Owner's Manual

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On Screen Controller

Thereminator's special onscreen controller allows you to easily capture the smooth glissando of the classic theremin sound thanks to built-in conveniences. It is two dimensional, in that the horizontal axis will control pitch change, whereas the vertical axis can be used to control up to four expression parameters such as volume, filter cutoff, vibrato amount, and tremolo. Please refer to the AUDIO FUNCTION for further information about these latter.

The controller provides a range of up to 8 octaves from C0 to C8. The controller can be used in both the standalone and AUv3 version of Thereminator. It will output MPE type MIDI data to the host, so that recordings can be made by using the onscreen controller alone.

The controller includes features for changing “key” width, as well as position. In addition, it can be assigned any one of 51 different musical scales (in any key), and also provides settable NOTE SNAPPING.

To switch to fullscreen controller mode, hide the parameters (“CTRLS”) panel by touching the button found on the taskbar.

To change the key size, use the -/+ buttons found on the task bar. At the lowest setting with “-” maxed out, exactly one octave in the chosen scale is displayed on the screen. With “+” maxed out, the octave count is eight.

To change the keys' location, turn on scrolling by touching the KEYBOARD SCROLL LOCK button located to the right of the "+" button. Then simply scroll the controller left or right until the desired key location is obtained. Finish by touching the SCROLL LOCK again to return to the regular performance mode.

To change the musical key or scale, press the KEY or SCALE dropdown found on the CTRLS panel. If hidden, CTRLS panel can be made visible by touching its display button on the taskbar.

NOTE SNAPPING is a convenient feature that allows you to easily latch to the audio frequency for a given note. With NOTE SNAP SLIDER at maximum value, sliding your finger from note to note will change the frequency immediately, much like sliding from note to note on a piano. With NOTE SNAP at 0, sliding your finger will result in generating all the in-between frequencies, much like a fretless bass (or a theremin). Middling values for this parameter will change how sensitive the glissando effect is when moving from note to note.

Whenever you save or overwrite a preset, the current KEY, SCALE, and NOTE SNAP data are also saved. However, a LOCK button is provided in that section of the controls panel. When this LOCK is enabled, the last configuration of KEY, SCALE, NOTE SNAP parameters will stay the same during preset changes.

Audio Functions

The following parameters change the characteristics of Thereminator's audio. They are all located on the controls panels.

WAVE: Select the waveform output by the oscillator
DRIVE: Specify the amount of overload into the special virtual-valve gain stage. Increasing Drive will result in a "fatter," more harmonically rich sound
FILTER: Specify the cutoff frequency for the built-in resonant filter
RESO: Specify the amount of emphasis for the filter. On very high settings, the filter will self-oscillate when the cutoff frequency is varied.
VIB: Set the amount of vibrato
VIB RATE: Specify the vibrato speed
TREM: Set the amount of tremolo
TREM RATE: Specify the tremolo speed
PMENTO (Portamento): Specify the duration of pitch changes when going from note to note. Higher values will result in slower, smoother change in pitch. This parameter can be used in tandem with the Note Snap parameter to get very easy glissando effects on the onscreen controller; it can also be used to help a regular MIDI keyboard mimic the "theremin sound."
CHORUS: Specify the amount of stereo chorus effect. At 0, the chorus is turned off completely.
CHORUS RATE: Specify the speed for the chorus effect
DELAY: Specify the amount of delay. At 0, the delay effect is completely turned off.
DELAY TIME: Set the length for delay echoes

DELAY FEED: Set the feedback for the delay effect. At higher values, the virtual-tape delay module will start to self-oscillate and provide an interesting additional sound effect that can be controlled via the TIME knob.

VERTICAL CONTROL: Provides individual switches for four operators so that they can be controlled by the vertical axis on the Thereminator onscreen controller.
VOL: Enable to control the voice volume through controller vertical axis.
FILT: Enable to control the filter cutoff.
VIB: Enable to control the vibrato amount. The vibrato amount will vary between 0 and the amount specified by the VIB knob
TREM: Enable to control the tremolo amount. The tremolo amount will vary between 0 and the amount specified by the TREM knob

KEY/SCALE/NOTE SNAP: Refer to the section about the On Screen Controller.

MIDI and AUv3

Thereminator 2 on-screen controller uses MPE (MIDI Polyphonic Expression) to enable enhanced control over the produced sound. It is also an AUv3 instrument plugin, and can be used in DAWs and hosts that are capable of handling MPE messages.

