Waves GTR
Stomp User Guide

TABLE OF CONTENTS

Chapter 1 – Introduction

1.1 Welcome

Thank you for choosing Waves! In order to get the most out of your Waves processor, please take the time to read through this manual.

In conjunction, we also suggest that you become familiar with www.wavesupport.net. There you will find an extensive **Answer Base**, the latest **Tech Specs**, detailed **Installation** guides, new **Software Updates**, and current information on **Authorization** and **Registration**.

By signing up at www.wavesupport.net, you will receive personalized information on your registered products, reminders when updates are available, and information on your authorization status.

1.2 Product Overview

Waves GTR Stomp is a virtual pedalboard plug-in that hosts multiple Stomp effects. Stomp effects are chosen by clicking on the space assignment button below the slot, or by right-clicking in an empty slot. Once loaded, Stomps may be rearranged by dragging-and-dropping them into place.

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 material.

Waves GTR Stomp includes Mono, Mono-to-Stereo (m>s), and Stereo components, in 2, 4, and 6 Stomp configurations.

1.4 Concepts and Terminology

Waves GTR Stomp appears in host application plug-in menus as follows:

- **Stomp 2**: Stomp 2 Mono, Stomp 2 m>s, and Stomp 2 Stereo.
- **Stomp 4**: Stomp 4 Mono, Stomp 4 m>s, and Stomp 4 Stereo.
- **Stomp 6**: Stomp 6 Mono, Stomp 6 m>s, and Stomp 6 Stereo.

Stomps may be placed in any order, and multiple instances of the same Stomp may be chained together.

Stomps, chains, and their settings can be saved as presets, and are saved with your session files. They can also be saved as PedalBoard setup files, which contain two presets, "A" and "B".

GTR STOMP CONTROLS

In addition to the standard WaveSystem controls, GTR Stomp has input gain, output meters and an output clip indicator.

The Stomp selection menu will display all available Stomps.

Each GTR Stomp configuration launches fully loaded with its default setup. Each setup has two presets ("A" and "B") which consist of the same chain of Stomps, in the same order, but with different settings.

TDM Notes

In TDM systems, the list displays Stomps according to availability. Only Stomps that can fit the DSP chip on which the Stomp PedalBoard is loaded will appear as available. Stomps that require more than your available system resources will be grayed out.

Please note: In the drop-down menu, an asterisk (*) next to the Stomp name indicates a Stomp that may be repositioned within the chain for better memory allocation.

AUTOMATION

The Input Gain, Setup A/B, Previous Setup, and Next Setup controls are not automatable but they can be controlled or automated by MIDI controller.

Additionally, the PedalBoard features a bypass and 7 Expression elements per Stomp Space for a total of 48 automatable elements. The Expression elements automate the controls of any assigned Stomp. The Expression elements are expressed as control numbers within Stomp spaces (e.g. Stomp 1 Bypass, Stomp 1 Control 1, Stomp 1 Control 2, etc.)

After the bypass, the next expression element will be assigned to the upper left hand control of the stomp. Additional elements will be assigned in order to the right of that control and then lower than the control.

For example, on the Flanger Stomp, the automation control order would be: 1 – Depth 2 – Manual Rate, 3 – Sync Rate, 4 – Sync On/Off , 5 – Delay, 6 – Feedback, 7 – Stereo.

MIDI SUPPORT

Stomp controls may be assigned to external MIDI controllers.

- Continuous control scales are mapped to the full MIDI controller resolution 0 = min and 127 = max.
- Toggle action buttons (such as the sync rate button or bypass activate pedal) can receive a note-on command or get linear mapping to MIDI resolution over a 128 value range. A 2-state control will toggle when it receives the value 127 from its attached controller.

The Input Gain, Setup A/B, Previous Setup, and Next Setup controls are all automatable by assigning them to a MIDI note or controller.

All MIDI assignments are saved with presets.

