

Waves GTR3 ToolRack Manual



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Chapter 1 – Introduction

1.1 Welcome

Thank you for choosing Waves! In order to get the most out of your new Waves plugin, please take a moment to read this user guide.

To install software and manage your licenses, you need to have a free Waves account. Sign up at www.waves.com. With a Waves account you can keep track of your products, renew your Waves Update Plan, participate in bonus programs, and keep up to date with important information.

We suggest that you become familiar with the Waves Support pages: www.waves.com/support. There are technical articles about installation, troubleshooting, specifications, and more. Plus, you'll find company contact information and Waves Support news.

1.2 Product Overview

The Waves GTR ToolRack is a guitar tone processor featuring virtual guitar amps, cabs, and effects that can run as a DAW plug-in or as a standalone application for the processing of live input. This means you can connect your guitar to a laptop computer and use it live on stage, using a MIDI foot controller for real-time preset selection and sound manipulation.

The GTR ToolRack offers 6 Stomp Effects, 2 amps, and a dedicated Tuner.

- The Stomp page allows editing of the Stomps chain and the place of the Amp within the processing chain.
- The Amp page allows editing of the Amp settings as well as the cabinets and microphones used in the setup.
- The Tuner offers chromatic, standard, custom, and alternate guitar tunings.
- The Presets page displays the list of presets in the current preset file and allows auditioning and editing of presets and their order.

1.3 Components

WaveShell technology enables us to split Waves processors into smaller plug-ins, which we call **components**. Having a choice of components for a particular processor gives you the flexibility to choose the configuration best suited to your needs and material.

- Mono-to-Stereo and Stereo Components
- GTR Standalone ToolRack

1.4 Automation

Automation for the GTR ToolRack consists of discrete automatable controls for the Chainer, Amp, and Tuner, as well as dynamic automation for the Stomps through an assignable set of 9 continuous parameters and 1 toggle for each Stomp slot.

MIDI AUTOMATION

GTR ToolRack is automatable using MIDI controllers and MIDI notes.

MIDI controller mapping includes a “Learn” function which is accessed by right-clicking the designated control, and all mapping is saved with the preset. See GTR Amp and GTR Stomp manuals for more details.

Chapter 2 – Controls and Interface

The GTR ToolRack user interface is divided into 3 sections:

WaveSystem Toolbar, specialized for GTR operation.

Main Editor Window, which displays the current page according to the page selected in the bottom page selectors.

Bottom Section, with page selectors, input and output gain knobs and meters as well as other global settings.

2.1 WaveSystem Toolbar

Use the bar at the top of the plugin to save and load presets, compare settings, undo and redo steps, and resize the plugin. To learn more, click the icon at the upper-right corner of the window and open the WaveSystem Guide.

2.2 Bottom Section

The bottom section of the ToolRack interface includes page buttons as well as controls and displays for tempo, routing, input, and output settings.

PAGE BUTTONS



- The Stomp page allows editing of the Stomps chain and the place of the Amp within the processing chain.
- The Amp page allows editing of the Amp settings as well as the cabinets and microphones used in the setup.
- The Tuner page offers chromatic, standard, custom, and alternate guitar tunings.
- The Presets page displays the list of presets in the current preset file and allows auditioning and editing of presets and their order.

INPUT SECTION



INPUT GAIN is used to boost or attenuate input gain.

Range: -18dB to +18dB

Default: 0dB

INPUT METER displays input level.

Range: -42dB to 0dBfs

Default: -42dB

TEMPO SECTION



TEMPO sets the reference tempo for effects synchronized to the host in beats-per-minute.

Range: 40 to 1200

Default: 120.

TAP is used to calculate tempo when not in Sync mode. (Averages last 4 taps).

Range: 50 to 400 BPM (*approximately*)

SYNC controls synchronization to host tempo.

Range: On/Off

Default: Off

ROUTING SECTION allows customization of processor connections.



The basic routing scheme is a straightforward cascade where each effect output passes to the next element in the chain. Use the Routing View option to see the various ways in which Stomps may be connected to one another.

Stomps in Odd slots (1st, 3rd, and 5th) can be routed separately from Stomps in Even slots (2nd, 4th or 6th) in either parallel stereo routes or split mono routes, so Stomps in Odd slots output to the left and Stomps in Even slots output to the right.

ROUTING PRE controls routing of effects inserted between the input and the amp.

Values: Cascade, Parallel, Split

Default: Cascade

ROUTING POST controls routing of effects inserted between the amp and the output.

