in your Eurorack, insert the microSD card, and configure the basic input and output signals.

Rack Installation

First let's make sure you have a compatible Eurorack. Toolbox requires a +12V connection and uses the standard 16-pin ribbon cable to connect to the rack. You should always power down the Eurorack when connecting new modules. Remove toolbox from the packing material and attach the ribbon cable to the back of the module. The cable is bi-directional so it does not matter which end is inserted into the module. However, the connector must be in the correct orientation. The connector on the module is keyed so the ribbon cable won't fit in the wrong orientation. The correct orientation places the edge of the ribbon cable with the red line on the left side of the module as shown in Figure 3 to the right. Next, connect the other end of the ribbon cable to the power supply for your Eurorack. When connecting to the Eurorack power supply, extra care is needed because not all power supplies are keyed to ensure correct orientation. The ribbon cable should be connected to the power supply so that the edge of the ribbon cable with the red line is aligned with the -12V pins on the power supply bus. When you power up, watch closely to make sure that the module powers up. If the touch screen doesn't respond right away, turn off the rack and confirm the cable orientation. 1010music modules do contain some buffering to prevent burning out the module but that only buffers for so long. Don't power up yet.

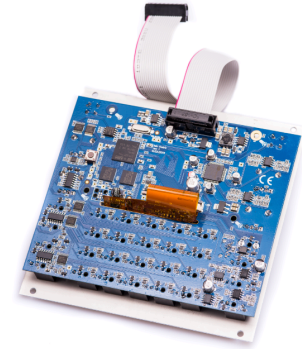


Figure 3: Ribbon Cable Orientation on Module

Next make sure the microSD card that came with the module is inserted into the Memory Card Slot. Most modules come with the microSD card already inserted. The card should be inserted with the notched edge down. Now you can power up the rack. The module should start up in less than 10 seconds and you will see the Main screen as shown in Figure 2: Main Screen Overview above.

Note:

- **A microSD card must be inserted into toolbox before you can get started. All presets are stored on the microSD card. Preset changes are only saved when you choose to save them.**

Connect a Gate Output to a Sound Generating Module

Toolbox itself does not generate sound. It generates MIDI and Control Voltage signals that drive other sound generating modules, such as bitbox, synthbox and third party drum and synthesizer modules. In order to hear an example of the output of toolbox, connect a patch cord between Gate Sequencer output jacks 1, 2, 3 or 4, and an external module. For example, you could connect it to a control voltage trigger on synthbox or bitbox. Configure the receiving module to play a sound when the gate signal is triggered.

Connect a MIDI Controller Input

Toolbox allows you to record Note Sequences from a MIDI input. If your MIDI controller has a mini TRS audio jack connector, then you can try to plug it directly into the MIDI Input Jack using a standard patch cable. However, there are competing standards for implementing mini TRS audio jacks for MIDI, so you may need to use a MIDI adapter. If it has a 5 Pin DIN connector, use an appropriate MIDI Adapter. Read the blog post [Mini TRS Audio Jacks for MIDI Connections Compatibility Guide](https://1010music.com/stereo-minijacks-midi-connections-compatibility-guide) on our website at <https://1010music.com/stereo-minijacks-midi-connections-compatibility-guide> for more details about the MIDI adapter.

Toolbox accepts input from all MIDI channels.

Play Settings

There are several global settings that apply to all of the sequencers and function generators. Follow these steps to configure these settings:

1. Press **HOME** to return to the Main screen if needed.
2. Touch **Play** and then press **INFO** to display the Play Settings screen.
3. Use the Control Knobs to adjust the following parameters:

Parameter	Description	Range of Values
BPM	The beats per minute used for playback of sequences and function generators when the internal clock is used.	40 to 250
Key Mode	Sets the type of scale used by the note sequencers for the purpose of quantizing the pitch. Choose Chromatic if you do not want the pitch quantized.	Minor Blues Minor Pent Minor Major Pent Major Chromatic
Root Note	Together with Key Mode, this will set the exact scale and key signature that toolbox will use for pitch quantization by the note sequencers.	A, A#, B, C, C#, D, D#, E, F, F#, G G#

