

HERCHILD

MODEL 670

PLUGIN USER MANUAL

Five years ago, Heritage Audio released what would become one of the most faithful recreations of the classic Model 670 and 660 Vari-Mu compressors. And we didn't stop there. The GRANDCHILD 670/500, a two-slot 500 Series Vari-Mu compressor, and the HERCHILD Next Gen Model 670N proved that when it comes to this revered circuit, one brand has truly mastered its craft.

The secret isn't really a secret: carefully matched NOS tubes, custom-made transformers designed specifically for the job, and every unit hand-built and subjected to the strictest quality control at our factory in Madrid, Spain.

Drawing on all that experience and knowledge, our team has spent the past year developing the ultimate FAIRCHILD-style plugin, complete with a range of never-before-seen features.

THE SOUND OF THE CLASSIC. PERFECTLY MODELED. PLUS MORE... MUCH MORE.

The HERCHILD plugin gets as close as possible to the sound and behaviour of the legendary hardware unit. But Advanced Mode takes its capabilities much, much further.

Blend control: Dial in the perfect amount of parallel compression, from fully dry to fully compressed.

Matching L/R: Keep both channels perfectly matched for a stable, consistent stereo image, or introduce subtle differences in left and right compression behaviour to add movement, dimension and a more organic character to your stereo material.

Matching Push-Pull: Explore the relationship between the push and pull stages of the classic Vari-Mu circuit, moving from balanced operation towards a more asymmetrical response. Experiment with harmonic texture, add extra attitude and introduce a different kind of analogue character to your sound.

And of course, the tubes: a dedicated selector gives you seven different NOS tube configurations, each individually modelled by our team. Switch between them and explore how each one changes the character, response and tonal personality of the compressor.

HERCHILD
MODEL 670

CONTROLS

Chooses the readout of the VU meter, either for adjusting the balance of the tubes or the gai reduction being applied.

METERING KNOB

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.

INPUT GAIN

Here you decide what kind of curve will be applied to the compression.

DC THRESHOLD

TIME CONST: Here you have 6 options for the attack and release timings giving you combinations for fast and slow timings.

	ATTACK	RELEASE
1	0.2 ms	0.3 seconds
2	0.2 ms	0.8 seconds
3	0.4 ms	2 seconds
4	0.4 ms	5 seconds
5	0.4 ms	2 seconds for individual peaks 10 seconds for multiple peaks
6	0.2 ms	0.3 seconds for individual peaks 10 seconds for multiple peaks 25 seconds for consistently high program level



VU METER

Indicates GAIN REDUCTION

MAKEUP SCREW

Controls the amount of output gain makeup applied.

BALANCE SCREW

Balance the circuit for optimum performance based on the particular set of tubes installed.

AC THRESHOLD

Determines when the compression begins. It s used to decide when and how much gain reduction takes place.

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.

AGC: Choose between the 4 different modes of operation for the HERCHILD

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 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.

ADVANCED CONTROLS

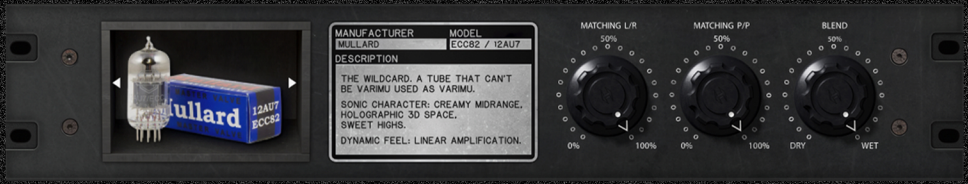
The push and pull stages of a classic vari-mu circuit are designed to work in perfect balance. But sometimes, a little imperfection is exactly what you're looking for.

Push-Pull Matching lets you explore the relationship between these two stages, moving from balanced operation towards a more asymmetrical response. Experiment with harmonic texture, add extra attitude and introduce a different kind of analogue character to your sound.

When deliberately introduced, the mismatch can create:

- **Asymmetrical distortion**: the positive and negative halves of the waveform are treated differently.
- **More harmonic colour**: the balance of generated harmonics changes, potentially adding a more pronounced character.
- **A change in perceived punch**: transient peaks can become less symmetrical, giving the sound a different sense of impact.
- **More attitude**: depending on the amount, the result can move from subtle analogue character to noticeably dirty and aggressive.

MATCHING P/P:



BLEND: Dial in the perfect amount of parallel compression, from fully dry to fully compressed.

TUBE SELECTOR

Browse between 7 different NOS tube configurations.