NOTE: MPE support might have to be manually enabled for some hosts: using GarageBand as an example, MPE is turned on by a switch found in the entry for GarageBand in the iOS setting. If the host you're using has such a setting, please make sure it is enabled for best results.

The MIDI channels 2 through 16 are dedicated to MPE. MIDI channel 1 can be used with ordinary MIDI keyboards, whereby Thereminator 2 will behave more like a keyboard instrument.

Although you can always use channels other than 1 with a traditional MIDI keyboard, certain controls such as pitch wheel will behave differently, and any parameter assigned to Thereminator's vertical controller axis will follow the last value specified by that onscreen controller.

During recording, Thereminator's built in controller outputs MPE data to host. On playback, this recorded MPE data is sent back into Thereminator to replay.

NOTE: Some desktop hosts might require you to manually enable MIDI output from an instrument plugin's on-screen keyboard or control surface. Please refer to the host's documentation for information about how to do this.

MIDI Learn

MIDI CCs can be mapped onto the knobs and switches found on the screen. The mappings can then be saved to patch and recalled for later use. See the section on the Preset System for more information about saving and loading patches.

To enter MIDI Learn mode, press the LEARN button (found on the settings panel). Touch the overlay on the desired parameter so that it is highlighted. Manipulate the control on your MIDI device until the CC/Channel pair is indicated on the overlay. Repeat with any number of parameters.

To manually enter a MIDI CC, or to access advanced MIDI settings for a parameter, simply double tap on its overlay to reveal the data entry prompt. Select the desired field, use the number pad to enter the desired value, and confirm entry by pressing SET on the number pad.

When finished, go back to Prefs -> MIDI Learn and unselect the LEARN button. Save the changes to patch by launching the Preset Manager.

To load the MIDI map saved into a patch, ensure the CC LOCK button found on the SETTINGS panel is turned off. Then simply select and load the desired patch on the PRESET MANAGER panel.

If you wish to preserve the currently loaded MIDI map even while changing presets, ensure the CC LOCK button is activated. This will prevent the pre-existing MIDI CC map from being supplanted by the map data in the incoming presets.

Preset System

The Preset Manager is accessed by touching the left area of the main taskbar, where selected preset and bank name is usually displayed.

What is saved in a preset?

All the sound engine parameters found on the control panel, as well as musical key, scale and note snap settings are patch bound. In addition, MIDI CC data are also saved to preset.

There are dedicated LOCK buttons provided for key/scale/note snap section, as well as MIDI Learn section. When either is enabled, the last setting is preserved even when a preset change occurs. This is so one can change presets without changing the preferred musical scale for the onscreen controller, or without altering the existing MIDI CC assignments.

Managing Presets

The app's built-in preset management system is a powerful way to organize, access, and share banks and presets. Here is the function of the buttons found in the preset manager's taskbar, left to right:

Bank Taskbar

• PLUS: Create an empty bank. • RENAME: Rename the selected bank. • EDIT: Enable to reorder or delete banks. When finished, touch again to exit editing mode. • SHARE: Display bank export/import options. See below for more information.

Presets Taskbar

• SAVE: Save as a new preset. • OVERWRITE: Overwrites the currently selected preset.

• [INIT]: Loads a basic "initial" preset, useful when writing a new patch from scratch. • RENAME: Rename the selected preset. • MOVE: Move selected preset to a different bank. • EDIT: Enable to reorder or delete presets. When finished, touch again to exit editing mode. • SHARE: Display preset export/import options. See below for more information.

• JOKER: Randomly load a preset from the file system. • SEARCH: Search for a preset. • RESTORE FACTORY: Reinstall factory presets that came packaged with Thereminator.

Favorites Bank

• You can "favorite" up to 256 presets by touching the STAR button located next to it. These presets are then displayed in the Favorites repository found at the very top of the banks list. To un-favorite a preset, simply touch the star button again.

Importing/Exporting Banks & Presets

You can export banks and presets to iOS Files or via email. Simply touch the bank or preset share task button and make a selection. The banks/presets exported to Files can be accessed through the iOS Files app (just navigate to the Thereminator root directory) and can also be accessed on your desktop computer via iTunes Filesharing.

You import banks and presets in many different ways: you can add them to the Thereminator root folder (either within your iPhone or iPad, or using iTunes Filesharing), and then install them using YPAT3 > Sharing > Import from Files. Or you can double tap any Thereminator bank/preset file, which will automatically launch the app, and install that asset. Similarly, you can touch an email attachment to install an asset.