

Thermionic Culture Freebird

The Freebird is a 3-channel (three/free — geddit?) valve EQ developed by request of Fat Bustard (Thermionic's summing mixer) customers who wanted to do a bit of extra tweaking. **GEORGE SHILLING** tucks in.

The unusual decision to provide three channels on the Freebird was the idea of designer Vic Keary's long-serving collaborator Nick Terry, who like Keary is an accomplished recording engineer. Frequently, an outboard stereo EQ will be strapped across the mix for some subtle addition of top and bottom, rarely repatched elsewhere. The extra channel allows for this scenario plus an extra EQ to put on (perhaps) the lead vocal or any other source. It's the kind of lateral thinking design philosophy that only a mildly eccentric British team could come up with.

The circuitry is based on Vic's Chiswick Reach console, which dates back to 1963, that in turn is based on a 1961 circuit that Keary designed to enhance Lansdowne's EMI console. There are two valves in each channel in the Freebird, a 5965 for EQ (as found in the Fat Bustard summing mixer) and a PC86 for output — one double triode, and one single triode, run in single-ended configuration for what Vic felt was the best balance of smoothness, clarity and harmonic distortion. According to the specifications, THD is a very low 0.02% at 1kHz, +4dBu.

The sturdy unit is almost cube-shaped. Peeking through the slats in the top, the valves can be seen glowing heartily and the warmth certainly felt. The unit is actually 4U high and half standard rack width, so with some extra metalwork available from Thermionic you can combine two units for a 6-channel monster (*Or Seabird. Ed*). The Nightingale recording channel is in a similar format, and further designs are under consideration, such as a 2U (half rack) single channel Vulture distortion unit. Some interesting mixing and matching possibilities are foreseeable in an almost 'Lunchbox' style modularity. An earlier prototype I tried came with the power supply as a separate box that tucked underneath the back. The two component parts are now firmly joined, which is far neater and less wieldy, but it seems that detachment would still be possible, with Keary hinting that, along with other similarly proportioned modes, this format might eventually facilitate incorporation into a Thermionic console.

The front panel follows the usual house style of gloss black with white legending — it's all pretty clear and self-explanatory, with controls well spaced. The audio XLR connectors are at the top of the rear, with the bolted-on power supply beneath providing an IEC socket with rocker switch and fuse holder, and a separate voltage selector.

True to form, the selection of controls provided by Keary is slightly unconventional to say the least. At the top of each channel is a gain knob with a range from -12dB to +5dB, with zero at the top, and a pleasantly indented Omeg pot which makes it feel as if it is switched, with about 20 'notches'. Remaining pots have closer clicks with about 30 positions. Moving down the panel, the first of these is labelled Top, with an accompanying toggle to select between



15kHz and 9kHz. The knob is legended from -5 to +5 with zero at the centre (top), which doesn't sound like an especially generous range. However, the actual scope is -16dB to +14dB. The 9kHz setting adds rich treble, and 15kHz is particularly silky; usually +2 on the legending is plenty for general enhancement, although full boost is useable and never nasty.

The velvetiness of the valve circuitry is immediately evident, and both settings are airy. This band and the Bass band (which we'll come to) are both typical Baxandall type curves. Below the Top knob is a Mid Cut knob. This is legended from 10 at fully anticlockwise to 0 fully clockwise. As the knob is turned left, a chunk of 700Hz is gradually removed (up to -21dB) taking away mid-range honk, much like the similar control on the Rooster, with the bell curve narrowing as cut is increased. Beside this is a Presence knob with five switched positions (and Off). These each provide a shelving boost with differing



corner frequencies, and something of a bell-shaped additional boost at that frequency.

Keary kindly provided some hand-drawn graphs to clarify the effects. L adds about 4dB at 400Hz, diminishing to 2dB from 3kHz upwards. M is similar but centres at around 1kHz, then the three H modes provide about 3, 5, or 8dB of boost at 3kHz on a very broad curve, only dropping by a dB or so at the uppermost frequencies. Vic explains the Presence as being originally developed to simulate his trick, when disc cutting in the 1960s, of switching a 15ips tape from CCIR to NAB for a bit of extra brightening. This is the first H setting. H+ takes this a stage further, and H++ adds enormous presence, but is still broad and useable.

The Bass band is another Baxandall curve, with useful frequencies of 100Hz or 50Hz on the toggle and a range of +/-11dB. Again, this is plenty, and the low end is hugely warm when boosted. At the bottom of the panel there are two further toggles. The first selects high pass filter settings. There are 25Hz and 65Hz settings, with a 12dB/octave filter that is 6dB down at the corner frequency. When the 0 position is selected, there still remains a filter in place at 4Hz to remove DC bumps, such is the impressively extended audio range at the low end. The switchable filters are at extremely

practical frequencies, and come in very useful when recording or processing certain sources. The lower frequency is especially valuable in the age of the DAW, where you miss the natural bass roll-off that tape provided. Finally at the bottom of each channel is a red-sheathed toggle for hard wire bypass. It is worth noting that while the inputs are balanced with transformers, the outputs are unbalanced — for sonic reasons. This is no problem in practice, although it did highlight a wiring fault on my patchbay!

For general programme sweetening, the broad, smooth shaping is perfect. The Bass band is big and booming if necessary, and evokes youthful memories of big old warm valve radiograms. The presence lift is almost always welcome in one of its various settings, with an appropriate position usually found among the differing choices. The Top boost is like lifting a blanket from the speakers; open, airy, never harsh.

For vocals and instruments, the same applies, and here the Mid Cut is often useful for taking out some honk, while the Presence and Top boost added the perfect sparkle to lift a dynamic mic male rock vocal recording. The Freebird (UK£1995 + VAT) seems to work well with just about anything, such is the broad yet musical and powerful character of the tone shaping. The lower frequency Presence boosts are great on guitars, for example. It's certainly not clinical, yet the colouration of the Freebird never seems undesirable, adding a lovely glowing enhancement. This is one succulent and tasty bird! ■

PROS Silky smooth yet juicy, uniquely characterful valve EQ; three channels of it!

CONS Unbalanced output; presence curves require some familiarisation; power switch on rear.

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