TUBE DESCRIPTION

A small description on the selected tube NOS configuration.

MATCHING L/R

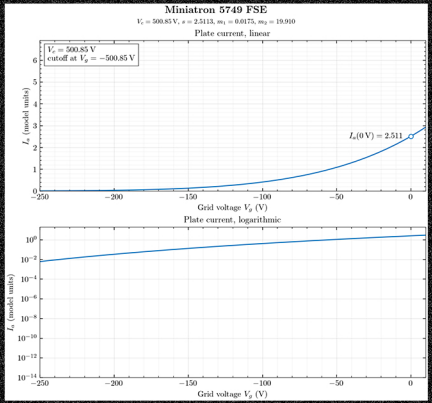
Keep both channels perfectly matched for a stable, consistent stereo image, or explore the creative possibilities of channel asymmetry. Introduce subtle differences in left and right compression behaviour to add movement, dimension and a more organic character to your stereo material.

When you move away from a matched condition, you can explore differences in their behaviour, potentially creating:

- **Stereo asymmetry**: one side responds differently from the other.
- **Image movement**: the stereo image can subtly shift as the signal dynamics change.
- **Different transient responses**: left and right elements can develop different degrees of punch and sustain.
- **More analogue character**: controlled channel differences can introduce a less perfectly symmetrical presentation.

THE NOS TUBES

Pristine Clarity





MANUFACTURER	MODEL
THOMSON	5749 FSE / 6BA6WB

DESCRIPTION

THE TUBES THAT POWER OUR HERCHILD 670 UNITS.

SONIC CHARACTER: DENSE, MUSCULAR, FORWARD MIDRANGE.

DYNAMIC FEEL: PRECISE, PUNCHY, HOLDS TRANSIENTS.

MINIATRON/THOMPSON 5749 FSE/ 6BA6WB

A specialized, ruggedized military-grade vacuum tube manufactured by the French electronics giant Thomson-CSF. It is a high-reliability version of the classic, industry-standard 6BA6 remote-cutoff RF/IF pentode.

A great VariMu Tube for analog compressors, and custom audio gear due to their exceptionally low noise floor and warm, stable analog signature.

* **Stiff, Punchy Dynamic Control**: It maintains excellent transient punch, making it highly favored for sources that need to stay forward in a mix (like aggressive vocals, acoustic guitars, or drum subgroups).

* **Dense, "Solid" Midrange**: Sonically, it is highly regarded for a robust and punchy midrange. Tubes from this family often utilize unique cylindrical grey-black anode plates that contribute to excellent heat dissipation and a stable, beefy tone.

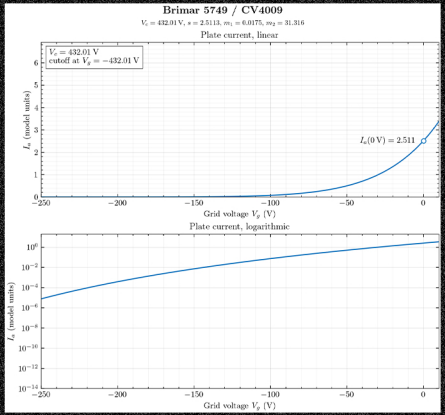
* **Best for** aggressive vocals, drums, rock guitars.

The tubes that power our HERCHILD 670 units.

THE NOS TUBES



Airy extended treble



BRIMAR CV4009/6BA6

The BRIMAR CV4009/6BA6 is a high-reliability, military-grade variable-mu radio frequency (RF) pentode vacuum tube first introduced around 1956 and manufactured in the United Kingdom by Brimar (part of Thorn-AEI) at their historic plant in Rochester, Kent.

* **Forgiving Saturation**: When pushed hard into gain reduction, the tube introduces pleasant second-order harmonic distortion. This saturation sounds like natural analog warmth rather than clipping.

* **Slower, Leveling Pumping**: It excels at leveling out macro-dynamics (like a vocal performance or an entire stereo mix) rather than catching ultra-fast, transient peaks like a modern VCA compressor.

* **Best for** acoustic music, jazz, master bus.

The tubes that power our HERCHILD 660 units.

