

HERCHILD NEXT GEN

Model 670N



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We are really proud to introduce the HERCHILD Next Gen Model 670N, authentic 670 sound crafted for the Next Generation of studios.

Four years ago, and after many years of R&D, we released the HERCHILD Model 660 and 670, a surgical recreation of the legendary Fairchild Model 660 and 670 by sourcing authentic NOS Vari-Mu tubes, carefully designed transformers and nailing the look and feel of the revered originals.

Two years later, the GRANDCHILD 670/500 marked an unprecedented engineering effort that for many years seemed impossible: getting the sound of the classic Vari-Mu compressor into a 500 series module with an even harder challenge to achieve: making it affordable.

The experience gathered during those two projects made the path clear for what the next generation of Fairchild-type Vari-Mu compressors should be: true to the original sound with added features for modern productions and as affordable as possible.

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CEO
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While our flagship HERCHILD Model 670 recreates the legendary Fairchild sound to perfection, our GRANDCHILD 670/500 also successfully achieves that loveable warm vibe, with the assumed limitations of the 500 series format. So...with all the knowledge acquired, the only step left would be to rethink the Fairchild with today's studio needs in mind.

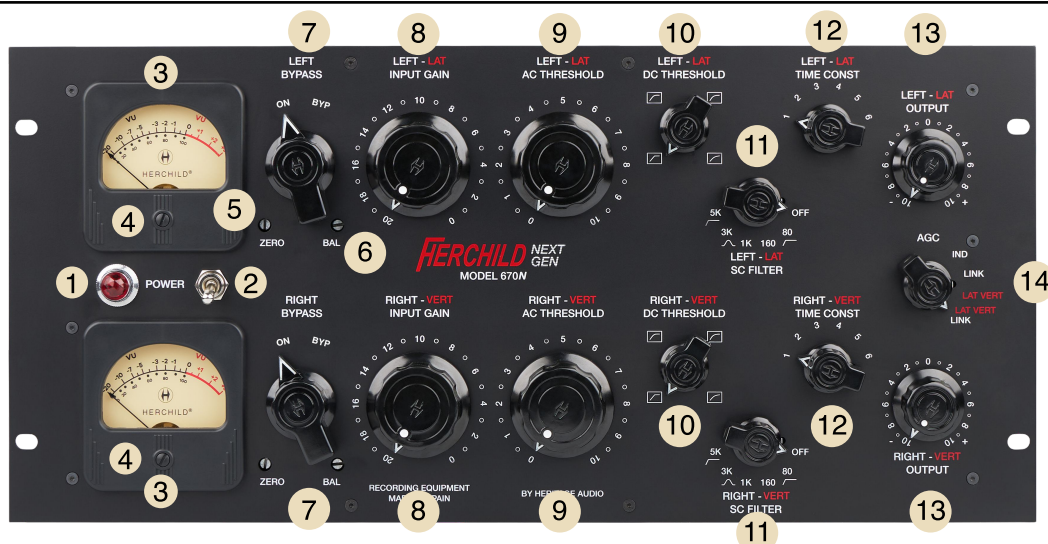
Independent bypass, side chain filtering and a thoroughly designed output gain make-up stage for each channel based on our revered transformer coupled HA-880 opamp (that successfully achieves a non-intrusive output gain completely preserving the soul of the HERCHILD 670) are some of the never-before-seen modern additions to the Next Gen.

The 6 Attack and Release times have been carefully thought out to make it even more flexible than in the original unit. The progressive DC THRESHOLD, combining control of the ratio and the knee (from hard limiting to a very smooth transparent compression).

Powered by the same NOS tubes of the HERCHILD 670 and six newly designed custom transformers, the Next Gen will infuse your tracks with rich analog warmth and commanding presence, while remaining remarkably quiet and transparent—perfectly suited for the creative demands of mixing and the precision and finesse of mastering.

In short: The Next Gen will essentially provide the same sound quality as the HERCHILD 670, but with 150% functionality..... at a fraction of the price.