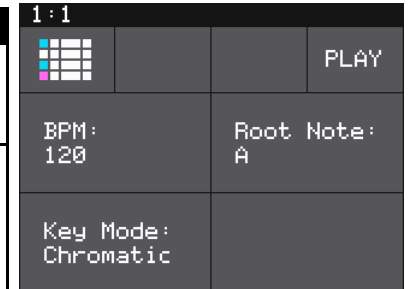


Figure 4: Settings Screen

4. Press **HOME** when done to return to the main screen.

Note:

- **If the Main screen is in Mute mode when you press INFO, toolbox will first turn off Mute mode and stay on the Main screen. Press INFO again to display the Global Settings screen.**

Manage Playback

Before we start creating our own sequences, lets make sure the module is setup properly by playing back some content from a preset that comes with the module.

Select a Preset

A preset is a set of pre-configured sequences, function generators and modulators. You can use the 1010music presets or create your own. To select a preset:

1. Press the **HOME** button to display the Main screen if needed.
2. Cycle through the presets by touching the **+** and **-** buttons at the top of the Touch Screen on either side of the name of the preset (e.g. **003THIRD NOODLE** in Figure 2: Main Screen Overview above).
3. Alternatively, you can touch the name of the preset or the space above it to display the Preset Selection screen.
4. Turn a Control Knob to select the desired preset.
5. Touch **Load** to load the selected preset and go back to the Main screen.

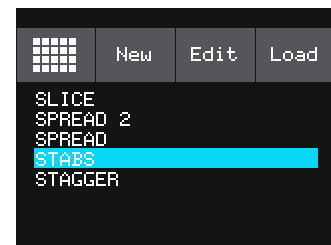


Figure 5: Preset Selection Screen

Save a Preset

Toolbox does not automatically save your changes to presets. You have to manually save by following these steps:

1. From the Main screen, touch the preset name to display the Preset Selection screen.
2. Touch **Edit** to display the Preset Edit Submenu.
3. Touch **Save** to save the changes to the preset and return to the Main screen.

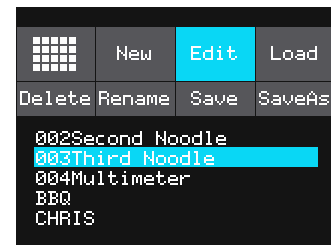


Figure 6: Preset Edit Submenu

Learn more about managing presets in Preset Management below.

Start Playback of the Sequencers and Function Generators

Toolbox comes with two presets that demonstrate the use of the sequencers and function generators. Let's play one of them to demonstrate the use of the module. Select one of the two supplied presets: STABS or BBQ. Note that these presets have gate sequencers 1, 2 and 3 configured.

To control playback of all of the sequencers and function generators:

1. Press the **HOME** button to display the Main screen if needed.
2. Touch **Play** in the lower left corner of the screen to toggle playback on and off. The **Play** button is pink when it is selected. The blue bar at the bottom of the **Play** button indicates when playback is active.
3. You can also use **CV Mod In 4** to control playback. Each high signal received on **CV Mod In 4** will toggle playback on and off.

Toolbox will now generate a sequence of gate signals out through the **Gate Sequencer output jacks 1, 2, 3** and **4** which can trigger notes on another module. Listen to the output of the receiving module to hear the sequences. (Note that the presets that come with Toolbox only have Gate Sequencers 1, 2 and 3 configured, so no signal will go out Gate Sequencer output jack 4 when using these presets as they were originally configured.)

Toolbox allows you to switch presets in real time to switch all patterns at once. If you switch presets during playback, the change will take effect at the beginning of the next bar. This change is quantized to measure to give you smooth transitions. You can also use modulation to alter pattern length, step size, and transposition to get maximum use out of a single pattern.

Mute Mode

Toolbox offers the ability to quickly mute individual function or sequencer component outputs. This allows you to turn different components on and off during the course of playback or to isolate a single component while creating the sequence.