THE NOS TUBES



MANUFACTURER	MODEL
GENERAL ELECTRIC	5749 / 6BA6W

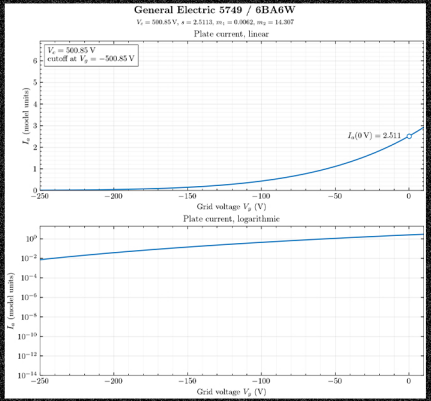
DESCRIPTION

THE QUINTESSENTIAL AMERICAN MILITARY-GRADE WORKHORSE.

SONIC CHARACTER: FAT, DARK, GRITTY AMERICAN WARMTH.

DYNAMIC FEEL: AGGRESSIVE CLAMPING, OBVIOUS VINTAGE SATURATION.

Warmer solid top end



GENERAL ELECTRIC 5749 / 6BA6W

Is the quintessential American military-grade workhorse. Manufactured in massive quantities throughout the 1950s, 60s, and 70s—frequently under contract for the US Joint Army-Navy (JAN) program—this tube was built for absolute reliability, physical toughness, and strict adherence to industrial tolerances.

* **Aggressive, Hard-Driving Compression**: Reacts aggressively to incoming signal peaks. When pushed hard into deep gain reduction, it clamps down firmly and introduces a thicker, fuzzier, and more obvious second-order harmonic saturation. It is a fantastic tube if you want to hear the compressor working and adding attitude to the track.

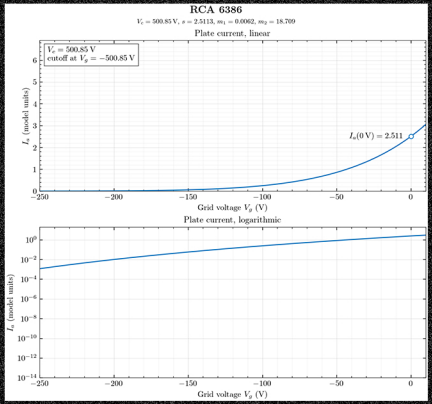
* **Blunt, Present Top End**: The top end is rolled off slightly, giving it a darker, warmer, and more "solid" character. This makes it excellent for taming harsh, brittle digital tracks or bright overhead microphones.

* **Best for** rock bass, gritty tracking, vintage vibe.

The tubes that power our HERCHILD 660 units.

THE NOS TUBES

The original Fairchild tube





MANUFACTURER	MODEL
RCA	6386 BLACK PLATE

DESCRIPTION

THE TUBES USED ON OTHER VARIMU COMPRESSORS SUCH AS THE 176 AND STA LEVEL.

SONIC CHARACTER: LUXURIOUS, 3D DEPTH, SILKY TOP-END SHEEN.

DYNAMIC FEEL: ULTRA-SMOOTH, FLUID, "INVISIBLE" LIQUID LEVELLING.

RCA BLACK PLATE 6386

The RCA 6386 Black Plate is the undisputed "holy grail" of variable-mu compressor tubes. Unlike the 6BA6/5749 variants discussed earlier, the 6386 is a dual-triode tube specifically engineered from the ground up for high-end remote-cutoff audio and RF applications.

The early "Black Plate" versions from RCA (featuring dark, carbonized plates and a classic D-getter) are legendary in the recording industry. This exact tube is the sonic backbone of the most famous vintage compressors in history, including the Fairchild 660/670 and the Gates STA-Level.

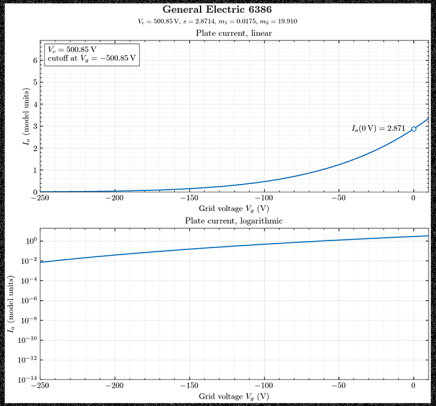
* **Effortless, Liquid Compression**: The remote-cutoff characteristics of the RCA 6386 are incredibly smooth. The tube features a uniquely long, linear grid-base curve, allowing it to handle massive amounts of gain reduction (up to 20–30dB in a well-designed circuit) without pumping, clicking, or distorting artifacts. The compression feels entirely "invisible" and fluid.

* **The Ultimate Studio "Glue"**: Sonically, the RCA Black Plate introduces a luxurious, 3D-like depth. It acts like a sonic varnish, smoothing out harsh transients while filling out the lower-mids with a rich, velvety warmth. It makes a full stereo mix or master buss sound cohesive and expensive.