ROUTING VIEW displays ToolRack routing using a schematic overlay on the ToolRack Stomp page.

OUTPUT SECTION



OUTPUT GAIN

Range: -18dB to +18dB

Default: 0dB

OUTPUT METER displays output level.

Range: -42dB to 0dBfs

Default: -42dB



MUTE OUTPUT mutes the ToolRack output.

BYPASS OUTPUT bypasses all ToolRack processing.

AMPS BYPASS bypasses the ToolRack Amps.

STOMPS BYPASS bypasses the ToolRack Stomps.

2.3 Stomps Page

The Stomps page provides control over the Stomps, their controls, and their order in the effects chain, as well as Amp position within the chain.



STOMP EFFECTS ASSIGNMENT

Beneath each Stomp effect slot, there is an arrow button which, when pressed, displays the list of available Stomps. Selecting a Stomp from the list will assign the selected effect to that Stomp effect slot. Right Clicking on an empty stomp slot will also display the stomp selection menu. The pull-down menu also features Delete, Move Right, and Move Left commands.

Click and drag on a Stomp effect's controls to adjust its parameters.

Click on an area of a Stomp without controls to drag the Stomp to a new location within the chain.

Change the location of the Amp within the chain by dragging it.

Double click on the Amp to open the Amp Page.

2.4 Amp Page

GTR ToolRack's Amp page displays 2 linkable mono amplifiers. Amp 1 processes inputs panned Left, while Amp 2 processes inputs panned Right.

The top section of each amp includes controls for Drive, Bass, Mid, Treble, and Presence controls, whose response curves changes according to the original hardware amp behavior. Bass amps feature a Direct Mix control in place of the Presence control.

The bottom section of each amp includes controls for Cabinet and Microphone setups, Cab Bypass, Air, Delay, Phase, Volume, and Pan.





AMP CONTROLS

AMP TYPE controls Amp selection. Toggle through the Amps by clicking on the text bar, or click on the arrow to the right of the text bar to reveal a drop-down list displaying the 4 Amp groups: Bass, Clean, Drive, and High Gain. Click on an amp group name to reveal a menu displaying the Amp types.

Range: Direct to OverBass

Default: Clean



AMP BYPASS controls Amp activation/bypass. When set to Bypass, input is routed directly to the cabinet and mic.

Range: Bypass/On

Default: On

DRIVE controls the drive level range.

Range: 0 to 10 (0 = -12dB, 10 = +12dB)

Default: 5 (5 = 0dB)

BASS controls low frequency equalization cut/boost.

Range: -5 to 5

Default: 0

MID controls midrange frequency equalization cut/boost.

Range: -5 to 5

Default: 0

TREBLE controls high frequency equalization cut/boost.

Range: -5 to 5

Default: 0

PRESENCE controls high frequency equalization cut/boost, complementing the Treble control. (Guitar amps only).

Range: 0 to 10

Default: 5

DIRECT controls the amount of direct mixed with the processed signal. (Bass amps only).

Range: 0 to 10

Default: 0

HD (HIGH DEFINITION) OPTION



The HD Option control is located at the right side of the Toolrack's top toolbar.

When running GTR at 44.1 or 48kHz, you have the option of doubling the internal amplifier sampling rate. HD offers fewer aliasing artifacts, and is especially useful for High Gain models.

The Toolrack's HD option control will turn on HD processing in both of the Toolrack's internal amps.

Please note: Engaging the HD option will increase your CPU load.

CABINETS AND MICROPHONES



Cabinets and microphones are selected by using the appropriate menu selector.

Toggle through them by clicking on the text bar, or click on the arrow to the right of the text bar to display a drop-down list. Each cabinet offers a choice of microphones, which may be positioned either on or off axis.

Please note: “No Cabinet,” the default for the Direct Amp, uses neither a cabinet nor microphone.

PHASE controls Cab/Mic polarity (DualCabinet only)
Range: -/+ (- = inverted phase, + = natural phase)
Default: +

DELAY controls the delay between the two cabinets, creating a phase difference between them.
Range: 0 to 100ms
Default: 0

AIR adds stereo early reverb reflections.
Range: -40 to 0
Default: 0

PAN controls cabinet positions within the stereo field.
Range: -1.0 to 1.0 (0 = Center)
Default: 0

VOL controls Cab/Mic volume.
Range: 0 to 10
Default: 5

LINK links the controls of Amp1 and Amp2.

Range: Linked, Unlinked
Default: Unlinked

2.5 Tuner Page



Clicking the Tuner page button turns on and displays the Tuner page.