MIDI ASSIGNMENT INTERFACE

Each Stomp control can be assigned to a single MIDI controller at a time. However, a single MIDI controller can be assigned to multiple Stomp controls.

The easiest way to link a MIDI event to a Stomp control is the Learn command. Right-clicking on any of the Stomp controls will display a MIDI assignment menu:

The first line in the menu will display the Stomp control name, e.g. "Drive". The second line displays the currently assigned MIDI controller.

When no control is assigned, it will display "Learn". When Learn is selected, the menu will disappear and the control will wait for the first MIDI event that it detects. Once a change is made to any control on your MIDI controller, this control will be assigned to the corresponding Stomp control.

Once the control is assigned, right-clicking on the control will display the linked MIDI control ID below the control name:

Similarly, Toggle controls may be assigned to MIDI controllers or notes and displayed as follows:
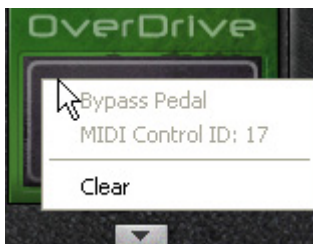
Selecting Clear will clear any current assignment and sets the control's assigned MIDI controller to "None".

The WaveSystem Toolbar displays the Preset name bar and Save/Load menus.

Use the Load menu to browse the supplied factory presets, or load your own for each individual stomp. Use the Save function to save your own custom presets to the preset menu or to an external file.

SYNC EFFECTS

Certain Stomps have parameters which can synchronize to your host BPM. When in Sync mode, musical note durations (ranging from 2 whole notes to 1/32nd note triplets) are used to represent the rate or time of the parameter.
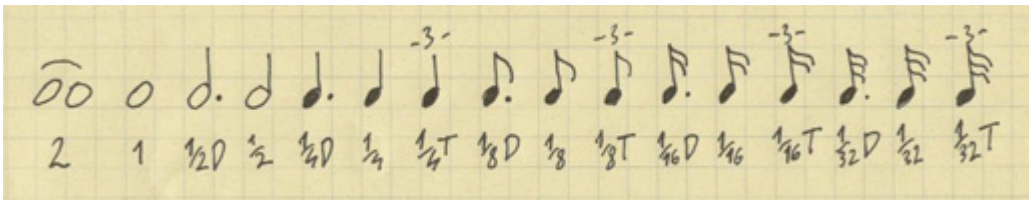
TIPS

- To eliminate pickup buzz, signal noise, etc., place a Gate or Gate/Comp Stomp first in your chain. This is especially useful when using distortion setups or when going into a driven or high gain amp.

- To save DSP power, use Mono Stomps at the beginning of a chain, using Mono-to-Stereo later on in the chain as needed. Then feed the Stereo output to a Stereo Amp.

- In general, Distortion Stomps sound good early in the chain, while Delay and Reverb Stomps sound better later.

- Try opening a Stereo PedalBoard after your amp for delays, reverbs, vibrato, panning, and/or corrective EQ.

- Since switching between Setups A and B is instantaneous, you can switch between them for different sections within the same song.

- While Waves GTR Stomps are designed especially for electric guitar, they can sound great on other tracks as well!

Chapter 2 – Controls and Interface

Stomps are divided into four categories: Distortion, Modulation, Space & Ambience, and Basics.

2.1 Distortion Effects

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

FUZZ

SUSTAIN controls the duration of the effect.
Range: 0 – 100
Default: 50

LEVEL controls output level.
Range: 0 – 100
Default: 50

TONE controls the output timbre.
Range: 0 – 100
Default: 50

BUZZ

DRIVE controls the amount of distortion applied to the signal.
Range: 0 – 100
Default 50

TONE controls the resonant low pass filter cutoff.
Range: 0 – 100
Default: 34

LEVEL controls the output level.
Range: 0 – 100
Default 50

*Hint: Using an expression pedal to control the Tone
transforms Buzz into a Distortion / Wah-Wah hybrid.*

METAL

DIST controls the amount of distortion applied to the signal.
Range: 0 – 100
Default 50