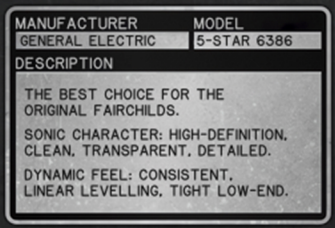
* **Best for** vocal tracking, acoustic music, main mix bus.

THE NOS TUBES

Immaculate stereo imaging







GENERAL ELECTRIC 5-STAR 6386

Considered the chief rival to the RCA Black Plate. The "5-Star" designation was GE's elite proprietary branding for their highest-quality, ultra-reliable tubes, specifically engineered for critical broadcast, aviation, and military electronics.

* **Tight, Focused Low End**: One of the standout features of the GE 5-Star is its transient response in the lower frequencies. Where other vintage tubes can make the bottom end feel a bit loose or "wooly," the GE 5-Star keeps bass guitars and kick drums tight, punchy, and perfectly defined.

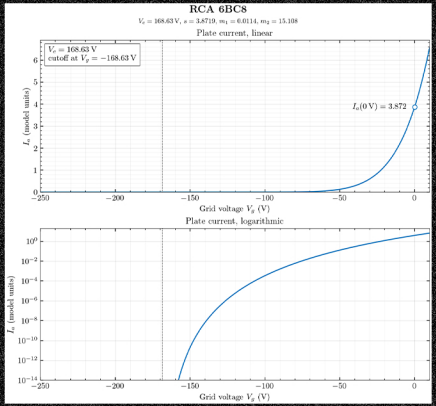
* **Exceptional Stereo Imaging and 3D Depth**: Because of the strict manufacturing tolerances of the 5-Star line, the internal matching between the two triode sections inside a single glass envelope is incredibly tight. In a stereo compressor (like a Fairchild or a Manley Variable Mu), this results in a wide, stable stereo image with zero center-image drifting during heavy compression.

* **Best for** stereo master bus, mastering, drum subs.

The best choice for the original Fairchilds.

THE NOS TUBES

The unexpected tube





MANUFACTURER: RCA
MODEL: 6BC8

DESCRIPTION

THE TUBES USED ON THE CLASSIC ALTEC 436.

SONIC CHARACTER: WEIGHTED LOW-MIDS, CLEAN ANALOG WEIGHT.

DYNAMIC FEEL: SNAPPY, FIRM, EXCELLENT PEAK-CATCHING.

RCA 6BC8

The RCA 6BC8 occupies a fascinating, highly strategic niche in the world of variable-mu compressors. Unlike the single pentodes (6BA6/5749) or the legendary dual-triodes (6386) engineered specifically for high-end audio and RF, the 6BC8 was originally introduced in the mid-1950s as a cheap, consumer-grade medium-mu, semi-remote cutoff dual triode designed for VHF television tuners and radio receivers.

Despite its humble, mass-produced TV origins, audio engineers discovered that its unique, semi-remote cutoff profile made it a spectacular, budget-friendly alternative for gain-reduction circuits.

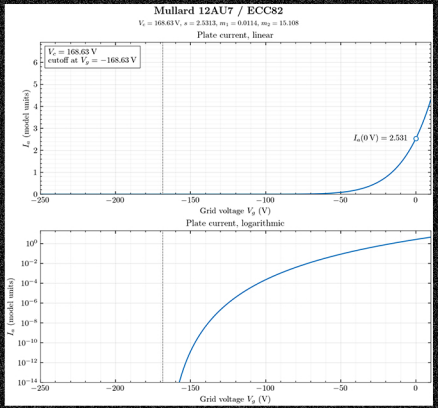
* **The Modern-Vintage Balance**: The RCA 6BC8 lands a beautiful punch right between the raw, vintage coloring of standard 6BA6s and the modern, high-definition speed of VCAs. It adds a distinct analog weight to the low-mids and general warmth without introducing the heavily dark, rolling off high frequencies of a GE 5749.

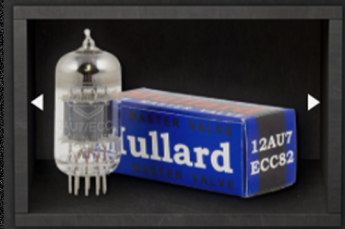
* **Firm, Snappy Clamping (The Semi-Remote Cutoff Feel)**: Because the 6BC8 is a semi-remote cutoff tube rather than a fully remote cutoff tube (like the 6386), its gain-reduction curve is slightly sharper. It doesn't yield the "invisible, pillowy glide" of the RCA 6386. Instead, it feels snappier, faster, and more tactile. It is exceptional at catching transients, giving it a punchy nature that excels on drums, acoustic guitar picking, and energetic vocal tracking.