MAIN TUNE VIEW displays a visual representation of your intonation.

Range: -100 to +100 cents.

Default: 0 cents (perfectly in tune)

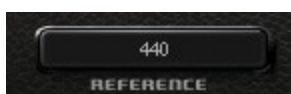
ARROWS AND NOTE

- The arrow located to the left of the center dot lights up when the current pitch is flat by -5 cents or more.
- The arrow located to the right of the center dot lights up when the current pitch is sharp by +5 cents or more.
- The center dot lights up whenever the pitch is within the range of -10 to +10 cents from the desired pitch.
- Both arrows light up when note is in tune.

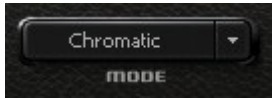
REFERENCE TUNE displays the value (in Hz) of the reference note "A".

Range: +/- 15Hz

Default: 440Hz



MODE controls tuning mode selection.



Default: Chromatic

NOTE CONTROLS

- Clicking on a note name enables or disables it.
- Enabled notes are displayed in white; disabled are displayed in gray.
- Waves Tuner looks for the nearest enabled note.



2.6 Presets Page



Choose Preset files using the Preset file pop up menu located above the Preset grid.

Double click on a preset to load it.

PRESET LIST EDITING

Presets may be saved, copied, pasted, deleted, or renamed by right-clicking on Preset name.

Please note: Standard shortcuts do not work under all host applications.

PRESETS PAGE CONTROLS

WRITE STATUS ICON ("Read & Write," illustrated by a lock icon) indicates whether or not the currently loaded preset may be edited. (Unlocked indicates that the Preset may be edited.)

To save "Locked" presets, either save to a new file or change the file's attributes to read and write from your Operating System.

LOAD WITH PRESET: There are 3 optional global elements which may be saved and loaded with a Preset.

- **Input Gain** When checked, the Preset loads with a specific Input Gain value. When unchecked, the value will remain at the manually entered setting when a new preset is loaded. To manually set an Input Gain value, uncheck the box.
- **Output Gain** When checked, the Preset loads with a specific Output Gain value. When unchecked, the value will remain at the manually entered setting when a new preset is loaded. To manually set an Output Gain value, uncheck the box.
- **Tempo** When checked, the Preset loads with a specific Tempo value. When unchecked, the value will remain at the manually entered setting when a new preset is loaded. To manually set a Tempo value, uncheck the box.

Chapter 3 – Preset System

Preset Handling is possible either from the dedicated Presets page or from the ToolRack's top toolbar.

3.1 Preset Saving

NEW... | SAVE TO NEW FILE...

"Save preset to file..." prompts the user for a new preset file name, and will save the current preset as the first preset in this file.

"New..." which invokes the same action as Save preset to file.

SAVE [CURRENT PRESET FILE].XPS [CURRENT PRESET NAME] |

SAVE OVER PRESET IN THE SELECTED PRESET CELL.

"Save preset" saves changes to the current preset in its current location. The preset will maintain its place in the list.

SAVE TO [CURRENT PRESET FILE].XPS AS... | NAME "EMPTY"

PRESET.

"Save preset to the current preset file" will save the current preset to the current preset file, as it does when naming an "Empty" preset by clicking on an "Empty" preset cell and entering a name. This preset will now appear in the presets list and in the Load preset menu.

Important: Press Esc before clicking enter or moving to another cell or page to cancel the operation.

EMPTY PRESETS

Empty presets are essentially place holders. They do not contain preset information; they do not appear in the preset listing under the Load Preset menu; and they do not change the current preset.

PRESET PAGE EDITING FUNCTIONS

Use the grid control copy/paste commands or drag/drop to modify the order in which the presets appear in the preset file. Certain edit features are available only from the right or Alt-Click menu when clicking on a selection. All features are available when the Edit enable button is activated on the Presets page.

RENAME PRESET

Presets can be renamed by selecting the name of an existing preset and editing it. This will not save the current preset over the preset saved in the selected preset cell.

“User Presets” loads the user presets file (saved in the plug-in settings folder) into the presets page grid editor.

COPY PRESET

Presets may be selected and copied to the clipboard using the Copy command in the right click edit menu.

PASTE PRESET

Presets copied to the clipboard may be pasted to the current preset file, following the last preset in the current selection, using the Paste command in the right click edit menu.

When pasting copied presets to the same preset file, their names will receive consecutive numbering for each copy. The paste operation will insert the preset into the next preset cell, pushing the following presets forward in the list.