- 1 **RED JEWEL INDICATOR LIGHT:** Indicates that the equipment is ON.
- 2 **POWER SWITCH:** Turns the unit on or off.
- 3 **VU METER:** Indicates GAIN REDUCTION.
- 4 **METER ADJUSTMENT SCREW:** This is not meant to be user adjustable. We recommend not adjusting this and to contact an official repair service.
- 5 **ZERO ADJUSTMENT SCREW:** Use this screw to set the meters to 0 dB on the VU meter when there is no compression happening. It is normal for this setting to drift for the first 30 minutes of operation.
- 6 **BALANCE ADJUSTMENT SCREW:** Use this screw to balance the circuit for optimum performance based on the particular set of tubes installed.
- 7 **BYPASS:** Bypasses the selected channel when on BYP.
- 8 **INPUT GAIN CONTROL:** This knob is used to control the amount of input gain applied. This is actually an attenuator that reduces the the input by up to -20 dB.
- 9 **AC THRESHOLD:** The AC THRESHOLD knob determines when the compression begins. It's used to decide when and how much gain reduction takes place. When in the fully counter-clockwise position, the HERCHILD Next Gen Model 670N will not compress at all. As the threshold control is turned clockwise, the amount of compression will progressively increase.
- 10 **DC THRESHOLD:** Here you decide what kind of curve will be applied to the compression. Go to the DC THRESHOLD section of this manual for a more detailed explanation.
- 11 **SC FILTER:** This is a side chain filter applied only to the control signal to decide if and where the unit will be more or less sensitive to certain frequencies. There are 5 choices available: 80, 160, 1K, 3K and 5K. The first two settings are great to avoid the compressor being unnecessarily overpowered by lower frequencies, very useful to avoid undesired pumping. The 1K and 3K settings can be very helpful when it comes to taming unruly elements of a mix such as loud vocals, fuzzy guitars or overly aggressive snares. The 5K setting can do magic relaxing annoying, over-hyped overhead MICs.
- 12 **TIME CONST:** Here you have 6 options for the attack and release timings giving you combinations for fast and slow timings. (Please see the TIME CONSTANT Section for exact timings.)
- 13 **OUTPUT GAIN CONTROL:** This knob is used to control the amount of output gain makeup applied. This control goes from -10 dB to +10dB.
- 14 **AGC:** Choose between the 4 different modes of operation for the HERCHILD Next Gen Model 670N:
 - **IND:** Each channel operates individually with it's own independent control.
 - **LINK:** Ties the channels together and bases the compression applied equally to both channels on whichever channel requires the most compression at any given moment. This is used for stereo operation.
 - **LAT VERT:** This is similar to what we refer today as Mid & Side. A very effective way of widening a stereo image and improving and strengthening the center image. Here the upper channel of the HERCHILD Next Gen Model 670N controls the MID (center) information and the lower channel controls the SIDE (extreme left and right information) information.
 - **LAT VERT LINK:** The same but with the controls linked together, once again deriving the overall compression from whichever channel is producing the most at any given moment.



- 1 **LINE INPUTS (x2 XLR):** Female Gold Plated XLR connector.
- 2 **LINE OUTPUTS (x2 XLR):** Male Gold Plated XLR connector.
- 3 **POWER INPUT:** To Be Connected to the HA-PSU02 Power Supply only.

After listening to our customers' requests over the last few years we were able to take all of their suggestions into account and develop a nifty 5 rack space unit with what we consider the most important features. It is now perfectly comfortable taking on any modern-day production with everything that that entails.

The first new addition you'll spot is the **BYPASS** control on the far left-hand side, right after those huge, sexy VU meters. This will allow you to quickly compare the signal with and without the compression applied to hear exactly how the signal is being treated. And the VU meters themselves will light up when ON and turn off when in BYP so you can conveniently check the status from afar.

Then, we've added **OUTPUT** controls on the other extreme, right-hand side of the front panel, for each channel. This will allow 10 dBs of boost or cut to compensate for any changes in the signals level after compressing. And also comes in handy when in the M/S mode as it will allow you to easily adjust the ratio between the audio's information in middle and on the sides.

