

GTR Solo

User Guide



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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.

1.1 Product Overview

Waves GTR Solo is a guitar tone processor featuring virtual guitar amps, cabs, and effects. It can run as a DAW plug-in or as a standalone application for processing 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.

GTR Solo can run up to 4 Stomps and 1 Amp at any given time, as well as the Tuner.

- The Stomp page allows editing of the Stomps chain and the placement 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.

1.2 Automation

Automation for the GTR Solo consists of discrete automatable controls for the 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 Solo 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.

Chapter 2 – Controls and Interface

The GTR Solo 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

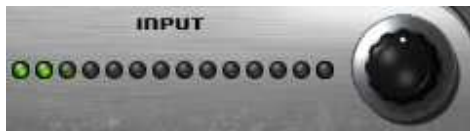
The bottom section of the GTR Solo interface includes page buttons as well as controls and displays for tempo, input, and output settings.

PAGE BUTTONS



- The Stomp page allows editing of the Stomps chain and the placement 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

Output Section



OUTPUT GAIN is used to boost or attenuate output gain.

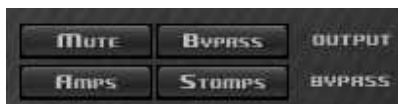
Range: -18dB to +18dB

Default: 0dB

OUTPUT METER displays output level.

Range: -42dB to 0dBfs

Default: -42dB



MUTE OUTPUT mutes the GTR Solo output.

BYPASS OUTPUT bypasses all GTR Solo processing.

AMPS BYPASS bypasses the GTR Solo Amps.

STOMPS BYPASS bypasses the GTR Solo 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.



GTR Solo includes 13 Stomp effects:

- OverDrive
- Distortion
- Phaser
- Flanger
- Chorus
- Delay
- WahWah
- Spring
- Pitcher
- Vibrolo
- GateComp
- EQ
- Volume

See Appendix A for more information on individual stomps.

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

The Amp page shows the selected Amp and its controls with two main sections:

1. The Amp section to the left of each amp includes controls for Drive, Bass, Mid, Treble, and Presence controls, whose response curves changes according to the original hardware amp behavior. The Bass amp features a Direct Mix control in place of the Presence control.
2. The Cabinet section of each amp includes controls for Cabinet and Microphone setups, Cab Bypass and Air control.



GTR Solo includes 10 amp types:

CLEAN amps are displayed with a golden panel and tweed skin.

- **Clean** Based on a 1959 tweed Fender® Bassman®.
- **Sweet** Based on a 1968 Gibson® Skylark

DRIVE amps are displayed with a blue panel and gold threaded cloth skin.

- **Edgy** Based on a 1980 Vox® AC-30 TB-2
- **Drive** Based on a 1964 blackface Fender® Super Reverb®
- **Overdrive** Based on a 1980 Marshall® JMP

HIGH GAIN amps are displayed with a red wine panel and treadmill skin.

- **Crunch** Based on a custom Garcia™ from Paul Reed Smith's personal collection
- **Shredder** Based on a Marshall® JMP1 preamp
- **PRS Scorch** Based on a boutique amplifier from Paul Reed Smith's personal collection
- **PRS Crush** Based on a modified 50W Marshall® MK2

BASS amp is displayed with a silver panel and grill skin.

- **SolidState** Based on a Hartke® 3500

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: Selection is described in section 1.1

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

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 with some choice of placement such as on or off axis.

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

AIR adds room by generating early reverb reflections.

Range: -40 to 0

Default: 0

VOL controls Cab/Mic volume.

Range: 0 to 10

Default: 5

GTR Solo includes 10 speaker cabinets:

- 12" OpenBack
- 2*12" Closed Back
- 2*12" Open Back
- 4*10" Open Back
- 4*12" Standard
- 4*12" Vintage
- Acme 12" Custom
- Acme 2*12" Vintage
- ACME 8" Open Back
- Bass 8*10" Pro

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 within your computer's 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 GTR Solo'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 presets 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 Presets 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.

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

The Grid Right Click Popup consists of the following commands:

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 Solo.) Selecting a preset loads it into the Current Preset File memory.