To use Mute Mode to temporarily disable playback of toolbox components:

1. Press **HOME** to return to the Main screen if needed.
2. Press **HOME** to toggle Mute Mode on and off. In Mute Mode, the colors of the screen components change to green and red.
3. Touch boxes on the screen to mute them. Touch them again to re-activate them. Green elements are active and red elements are muted.

Use the Sequencers and Function Generators

Now that we have tested the module setup we are ready to start creating our own functions and sequencers. Toolbox has 4 gate sequencers, 4 note sequencers, and 4 function generators. The function generators include 3 low frequency oscillators (LFOs) and 1 control voltage sequence (SEQ) generator. On the Main screen, the second column from the left contains a series of squares that show a miniature representation of each of the gate sequencers. The next column to the right contains a series of rectangles that represent the four note sequencers. The rightmost column contains buttons for each of the 3 LFO function generators and the control voltage sequencer. You can touch each of the elements in these columns to access the screens used to configure them. You can also use the Control Knobs to change the currently selected element. The current selection is highlighted in pink. You can then press the INFO button to configure the selected element. Each of these elements maps to a Control Voltage output in the grid below the touchscreen.

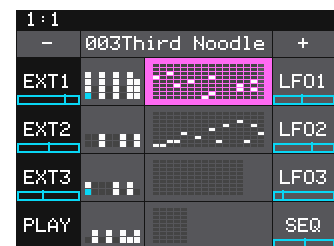


Figure 7: Main Screen with Note Sequencer 1 Selected

Use the Gate Sequencer

The Gate Sequencer is a useful way to create a repeating pattern of ON and OFF control voltage signals. These signals are then typically used to trigger notes or effects in other modules. For toolbox, the ON signal output will be +5V, and the OFF signal will be 0V. Due to the nature of CV signals, the Gate Sequencer output is monophonic.

Toolbox has four gate sequencers that generate a sequence of gate signals to **Gate Outputs 1** through **4**. Each Gate Sequencer on the touchscreen maps to one Gate Output jack. You configure the steps in the sequence by using the control knobs and touch screen to control which steps in the sequence are ON or OFF.

To edit a Gate Sequence:

1. Press the **HOME** button if needed to return the Main Screen.
2. Touch one of the Gate Sequencers in column 2 to display the Gate Sequencer screen. The gate sequencer grid displays a series of boxes that control whether the gate signal is on (light blue) or off (gray) at each step in the sequence. The sequence starts with step 1 in the lower left corner and scrolls right then up. During playback, a white outline will move through the sequence of boxes to show the current playback position.
3. Touch a box in the sequence grid to change its state.
4. Press the **INFO** button to toggle the display between the Gate Sequencer screen and the Gate Parameters screen for this gate sequencer.
5. Use the Control Knobs to adjust the values of the following parameters:

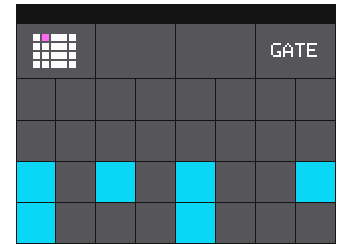


Figure 8: Gate Sequencer Screen

Parameter	Description	Range of Values
Step Len	Controls the length of time the sequence will spend on each step, in terms of fractions of a bar.	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars, 4 bars, 8 bars (T= Triplet)
Quant Size	Defines precisely when to restart the sequence when using the internal clock. When the sequence ends, toolbox will wait until the start of the next Quant Size interval to restart the sequence.	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars (T= Triplet)
Step Count	The number of steps in the sequence. The number of boxes on the screen will remain the same, but if a value lower than 32 is selected, the sequencer will only move through the number of steps selected.	1 through 32
Clk Source	This parameter allows you to use an alternative input as the clock signal. By default, the toolbox internal clock (INT) will be used.	INT, EXT1, EXT2, EXT3, GATE1, GATE2, GATE3, GATE4

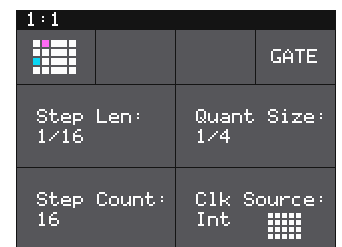


Figure 9: Gate Sequencer Parameters Screen

Note:

- **If a value of a Gate Sequencer parameter is changed during playback of the sequence, the change will take effect at the start of the next loop through the sequence.**

Use the Note Sequencer

Toolbox's four Note Sequencers are piano roll style sequencers that generate both CV and MIDI outputs. The CV output is in the form of a pair of gate and pitch signals for each Note Sequencer. The CV Output is monophonic and will play back the most recently entered note for each step in the sequence. The CV gate signals for each Note Sequencer are output through **Gate Outputs 5 – 8**, labeled Note Sequencer Gate Outputs in Figure 1: Front Panel Overview. The CV Pitch signals are output through **CV Outputs 1 - 4**, labeled Note Sequencer Pitch Outputs in Figure 1: Front Panel Overview. The CV signals on **Gate Outputs 5 – 8** will output +5V for an ON signal and 0V for an OFF signal. The pitch signals on **CV Outputs 1 - 4** output 1 volt per octave and support a range of 0 to 5 volts. Middle C is at 2 volts.

The MIDI signals are output through the MIDI Output Jacks on the right edge of the module. The Note Sequencer parameters allow you to configure the MIDI port and channel for playback of each Note Sequencer. All Note Sequencers could output to the same port and channel, or each could be routed to a different port or channel. The MIDI output is polyphonic and can play up to 128 notes per step per port. When the sequence is recorded via MIDI input, the MIDI output will include gate, pitch and velocity information. Notes that are placed manually via the touchscreen will include only gate and pitch information in the MIDI output. The Note Sequencer is the only element of toolbox that sends a signal to the MIDI output.

Follow these steps to create a Note Sequence:

1. From the Main screen, touch one of the Note Sequencers in column 3 to display the Note Sequencer screen. The black and white display along the left side of the screen represents notes on a keyboard, with higher pitched notes at the top of the screen. The vertical gray bars represent steps in the sequence. Blue rectangles represent notes in the sequence. MIDI output can support multiple notes per step, but CV output only supports one note per step.
2. There are three ways to add notes to the sequence:
 - a. Touch the screen at the step and note position desired.
 - b. Touch **Rec** to record inputs coming in through the MIDI Input Jack in real time. Touch **Rec** again to stop recording.
 - c. Touch **Step** to record inputs coming in through the MIDI Input Jack with each successive MIDI input note adding a note to the next step in the sequence. Touch **Step** again to stop recording.
3. You can use the Control Knobs and touch gestures to zoom and scroll through the sequencer:

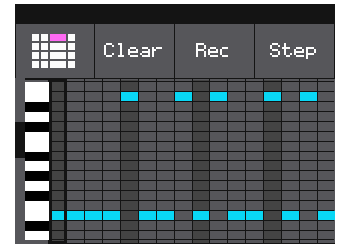


Figure 10: Note Sequencer Screen

Action	Result
Turn the top left control knob	Moves the current note position cursor
Turn the top right control knob	Scrolls the piano roll up and down
Turn the bottom left control knob	Zooms the piano roll in and out vertically only
Turn the bottom right control knob	Scrolls the piano roll left and right
Two finger pinch or stretch	Zooms the piano roll in the direction pinched or stretched
Single finger drag or swipe	Scrolls the piano roll

Note:

- When the Sequencer Screen reloads, it zooms horizontally to display the number of steps that have been selected in Step Count, and scrolls vertically to display the entered notes.
 - The cursor position is restricted to the Step Count configured for this Note Sequencer.
 - When recording, the sequencer will add the incoming notes to the sequence. It will not remove previously existing notes. Touch Clear before touching REC if you want to start with a clean piano roll.
4. Press the **INFO** button to toggle the display between the Note Sequencer Screen and the Note Sequencer Parameters screen pages 1 and 2.
 5. Use the Control Knobs to adjust the values of the parameters:

Parameter	Description	Range of Values
Step Len	Controls the length of time the sequence will spend on each step, in terms of fractions of a bar. This parameter can be modulated.	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars, 4 bars, 8 bars (T= Triplet)
Duty Cycle	The duration of the note events where 0% is inaudible, and 100.0% is always playing.	0% to 100.0%