Positioned right between the two channel's **OUTPUT** controls you'll find the **AGC** section offering 4 different modes of operation. The 4 modes to choose from are: IND, LINK, LAT VERT & LAT VERT LINK.

IND gives you totally independent control for each channel while **LINK**, obviously, links the two channels operation together so whichever channel provokes the most amount of gain reduction will determine the compression applied to both channels, ensuring a stable stereo image at all times.

LAT VERT is the equivalent to the more commonly known MID/SIDE and when used properly, can really give you the power to make your songs sound wider, deeper and more focused. Nowadays, people have discovered the advantages of mixing and mastering with MID/SIDE processing as it allows you creative control over the center and side signals of a stereo track, separately. And the last option is **LAT VERT LINK** and is, once again, for MID/SIDE processing but this time with the two channels linked together and controlled by whichever channel produces the most compression.

There is a soft-stepped **INPUT GAIN** attenuator control for both channels so you can quickly decide the level of the signal entering the unit. Each channel also has its own **AC THRESHOLD** knob, once again soft stepped, so you can precisely adjust when you want the unit to actually begin compressing the inputted signal.

Next up is the **DC THRESHOLD**, to control the slope of the compression applied. This is basically a ratio and knee control that varies from an immediate limiting-like response to a very slow, gradual curve that progressively brings on more compression as the signal level increases.

Then, there is the **TIME CONST** switch to choose from 6 different ATTACK & RELEASE settings. These are the exact time settings included on our top-of-the-line HERCHILD Model 670. The first two options are quite fast while the following 4 are much slower so you can cover a vast range of dynamic needs.

And finally we've added our famous built-in side chain filter (**SC FILTER**) that we include with most of our compressors that'll give you tons of practical, as well as creative, flexibility. This is a great addition especially when you're working in the M/S mode, (Lat/Vert) as it'll allow you do some very focused, frequency specific compression.