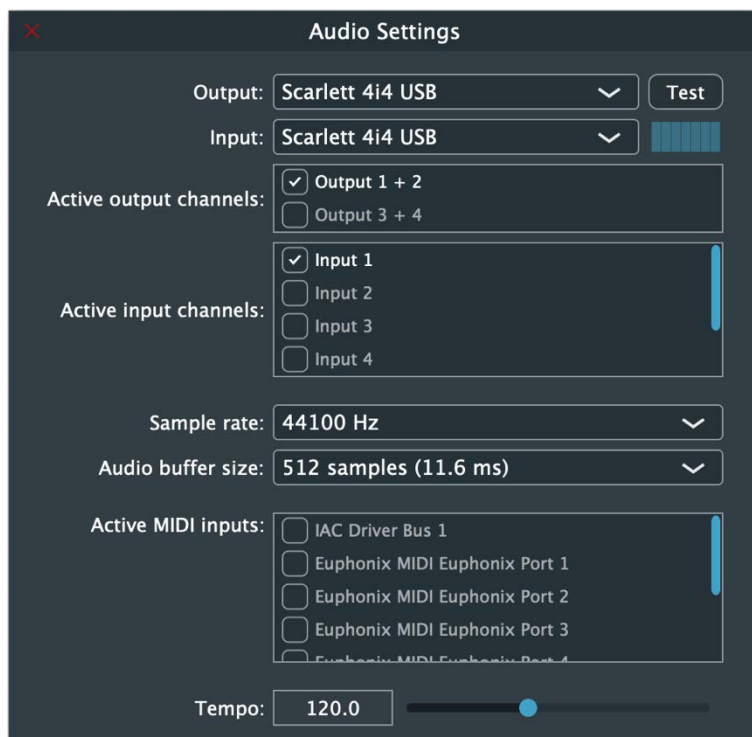
The opened file will now appear in the presets page grid control, ready for editing. The same thing will happen when selecting a file from the preset file drop down menu. (You can browse to any location using your system navigation). When loading a file not located in the presets directory, it will be listed along with the other files in the popup menu until GTR Solo 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 Solo application can be used as a standalone instrument. It requires ASIO drivers for Windows or Core Audio for macOS. GTR Solo.exe (Win) or GTR Solo.app (Mac) loads the GTR Solo instrument and configuration preferences dialogs. Set up the standalone application preferences from its File menu:

- 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 below), 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.

Appendix A GTR Solo Stomps

OVERDRIVE



DRIVE controls the amount of effect applied to the signal.

Range: 0 – 100

Default: 50

LEVEL controls the output level.

Range: 0 – 100

Default: 50

TONE controls the output timbre.

Range: 0 – 100

Default: 50

DISTORTION



DRIVE controls the amount of distortion applied to the signal.

Range: 0 – 100

Default: 50

LEVEL controls the output level.

Range: 0 – 100

Default: 50

CONTOUR controls the output character.

Range: 0 – 100

Default: 50

TONE controls the output filter cutoff.

Range: 700Hz – 10 kHz.

Default: 3.9 kHz

FLANGER



DEPTH controls the depth or amount of flanging.

Range: 0 to 100

Default: 50

SYNC controls synchronization to host tempo.

Range: On/Off

Default: Off

SYNC RATE controls the speed of the synchronized effect.

Range: 2 to $1/32t$

Default: $1/4t$

MANUAL RATE controls the speed of the effect when not synchronized to host tempo.

Range: 0 to 20Hz

Default: 0.20

DELAY controls the length of the delay added to the signal.

Range: 1.5 to 10ms

Default: 3.0

FEEDBACK controls the amount of resonance.

Range: 0 to 100

Default: 50

STEREO controls the LFO (Low Frequency Oscillator) phase difference between the left and right channels.

Range: 0 to 100

Default: 50

VIBROLO



WAVEFORM

Range: Sine, Triangle, SawUp, SawDown, Square

Default: Sine

SYNC controls synchronization to host tempo.

Range: On/Off

Default: Off

SYNC RATE controls the speed of the synchronized effect.

Range: 2 to 1/32t

Default: 1/4t

MANUAL RATE controls the speed of the effect when not synchronized to host tempo.