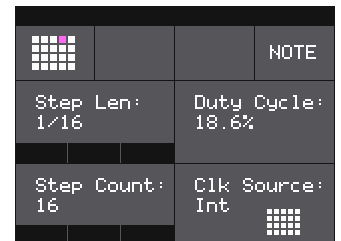


Figure 11: Note Sequencer Parameters Page 1

Step Count	The number of steps in the sequence. The number of boxes on the screen will remain the same, but if a value lower than 32 is selected, the sequencer will only move through the number of steps selected. This parameter can be modulated.	1 to 32
Clk Source	This parameter allows you to use an alternative input as the clock signal. By default, the toolbox internal clock (INT) will be used.	INT, EXT1, EXT2, EXT3, GATE1, GATE2, GATE3, GATE4
MIDI Ch	The MIDI channel that this sequencer will use for output.	1 through 16
Quant Size	Defines precisely when to restart the sequence when using the internal clock. When the sequence ends, toolbox will wait until the start of the next Quant Size interval to restart the sequence.	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars (T= Triplet)
MIDI Port	Controls which of toolbox's MIDI Output jacks will be used for the output of this sequencer. Multiple Note Sequencers may use the same MIDI Port.	1 through 4
Transpose	Shifts the This parameter can be modulated.	-48 to 48

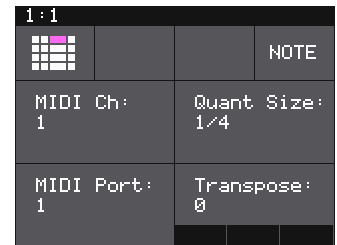


Figure 12: Note Sequencer Parameters Page 2

Note:

- If a value of a Note Sequencer parameter is changed during playback of the sequence, the change will take effect at the start of the next loop through the sequence.

Use the LFO Function Generators

Toolbox can generate three low frequency oscillation (LFO) signals. These outputs play out the **Function Generator Output Jacks 5** through **7**. The output range for these signals is -5V to +5V. To configure an LFO:

1. From the Main screen, touch one of the **LFO** buttons in the right column to display the LFO Parameters screen.
2. Use the control knobs to adjust the values of the following parameters:

Parameter	Description	Range of Values
Waveform	Choose the desired Oscillator.	<ul style="list-style-type: none"> • Saw • Rev Saw • Triangle • Pos Tri • Square • Pos Square • Sine • Pos Sine • Random
Depth	The amount or amplitude of the LFO.	0 to 100%
Rate	The frequency of the LFO from about 0.1Hz to 12 Hz. When Beat Sync is On , this specifies the rate in beats and measures.	0 to 100% or 1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars (T= Triplet)

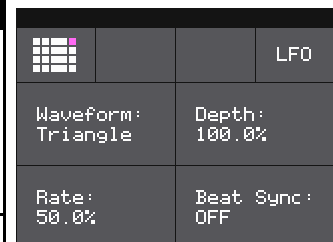


Figure 13: LFO Parameters Screen

Beat Sync	Controls the operation of the rate parameter.	On, Off
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3. Press **HOME** or touch the grid in the top left corner to return to the Main Screen.

Note:

- **If a value of an LFO parameter is changed during playback of the sequence, the change will take effect immediately**

Use the Control Voltage Sequencer

Toolbox can generate one control voltage sequencer (SEQ) signal. This signal plays out the **Control Voltage Output Jack 8**. The output range for this signal is 0V to +5V. To configure the SEQ:

4. From the Main screen, touch the **SEQ** button in the lower right corner to display the CV Sequencer screen.
5. Press the **INFO** button to display the CV Sequencer Parameters screen.
6. Use the control knobs to adjust the values of the parameters:

Parameter	Description	Range of Values
Step Len	The length of each step in the sequence	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars, 4 bars, 8 bars (T= Triplet)
Quant Size	Defines precisely when to restart the sequence when using the internal clock. When the sequence ends, toolbox will wait until the start of the next Quant Size interval to restart the sequence.	1/64, 1/32T, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 1/2, 1 bar, 2 bars (T= Triplet)
Step Count	The number of steps in the sequence. The number of step bars on the screen will remain the same, but if a value lower than 32 is selected, the sequencer will only move through the number of steps selected.	1 to 32
Clk Source	This parameter allows you to use an alternative input as the clock signal. By default, the toolbox internal clock (INT) will be used.	INT, EXT1, EXT2, EXT3, GATE1, GATE2, GATE3, GATE4

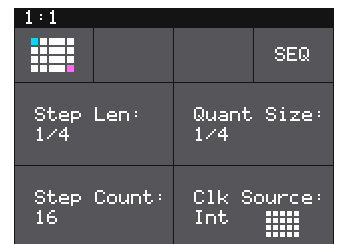


Figure 14: CV Sequencer Parameters Screen

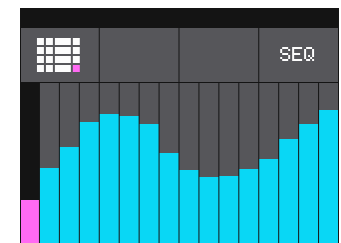


Figure 15: CV Sequencer Screen

7. Touch the **INFO** button again to return to the CV Sequencer Screen.
8. On the CV Sequencer screen, use touch gestures and control knobs to configure the values of the sequencer steps. When the sequence is playing the cursor will move across the step bars to show the current playback position. Touch a step bar to set the value at the height selected. Turn the left control

knobs to move the cursor through the bars. Turn the right control knobs to adjust the height of the bar at the currently selected step.

9. Touch the grid icon in the top left corner, or press **HOME** to return to the Main screen.

Note:

- **The CV Sequencer Screen always shows the same number of steps and allows the cursor to move to all of the steps. However, only the number of steps selected in the Step Count parameter will be used during playback.**
- **To set the value of a step to 0, use the control knobs to adjust the value.**
- **If a value of a CV Sequencer parameter is changed during playback of the sequence, the change will take effect at the start of the next loop through the sequence.**

Apply Modulation

Toolbox provides the ability to modulate parameters using internal signals and external CV inputs. The following parameters are **Modulation Targets** because modulation can be applied to them:

Sound Element	Parameter	Example usage
Note Sequencer	Step Length	Use an LFO square wave to change the rhythm of a sequencer between two different durations.
Note Sequencer	Step Count	Use an LFO to adjust the number of steps to add variation.
Note Sequencer	Transpose	Use an LFO to add movement to the pitch and variety to the sequence.

To apply a modulator to a specific modulation target:

1. From the Main screen, touch one of the Note Sequencers to display the Note Sequencer screen.
2. Press the INFO button to display the Note Sequencer Parameters screen.
3. The parameters that can be modulated will have three black boxes below them. This allows you to apply up to three modulators to each of these parameters. Touch one of the boxes below a parameter to open the **Modulation Selection Screen**.
4. Adjust the modulation parameters by turning the Control Knob closest to the parameter.

Parameter	Description	Range of Values
Source	The source of modulation to be applied.	<ul style="list-style-type: none"> • None • LFO1 • LFO2 • LFO3 • SEQ • EXT1 • EXT2 • EXT3
Amount	Choose the amount of modulation that will be applied.	-100% to +100%

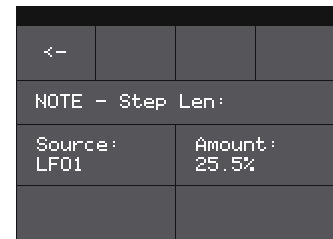


Figure 16: Modulation Selection Screen

5. Once you have selected all the settings, touch the arrow (<-) in the top left or press **HOME** to go back to the parameters screen.
6. Touch another black box below a parameter to add more modulation.
7. Press **HOME** to return to the Main screen.

Synchronizing with Other Modules

Toolbox is designed to work together with other modules. It can follow an external clock input and then use that to control the CV and MIDI outputs to other modules. The toolbox clock can be driven by three sources, and will use the highest priority clock signal available. The sources, in decreasing order of priority are:

1. CV clock input in the Clock Input jack
2. MIDI Clock from the MIDI Input jack
3. Internal free running clock

When a MIDI Clock is used, toolbox responds to MIDI clock pulse, play and stop signals. When a MIDI play signal is received, the playback of the module resumes from the beginning, and the play signal is passed along to the MIDI

outputs. When a MIDI stop signal is received, the module stops playback and passes this signal along to the MIDI outputs.