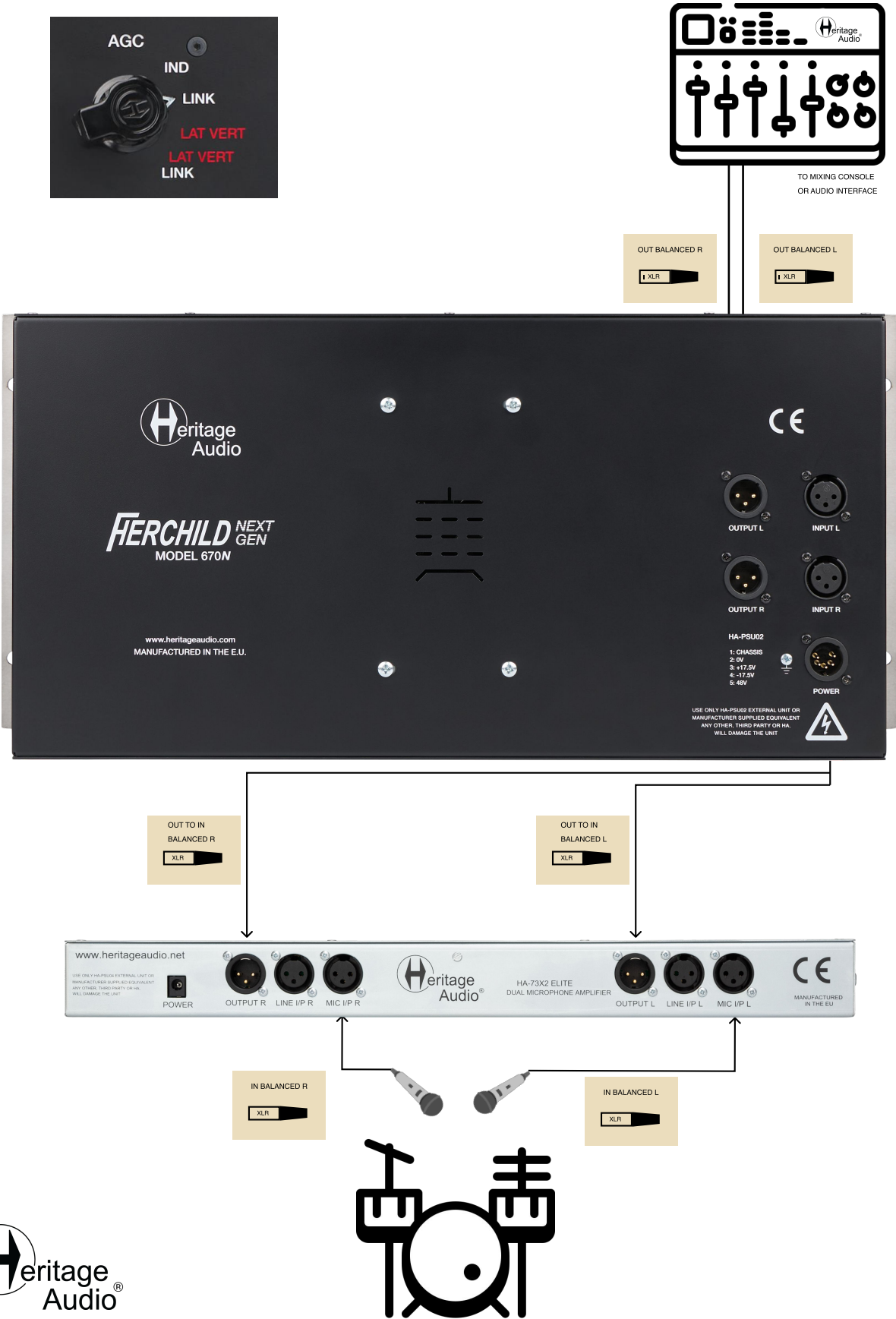


	ATTACK	RELEASE
1	.2 ms	.3 Seconds
2	.2 ms	.8 Seconds
3	.4 ms	2 Seconds
4	.4 ms	5 Seconds
5	.4 ms	2 Seconds for individual peaks 10 Seconds for multiple peaks
6	.2 ms	.3 Seconds for individual peaks 10 Seconds for multiple peaks 25 Seconds for consistently high program level