LEVEL controls the output level.
Range: 0 – 100
Default 50

LOW controls the low frequencies.
Range: -12 to +18dB (Bell)
Default +2.4dB

HIGH controls the high frequencies
Range: -30dB to 0dB (High Shelf)
Default -12dB

FREQ controls the midrange bell filter cutoff frequency.
Range: 250Hz to 1500Hz
Default: 400Hz

GAIN controls the midrange bell filter gain.
Range: -36 to +12
Default: -6

2.2 Modulation Effects

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

PANNER

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: 1/4 t

MANUAL RATE controls the speed of the effect when not synchronized to host tempo.
Range: 0.1 to 20Hz
Default: 8Hz

WIDTH controls the width of the panning effect, in degrees.
Range: 0 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

OCTAVER

DIRECT controls the volume of the direct signal.
Range: 0 -100
Default: 75

OCT1 controls the gain of the tone one octave below the direct signal.
Range: 0 - 100
Default: 75

OCT1 PAN controls the position of the tone one octave below the direct signal.
Range: +/-45 degrees
Default: 22.5

OCT2 controls the gain of the tone two octaves below the direct signal.
Range: 0 - 100
Default: 75

OCT2 PAN controls the position of the tone two octaves below the direct signal.
Range: +/-45 degrees
Default: -22.5

Please note: Octaver works best with a monophonic input.

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

CHORUS

DEPTH controls the amount of detune effect applied to the signal.
Range: 1 to100
Default: 10

RATE controls the speed of the detune effect's modulation time.
Range: 0.10 to 10
Default 0.77

DOUBLER

MIX controls the balance between Wet and Dry signal.
Range: 0 to 100
Default 50

DETUNE controls the amount of detuned chorus effect, in cents.
Range: 1 to 25 Cents
Default: 8

DELAY controls the length of the Delay effect added to the signal.
Range: 12 to 100ms
Default: 12ms

FEEDBACK controls the amount of energy fed back from the output back to the input.
Range: 0 to 100
Range: Default: 0

STEREO controls the position of the doubled sounds. At 100, the doubled signals are fully panned to left and right; at 0 they are panned to center.
Range: 0 to100
Default: 50

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

BASS 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

2.3 Space and Ambience Effects

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

LAY-D

MIX controls the balance between Wet and Dry signal.
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: 1/32 to 1/2
Default: 1/16

MANUAL TIME controls the speed of the effect when not
synchronized to host tempo.
Range: 0.01 to 1 (seconds)
Default 0.5

PITCH controls the amount of pitch shifting that will take place
on the first regeneration of the delay; consecutive
regenerations will shift by the same amount
Range: -1200 to +1200
Default: 0

FEEDBACK controls the amount of energy fed back from the
output back to the input.
Range: 0 to 100
Default: 50

STEREO controls the position of the delay regenerations
within the stereo field.
Range: 0 to 100
Default: 100

REVERSE controls the reversed regenerations that create a
backward effect.
Range: On/Off
Default: On

REVERB

MIX controls the balance between Wet and Dry signal.
Range: 0 to 100
Default: 50

PREDELAY controls the delay between the start of the direct signal and the reverb.
Range: 11 to 160ms
Default: 80

TIME controls the reverb's decay time.
Range: 0.2 to 10 (seconds)
Default: 1.4

TONE controls the reverb's high frequency damping ratio.
Range: 0.1 to 2
Default: 0.60

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

2.4 Basic Effects

COMPRESSOR

COMP controls the amount of compression applied to the signal.
Range: 0 to 100
Default: 0

ATTACK controls the speed at which compression begins.
Range: 1 to 50
Default: 4.99

RELEASE controls the speed at which compression stops.
Range: 50 to 2000ms
Default: 752ms

AXXPRESS

PRESS controls threshold and makeup gain simultaneously. Higher settings result in increase loudness.
Range: 0 - 100
Default: 0

ATTACK controls the speed at which compression begins once the input exceeds the press threshold.
Range: 0ms – 50ms
Default: 5ms.