Range: 1 to 20Hz

Default: 8Hz

VIBE controls Frequency Modulation depth.

Range: 1 to 100

Default: 0

TREM controls Amplitude Modulation depth.

Range: 1 to 100

Default: 50

PHASER



DEPTH controls the amount of effect applied to the signal.

Range: 0 to 0.80

Default: 0

SYNC controls synchronization to host tempo.

Range: On/Off

Default: Off

SYNC RATE controls the speed of the synchronized effect.

Range: 2 to 1/32t

Default: 1/4t

MANUAL RATE controls the speed of the effect when not synchronized to host tempo.

Range: 0 to 20

Default: 1

STEREO varies the LFO (Low Frequency Oscillator) phase for the left and right channels.

Range: 0 to 100

Default: 0

CHORUS



DEPTH controls the amount of detune effect applied to the signal.

Range: 1 to 100

Default: 10

RATE controls the speed of the detune effect's modulation time.

Range: 0.10 to 10

Default: 0.77

WAHWAH



SENSITIVITY controls the sensitivity of the envelope follower

Range: 0 to 100

Default: 50

SPEED controls both the Attack and Release controls of filter modulation.

Range: 0 to 100

Default: 50

RANGE controls the frequency around which the Wah works.

Range: 0 to 100

Default: 50

MODE Auto turns the effect into an Auto Wah. Manual enables MIDI or mouse control of the effect.

Range: Auto/Manual

Default: Auto

WAH controls the frequency of the Wah filter in Manual mode.

Range: 0 to 1

Default: 0.5

PITCHER



MIX controls the balance between Wet and Dry signal.

Range: 0 to 100

Default: 50

MIN (Shift)

Range: -12.00 to +12.00 semitones

Default: -12.00

MAX (Shift)

Range: -12.00 to +12.00 semitones

Default: +12.00

PITCH controls the range of pitch shift.

Range: 0 - 100

Default: 50

DELAY



MIX controls the balance between Wet and Dry signal. At 50, the Wet and Dry paths mixed are mixed evenly at -3dB.

Range: 0 to 100

Default: 50

SYNC controls synchronization to host tempo.

Range: On/Off

Default: Off

SYNC TIME controls the speed of the synchronized effect.

Range: 2 to 1/32t

Default: 1/16

MANUAL TIME controls the speed of the effect when not synchronized to host tempo.

Range: 0.01 to 2.0

Default: 0.5

FEEDBACK controls the amount of energy fed back from the output back to the input. Please note: Feedback levels above 8.7 may result in clipping or feedback.

Range: 0 to 10

Default: 5

Hi CUT rolls off high frequencies.

Range: 0.1 to 7

Default: 7

STEREO controls the position of the delay regenerations within the stereo field. (0 = Mono, 100 = Full Stereo “ping pong” effect)

Range: 0 to 10

Default: 10

SPRING



Mix controls the balance between Wet and Dry signal.

Range: 0 to 100

Default: 50

TIME controls the reverb decay time.

Range: 0.2 to 10 seconds

Default: 3.6

PREDELAY controls the delay between the start of the direct signal and the reverb.

Range: 20 to 170ms

Default: 20ms

GATE/COMP



GATE controls the sensitivity of the gate.

Range: inf to 0dB (FS)

Default: -60

COMP controls the amount of compression applied to the signal.

Range: 0 to 100

Default: 50

EQ



Frequencies: 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz
Range: +/- 12dB (Q=10)

Please note: EQ's hidden low frequency attenuator reduces unwanted rumble.

VOLUME



VOLUME BAR (HI > LO) controls output level. The position between Hi and Lo determines output volume according to the selected scaling.

SCALE controls the way the volume range is distributed by the Volume bar fader.

Settings: Log or Lin

Default: Lin

MIN controls the Lo volume setting, or the volume that is set when the Volume bar is in Lo position.

Range: -144dBfs – 0dBfs.

Default: -24dBfs.

MAX controls the Hi volume setting, or the volume that is set when the Volume bar is in the Hi position.

Range: -144dBfs – +12dBfs.

Default: 0dBfs.

Please note: Since Max control limits the Min control, Min value may not exceed Max value.