

# H-COMP

## Hybrid Compressor 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 Waves processor, please take the time to read through this manual.

In conjunction, we also suggest that you become familiar with [www.wavesupport.net](http://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](http://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

First, Waves took everything we learned when we modeled classic hardware for our award-winning SSL 4000 Collection, V-Series, and The API Collection. Then, we imagined a series of plug-ins that would blend the best of yesterday's sound with today's technology. Finally, we brought these elements together, and created the plug-ins that would realize our vision. The result is the new Waves Hybrid Line.

H-Comp Hybrid Compressor is a dynamics processor that combines the modeled behavior of transformers, tubes, and transistors, together with the power and precision that only a plug-in can provide.

## 1.3 Concepts and Terminology

In addition to standard compression control parameters (Threshold, Attack, Ratio, Release), H-Comp features additional controls that offer unique sound design possibilities:

**Mix** provides an easy way to achieve Parallel compression, which usually requires special setup and additional tracks.

**Limiter** activates an output limiter that prevents peaks above 0dBFS.

**Punch** allows transients to pass through the compressor, even with very fast attack times, in order to better preserve transient behavior.

**Sync** provides sync-to-host and sync-to-BPM Release time control. Setting the correct Release for a compressor generally involves attention to both the sound of the compression as well as its musical interaction with the signal. Therefore, Release times are often related to the interval between drum strokes, or other sharp onsets. In other words, Release times often correspond to the track's BPM. H-Comp's Sync feature allows you to set Release times using intuitive musical values.

**Analog Modes** lets you choose between 4 Analog Modes which correspond to sound qualities which are usually associated with and perceived as analog hardware sound.

## 1.4 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 a configuration suitable for your material.

H-Comp has two component processors:

- H-Comp Mono (mono-to-mono)
- H-Comp Stereo (stereo-to-stereo)

## Chapter 2 – Quickstart Guide

- Turn the large threshold knob clock wise until you distinctly hear compression occurring. At that point, the VU Meter set to GR should show display activity.
- Use the Ratio control to adjust the amount of compression. Higher ratio equals more compression
- Use the Attack control to set the speed at which compression will occur.
- If you lose any transient information, use the Punch control to bring them back.
- Use the Release control to set the speed at which the compression fades out.
- Choose Host or BPM Sync mode if you want the compression to correspond to your track tempo.
- Once you've set the correct compression, use the Mix control to blend the compressed signal in with the original input.
- At this point. experiment with the Analog Modes to change the sonic character of the compressor
- To control output levels, use the Output Trim control, and activate the Limiter as needed.

# Chapter 3 – Interface and Controls

## 3.1 H-Comp Interface



## 3.2 H-Comp Controls

**Threshold** controls the point at which compression begins.



Range: 0 to -48 dB  
Default: -18 dB

**Ratio** controls the compression ratio.



Range: 1 to 50  
Default: 3

**Mix** controls the amount by which the compressed signal (Wet) is mixed with the direct, uncompressed input (Dry).



Range: 1 (Dry) to 100 (Wet)  
Default: 100

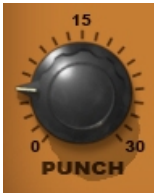
*Please note: H-Comp has automatic-makeup gain, which is designed to maintain the same approximate level for the both the uncompressed and compressed signals.*

**Attack** controls the compression attack time (in milliseconds).



Range: 0.5 to 100 ms  
Default: 7 ms

**Punch** controls the amount of transient 'pass through', regardless of the Attack time. Higher values allow more transients to bypass the compression, resulting in a punchier sound.



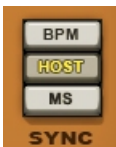
Range: 0 to 30  
Default: 1

**Release** controls the compression release time.



Range: 3 ms to 3 sec or BPM multiples (note values)  
Default: 100 ms

**Sync** toggles between Release Time modes. In Host and BPM modes, Release value displays BPM multiplier values.



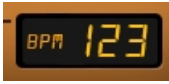
Range:

- Host (syncs to the host application BPM setting)
- BPM (syncs to a manual user setting)
- MS (allows manual setting, in milliseconds)
- 

Default: MS



**BPM Readout** displays tempo in beats-per-minute. In Host Sync mode, shows host BPM; in BPM mode, values may be set using the mouse or by manual text entry.



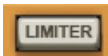
Range: Off, 30 – 300  
Default: Off

**Analog** toggles between analog character modes.



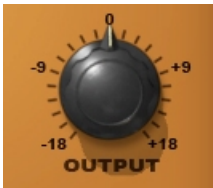
Range: Off, Modes 1 thru 4  
Default: 2

**Limiter** activates the peak limiting function.



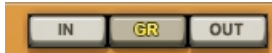
Range: On/Off  
Default: Off

**Output** controls output Gain.



Range: +/- 18 dB  
Default: 0

## Meter Display Selection



Range: IN (input level); GR (gain reduction amount); OUT (output levels)

Default: GR

GR mode employs a different metering scale than IN and OUT modes. GR displays the total amount of attenuation, taking into account compression, mix position, and limiter activity.

## VU Meter



Range: 0 dB to -48 dB

## Chapter 4 – The WaveSystem

### 4.1 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

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

### 4.2 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



**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



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

## 4.3 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 (system beeps? If system sounds are on?)

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.

## **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.