Toolbox can also drive a clock signal to other modules in a few different ways. You can use the four MIDI outputs to output the MIDI clock to other modules. You can also use a Gate Sequencer to configure your own custom clock signal that will go out the corresponding Gate output jack. In this way you could create a repeating sequence of 1/16th notes to generate an analog clock.

Preset Management

A preset is a set of pre-configured sequences, function generators and modulators. You can use the 1010music presets or create your own presets to save your work.

Select a Preset

To select a preset:

6. Press the **HOME** button to display the Main screen if needed.
7. Cycle through the presets by touching the **+** and **-** buttons at the top of the Touch Screen on either side of the name of the preset (e.g. **STABS** in Figure 2: Main Screen Overview above).
8. Alternatively, you can touch the name of the preset or the space above it to display the Preset Selection screen.
9. Turn a Control Knob to select the desired preset.
10. Touch **Load** to load the selected preset and go back to the Main screen.

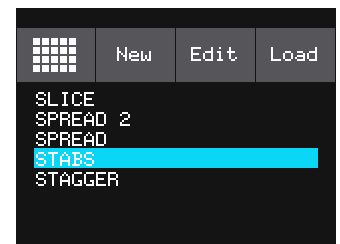


Figure 17: Preset Selection Screen

Save a Preset

Toolbox does not automatically save your changes to presets. You have to manually save by following these steps:

4. From the Main screen, touch the preset name to display the Preset Selection screen.
5. Touch **Edit** to display the Preset Edit Submenu.
6. Touch **Save** to save the changes to the preset and return to the Main screen.

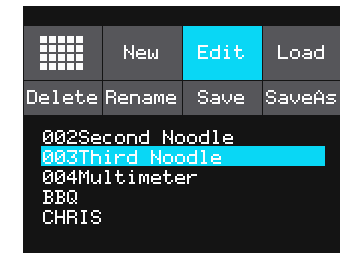


Figure 18: Preset Edit Submenu

Copy a Preset

If you prefer not to start with a blank slate, you can copy an existing preset.

1. From the Main screen, touch the preset name at the top of the grid to display the **Presets** screen.
2. Touch the **Edit** button at the top of the **Touch Screen** to display the **Preset Edit** menu.
3. Use a **Control Knob** to select the preset you want to copy, and then touch the **Copy** button. Toolbox creates a copy of the preset that appears above the source preset in the list. The name of the copy is the name of the source preset with " 2" appended to the end.

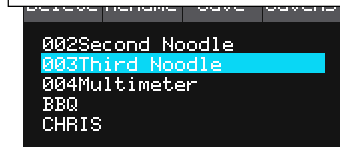


Figure 19: Preset Edit Menu

Rename a Preset

Here's how to give a preset a new name:

1. From the **Presets** screen, touch the **Edit** button at the top of the **Touch Screen** to display the **Preset Edit** menu.
2. Use a **Control Knob** to select the preset you want to rename, and then touch the **Rename** button. Toolbox displays a touch screen keyboard you can use to enter a new name. Touch the **return** button to save the changes and go back to the **Presets** screen.



Figure 20: Preset Naming Keyboard

Delete a Preset

Follow these steps to delete a preset. Warning: there is no undo, and no prompt to ask "are you sure?" So make sure you are on the correct preset before you use this. If you do accidentally delete a factory preset, you can reload it from the factory image using the steps outlined in Update Firmware and Manage Preset Files below.

1. Touch the **Edit** button at the top of the **Presets** screen to display the **Edit** submenu.
2. Use a **Control Knob** to select the preset you want to delete, and then touch the **Delete** button. The preset is immediately deleted.