OUTPUT controls the output volume of the compressor.
Range: -30 – 0dBfs
Default: 0dBfs

GATE

THRESHOLD controls the sensitivity of the gate.
Range: inf to 0dB (FS)
Default: -50

ATTACK controls the speed at which the gate opens when the level exceeds the threshold.
Range: 0.01 to 1000
Default: 0.05

RELEASE controls the speed at which the gate closes when the level falls below the threshold
Range: 1 to 10,000ms
Default: 100

HOLD controls the amount of time the gate remains open after the last attack.
Range: 0.01 to 5000ms
Default: 0.20

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

TONE

LOW controls the low frequencies.
Range: -/+18dB Low Shelf @ 310Hz
Default: 0dB

MID controls the midrange frequencies.
Range: -/+18dB Mid Bell @ 1kHz
Default: 0dB

HIGH controls the high frequencies.
Range: -/+18dB Hi Shelf @ 4kHz
Default: 0dB

LOWCUT controls the high pass filter cutoff frequency.
Range: 16 to 310Hz
Default: 40Hz

HICUT controls the low pass filter cutoff frequency.
Range: 4kHz to 18kHz
Default: 14kHz

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.
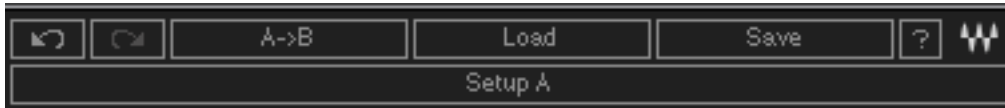Range: -144dBfs – +12dBfs.
Default: 0dBfs.

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

Chapter 3 – The WaveSystem

3.1 The WaveSystem Toolbar

All Waves processors feature the WaveSystem toolbar which takes care of most administrative functions you will encounter while working with your Waves software. The features of the WaveSystem toolbar are the same on practically all Waves processors, so familiarity with its features will be helpful whichever processor you are using.

TOOLBAR FUNCTIONS

Undo	Undoes the last 32 actions. GTR supports multiple undo levels.
Redo	Redoes the last 32 undone actions.
Setup A/B	Toggles between two presets. This is useful for close comparison of different parameter settings
Copy A->B	Copies the current settings to the second preset register
Load	Recalls presets from file
Save	Saves presets in the Waves file formats
?	Opens the manual for the processor you are using

3.2 Preset Handling

PRESET TYPES

Factory Presets are permanent presets in the Load menu. Factory presets cannot be over-written or deleted. When applicable, different component plug-ins may have different factory presets.

User Presets are your favorite settings of the plug-in saved as a preset in the Load menu, under 'User Presets'. User Presets can be over-written and deleted.

Setup Files may contain more than one preset. For example, a single file can contain all the presets for a session. When you open a Setup File, all its setups become part of your Load pop-up menu for fast access. This can be particularly useful with multiple instances of a plug-in in a single session. By saving all the settings you create into a single Setup File, they can all be quickly available for every instance of that plug-in.

LOADING PRESETS AND SETUPS

Load

Click-and-hold on the Load button to see the Load pop-up menu. The menu is divided into four sections. If a section is not currently available it will not appear in the Load pop-up menu.

Open Preset File… Select to open any setup or preset file, whether from the Library or your own creations.
'Filename.xps': Displays any currently loaded Setup File and its presets.
Factory Presets: Displays the default Factory Presets.
User Presets: Displays any loaded User Presets.

SAVING PRESETS AND SETUPS

Save

Click-and-hold on the Save button to see the Save pop-up menu. Four options are available. If an option is not currently available it will be grayed out and inaccessible.