* **Best for** upfront vocals, acoustic guitars, tracking.

THE NOS TUBES

The wildcard





MANUFACTURER: MULLARD
MODEL: ECC82 / 12AU7

DESCRIPTION

THE WILDCARD. A TUBE THAT CAN'T BE VARIMU USED AS VARIMU.

SONIC CHARACTER: CREAMY MIDRANGE, HOLOGRAPHIC 3D SPACE, SWEET HIGHS.

DYNAMIC FEEL: LINEAR AMPLIFICATION.

MULLARD ECC82/12AU7

And then there's the wildcard: the Mullard ECC82, or 12AU7. Not a traditional vari-mu tube, but we've given it a completely different role inside the Herchild Plugin.

Mullard tubes manufactured at the legendary Blackburn, England plant (famous for their "B" etched production codes) are considered the absolute pinnacle of warm, musical British audio engineering.

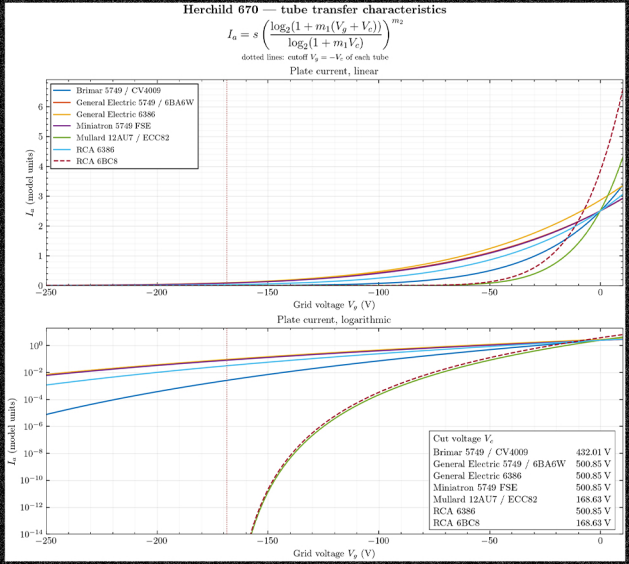
Sonically, this option takes things in a different direction. Expect a thicker, rounder presentation, with a beautifully textured midrange and a softer, more forgiving top end.

It gently rounds off sharper transients, giving instruments a more cohesive, almost weightier feel. The low end becomes fuller and more solid, while the upper frequencies take on a smoother, less aggressive character.

* **Best for** experimenting with an unexpected tube choice that opens up an entirely new sonic territory.

THE NOS TUBES

All tubes overlay



COMPATIBILITY

- Plugin formats: VST3, AU, AAX (64-bit).
- Platforms supported: Mac OS 12.0 and up (Both INTEL and Native Apple Silicon Compatibility), PC Windows 10 and 11.
- DAWs supported: All major DAWs, including Ableton Live, Pro Tools, Logic Pro, FL Studio, Cubase, Studio One, Bitwig, Reaper, Reason, etc.

INSTALLATION

A software download is made available in your Downloads section of your profile in https://users.heritageaudio.com right after your purchase. Select either Mac or PC depending on your system.

MAC: Double click on the PKG installer and follow the instructions.
PC/WINDOWS: Double click on the setup .exe file and follow the instructions.

ACTIVATION AND TRIAL PERIOD

If you have purchased your Heritage Audio Console Channels Collection through https://users.heritageaudio.com, an iLok licence will have been deposited on your iLok account as soon as you have finished your purchase. Your copy of the HERCHILD Plugin will be automatically activated upon opening the plugin for the first time while logged into your iLok account.

If you have purchased your HERCHILD Plugin through a third party vendor, an activation code will have been emailed to you once the purchase is completed. Enter the activation code provided when iLok ask for it the first time you open it.

If you have any problems activating it, please email us at users@heritageaudio.com.

If you're running your HERCHILD Plugin in trial mode, please note that the trial will be fully functional for 14 days after its first validation.

For further information regarding the functioning of the HERCHILD Plugin, please refer to the hardware version user manual at:

https://heritageaudio.com/wp-content/uploads/2022/09/HERCHILD-670_User-Manual_v2.pdf





HERCHILD

MODEL 670