Use "Save As" to Save Current Changes to a Preset as Another Preset

You can save your work on a current preset as either a new preset or overwriting a different existing preset:

1. Touch the Preset Name to display the Preset Selection screen.
2. Touch **Edit** to display the Edit sub-menu.
3. Touch **SaveAs**. Toolbox displays a touch screen keyboard you can use to enter a new name. Touch the **return** button to save the changes and go back to the **Presets** screen.

Update Firmware and Manage Preset Files

Toolbox owners can update the module's firmware to get the latest features and other updates. Toolbox is not cross compatible with the Series 1 Modules, bitbox, fxbox and synthbox. The firmware can be updated with the factory image, which includes the original presets, or just the firmware itself. You can also choose individual presets to copy over to your microSD Card

Install New Firmware

Here are the steps required:

1. Download the toolbox firmware onto your computer. You can find the latest firmware image in the Firmware Downloads sub-forums at <https://forum.1010music.com>. NOTE: You must be a registered member of the forum in order to access the firmware download sub-forums.
2. Unpack the zip file. Some browsers do this automatically for you.
3. If you want to replace the Presets with the factory image, copy the full contents of the zip file onto a microSD card. If you do not want to overwrite your presets, copy only the **Series2.bin** file to the microSD card. Place the microSD card in your toolbox.
4. While powering up the unit, hold the Home and Info buttons. When you see the message about upgrading the firmware, you can let go.
5. When the upgrade finishes in about 15 seconds, the unit will restart with the new software.

NOTE:

- **You must register at forum.1010music.com in order to download firmware.**
- **You cannot run bitbox, fxbox or synthbox firmware on a toolbox module.**
- **You cannot run toolbox firmware on a bitbox, fxbox or synthbox module.**
- **The microSD card must be formatted with FAT32. The exFAT format will not work.**

Backup and Restore Your Presets

It is always a good idea to keep a backup of your work. You can backup the preset files that are stored on the microSD card by following these simple steps:

1. Remove the microSD card from your module and insert into your computer. You may need to use a microSD adapter.
2. Copy the files from the microSD card onto your computer.

To restore one or more preset files from a backup, simply copy the preset file from the backup copy onto the microSD card. You may rename the files.

Technical Specs

Module Specs

Toolbox is designed with the following specs:

- Rack width: 26 HP
- Power supply requirements:
 - +12V: 350mA
 - -12V: 0mA
 - 5V: 0mA

Pin Mapping for Mini TRS Audio Jack to MIDI 5 Pin DIN Connectors

The musical instrument industry currently uses several different ways of mapping MIDI 5 Pin DIN signals to mini TRS audio jack connectors. The diagram to the right shows the numbering of the pins on a MIDI connector and the labels of the connection components of a mini TRS audio jack. 1010music products are compatible with cables that use the following mapping of MIDI signals between female MIDI connectors and mini TRS audio jacks:

MIDI Signal	MIDI Connector	Mini TRS Audio
Current Source	Pin 4	Tip
Current Sink	Pin 5	Ring
Shield	Pin 2	Sleeve

Table 1: MIDI Connector to Mini TRS Audio Jack Mapping

For more information on the use of adapters, read the blog post on our website [Mini TRS Audio Jacks for MIDI Connections](#)

Compatibility Guide at:

<https://1010music.com/stereo-minijacks-midi-connections-compatibility-guide>

Learn More

Download the Toolbox User Manual or watch toolbox videos on our website at

<https://1010music.com/toolbox-support>.

Join the conversation with other toolbox owners at <https://forum.1010music.com>.

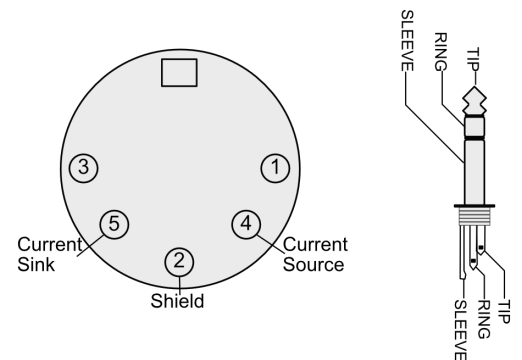


Figure 21: 5 Pin DIN and Mini TRS Audio Jack Connectors