DRAG AND DROP

Drag and drop presets to change their order in the presets file.

MULTI PRESET SELECTION EDITING

Multiple consecutive presets may be selected on the presets page grid control by click dragging over a group of presets. When Empty presets are a part of a multi selection they are ignored and only named presets are selected. Presets copied to the clipboard can be pasted to other files when they are selected.

GRID RIGHT CLICK POPUP

Consist of the following items:

1. Save – Save the preset that is edited in memory to the selected cell.
2. Copy – Copy the current selection to the clipboard.
3. Paste – Paste at the last selection cell and shuffle forward
4. Delete – Fill the selected cells with empty presets.
5. Rename – Rename the preset.

3.2 Loading Presets

OPEN PRESET FILE | SELECT PRESET FILE DROP DOWN MENU

"Open preset file... " prompts for a preset file. (The default location is WavesGTR/Presets/GTR.) Selecting a preset loads it into the Current Preset File memory.

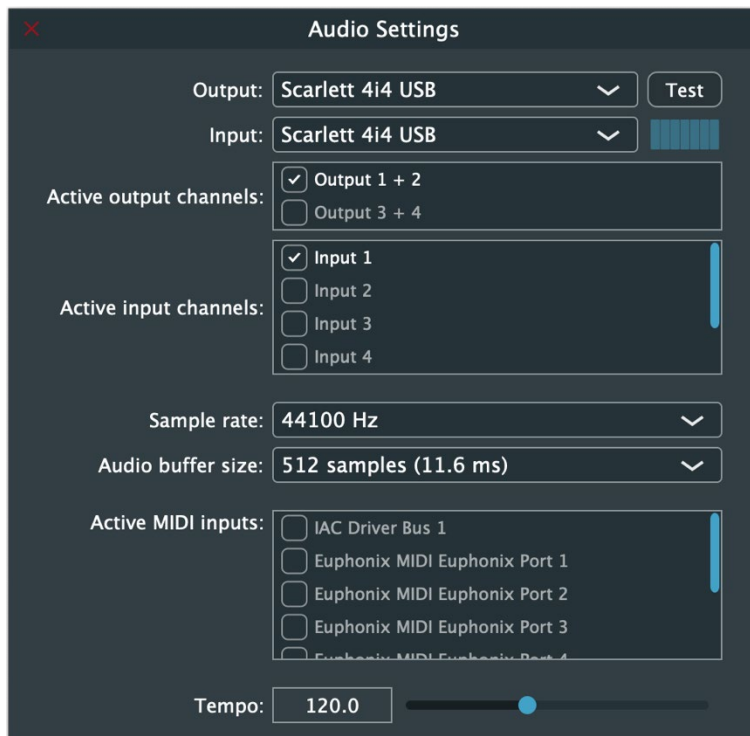
The opened file will now appear in the presets page grid control, ready for editing. The same thing will happen when selecting a file from the preset file drop down menu. (You can browse to any location using your system navigation). When loading a file not located in the presets directory, it will be listed along with the other files in the popup menu until GTR is fully closed. The next time, it must be opened from within the Open Preset File... menu. From then on, it will be available from the Preset File drop down.

4. Standalone Application

The GTR Standalone application requires ASIO drivers for Windows or Core Audio for macOS. GTR 3.5.exe (Win) or GTR 3.5.app (Mac) loads the GTR 3.5 instrument and configuration preferences dialogs. The standalone application's Menu file contains two items::

- All Notes Off Sends an All-Notes-Off MIDI command. This is useful in cases of "stuck" sustaining notes.
- Preferences Displays the Preferences dialog for the Audio, MIDI, and User Choices configurations.

AUDIO SETTINGS



Output displays the available audio output devices.

Test plays a sound if the outputs are configured correctly.

Input displays the available audio input devices.

Active Output Channels allows selection of audio output channels from the chosen output device.

Active Input Channels allows selection of audio input channels from the chosen output device.

Sample Rate displays and sets the sample rate.*

Audio Buffer Size displays and sets the buffer size, which influences latency.*



(Windows Only)

*In Windows, sample rate and buffer size cannot be changed from this panel. To modify these settings: close the application, adjust sample rate and buffer size with your driver's control panel (shown here), and relaunch.

Active MIDI Inputs displays a list of available MIDI input devices on the current system. Select the MIDI device for receiving MIDI data.

Tempo: Sets the tempo for all relevant plugins. By default, tempo-based Waves plugins are in a “tempo listen” state. Their tempo rates will fix to this value.