Save to New File… Select this to start a new Setup file. There are two prompts - first for the setup filename, then for the preset name. You must provide a name for both the setup file and the preset. Click OK (ENTER) to complete the save. It is a good idea to create a folder in which to save several setup files for a project.
Save 'File Name' – "Preset Name" Overwrites the settings of the loaded preset (whether a User Preset or a preset from a Setup File) with the current settings. If a Setup File is currently loaded, the name of the Setup File is displayed followed by the name of the preset itself. If a User Preset is loaded, its name is displayed.
Save to 'File Name' As… Saves the current settings as a new preset into the Setup file that is open (if one is not open, the option is grayed out). You will be prompted to give the preset a name.
Put into Preset Menu As… Save the current settings into a User Preset that will always be in your Load menu (until deleted). You will be prompted to give this

preset a name. User Presets are stored in the plug-in's preference file.

DELETING PRESETS

You may delete User Presets and presets within a Setup File. Factory Presets and Setup Library files cannot be deleted or overwritten.

1. Hold the Command (Mac)/Control (PC) key down.
2. Click-and-hold the Load button to see the pop-up menu.
3. While still holding the Command/Control key, select the preset or setup to delete.
4. A confirmation box will appear, allowing you to cancel or 'OK' the deletion.

A/B COMPARISON AND COPYING

The Setup A/Setup B button may be clicked to compare two settings. If you load a preset in the Setup B position, this will not affect the preset loaded into the Setup A position, and vice-versa.

If you want to slightly modify the settings in Setup A, you can copy them to Setup B by clicking on the Copy to B button, then alter Setup A and compare with the original Setup B.

The name of the current setup will be shown in the title bar (on platforms which support it), and will switch as you change from Setup A to Setup B.

Note: an asterisk will be added to the preset name when a change is made to the preset.

3.3 Interface Controls

Controls can be in one of three states:

- **Not Selected** where the control is not the target of any user entry
- **Selected** where the control is the target of mouse control entry only
- **Selected and Active** where the control is the target for both mouse and keyboard entry

TOGGLE BUTTONS

Toggle buttons display the state of a control, and allow switching between two or more states. **Single-click** to change the control's state. Some toggle buttons have

a text display which updates with the current setting, and others (bypass, solo, or monitoring toggles) illuminate when the control is active.

Some processors have **link buttons** between a pair of toggle buttons, allowing click-and-drag adjustment while retaining the offset between the controls.

VALUE WINDOW BUTTONS

Value windows display the value of a control and allow **click-and-drag** adjustment, or **direct control via the keyboard**.

- **Using the mouse**, click-and-drag on the value window to adjust. Some value windows support left/right, some up/down (as you hover over a button, arrows will appear to let you know which direction of movement that button supports).
- **Using the arrow keys**, click once with mouse to select the button, and then use up/down – left/right (depending on the direction supported by that button) to move in the smallest incremental steps across the button's range (holding down the arrow keys will move faster through the range).
- **Using key entry**, double click on the button to open the value window, and directly enter the value from your keyboard. If you enter an out of range number, the button stays selected but remains at the current setting.

Some processors have **link buttons** between a pair of value windows, allowing click-and-drag adjustment while retaining the offset between the controls.

SLIDERS

Click on the slider itself or anywhere within the sliders track. The numerical value of the slider settings is displayed in a hover window above the slider path.

HOVER BOX

Hovering boxes will appear and display the control value when hovering with the mouse over the control.

MULTIPLE SELECTION OF CONTROLS

One of the most powerful features of the WaveSystem is the ability to select and adjust many controls at the same time. Using the mouse, simply drag-select the desired group of button or graphic controls by clicking and holding at a point outside the controls and forming a rectangle to include the controls you wish to adjust. Alternatively, you can hold down Shift while clicking the mouse on any control you wish to link. This second method is useful when you want to select two (or more) controls that are separated on the GUI by other controls you do not wish to select.

TAB FUNCTIONS

TAB moves the 'selected' status to the next control, with shift-TAB moving in the reverse direction.

Additionally, the Mac has an option-TAB function for 'down' movement and shift-option-TAB for 'up' movement where applicable.

If you have several Value Window Buttons selected, TAB functions will take you through the selected controls only.