IND (DUAL MONO) - Voice and Bass



LINK (STEREO) - Drums



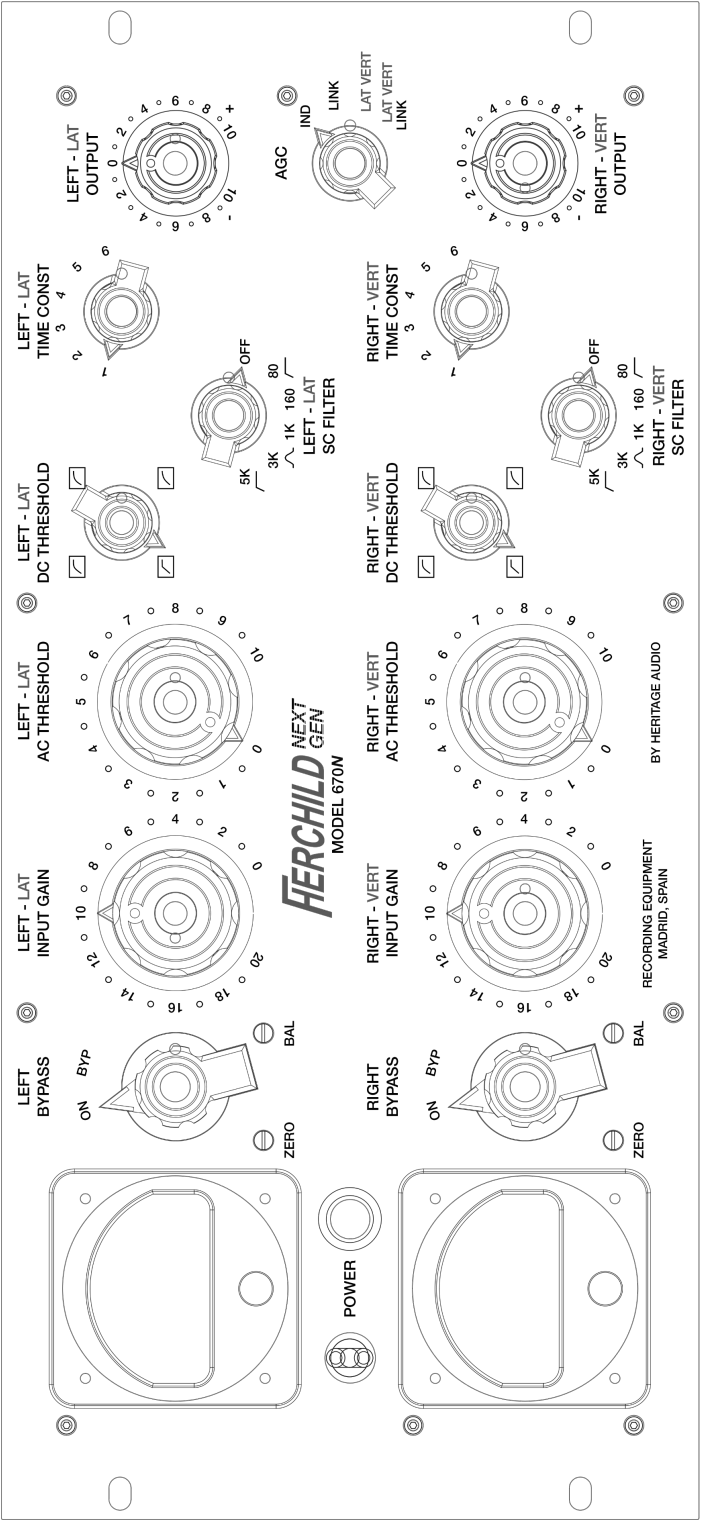
LAT/VERT - Mix



LINK - LAT/VERT - Chorus Subgroup



PROBLEMS	SOLUTIONS
The unit is barely responding or sounding very strange.	Make sure to allow at least 20 minutes of warm up time before using.
The RIGHT channel does not seem to be responding to any adjustments.	Check to make sure you are not in one of the linked modes.
I'm not getting any gain reduction registering on my VU meters, nor hear it.	Adjust the AC THRESHOLD until the units compresses to the point you require.
There doesn't seem to be any signal at all entering the unit.	Make sure that your INPUT GAIN knob is not turned all the way down.
There still is no signal entering the unit.	Make sure your cables are correctly connected and carrying a signal. (Balanced +4dBu)
I see gain reduction occurring on the VU meters, but I don't have any signal coming out of the unit.	Verify that if you have turned the OUTPUT knob all the way down.
However I adjust the AC THRESHOLD there just seems to be way too much compression happening.	Adjust your INPUT GAIN knob until you have a more workable signal present.
No matter how I adjust the AC THRESHOLD there just seems to be way too much compression happening right away.	Check your DC THRESHOLD setting to see if it is set to limiting and if so, adjust accordingly.
The compression effect seems to linger on for way to long.	Try a different TIME CONST setting. (Probably 1 or 2)
Regardless of my settings I'm getting a bit of pumping of the signal happening.	Try using one of the low-cut filters in the side chain so the detection circuit is less sensitive to those lower frequencies and they won't trigger the compression.
I'm getting a strange response from the unit and think that the tubes are bad.	It may need a calibration or a simple BALANCE adjustment of the tubes.
I've just swapped out the tubes for a new set and the unit now sounds very different.	If those were compatible tubes then the most likely case is that you'd need to have it calibrated properly with that new set of tubes installed.



Session / Title: _____ Track: _____ Connected Equipment: _____

Date: _____ Instrument: _____ Notes: _____

LIMITED 2 YEAR WARRANTY

Heritage Audio's HERCHILD Next Gen Model 670 is warranted by Heritage Audio S.L. to be free from defects in materials and workmanship for the period of 2 years to the original purchaser. In the event of such defects, the product will be repaired without charge or, at our option, replaced with a new one if delivered to Heritage Audio prepaid, together with a copy of the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications. Heritage Audio shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential or otherwise.

We encourage you to register your new HERCHILD Next Gen Model 670 in our web in order to better manage any warranty related issues at: <https://.heritageaudio.com/registration/>.

This warranty is not transferable.

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