MM/MC hybrid tube phono preamp
Made by: European Audio Team, Slovak Republic
Supplied by: Henley Audio Ltd, UK
Telephone: 01235 511166
Web: www.euroaudioteam.com; www.henleyaudio.co.uk
Price: £1799

AUDIO FILE

hi-fi news OUTSTANDING PRODUCT

EAT E-Glo Petit B

While European Audio Team's (EAT) latest E-Glo tube/hybrid phono preamplifier looks similar to its predecessors, key circuit revisions deliver a glowing uplift in performance

Review: **Adam Smith** Lab: **Paul Miller**

For a manufacturer that began life making boutique audio valves, EAT has gone from strength to strength in the last 20 years or so. With a portfolio that now encompasses turntables, arms, cartridges, phono stages, amplifiers, accessories and those staple valves, the brand shows no sign of resting on its laurels. The latest additions are two new phono stages, the £1299 E-Glo Petit 2 and £1799 E-Glo Petit B, which replace the original E-Glo Petit [*HFN* Feb '19].

The E-Glo Petit 2 is similar to its predecessor, offering the same 2x12AX7 tube lineup with the same gain, resistance and capacitance options. It does, however, benefit from a few internal and external tweaks, including new and more stylish valve covers. The E-Glo Petit B seen here, however, is a fully balanced and largely discrete reimagining of the 'Petit 2. Its balanced (XLR) and single-ended (RCA) inputs are switched via the first of several top-panel toggles, turning the unit into a dual input device to which two turntables can be permanently connected.

TUBE UPGRADE

Furthermore, the 12AX7s are replaced by superior ECC83S tubes here. While these triodes are nominally direct equivalents, the 'S' signifies that the valve is a newer version featuring a shorter anode plate and a spiral heater filament. Reduced microphony is claimed, assisted by proprietary tube dampers – important in a high-gain application like a phono stage.

The E-Glo Petit B has multiple gain stages that mix discrete semiconductors and low-noise op-amps alongside the valves [see PM's boxout, p75]. Also carried over from the unit's predecessor are the gain and loading settings, which do not make any specific distinction between 'MM' and 'MC' operation although, typically, the balanced XLR input will only be suitable for MCs. Otherwise, gain values of 40, 45, 50, 55, 65 and 70dB can be applied to either input via a toggle switch, in conjunction with load impedances of 10, 18, 43, 75, 150, 300, 600 and 1200ohm set by one rotary control, or 30, 36, 42, 47, 53, 59, 65 and 75kohm set by the second.

This means that gain and loading can be mixed and matched as desired, catering for a very wide range of cartridge types. Some high-output MCs that are nominally designed for use into a conventional 47kohm MM load, actually work better when given MM levels of gain, but with MC loading. As a result, the E-Glo Petit B is likely to get even more out of its partnering pick-ups than many competitors.

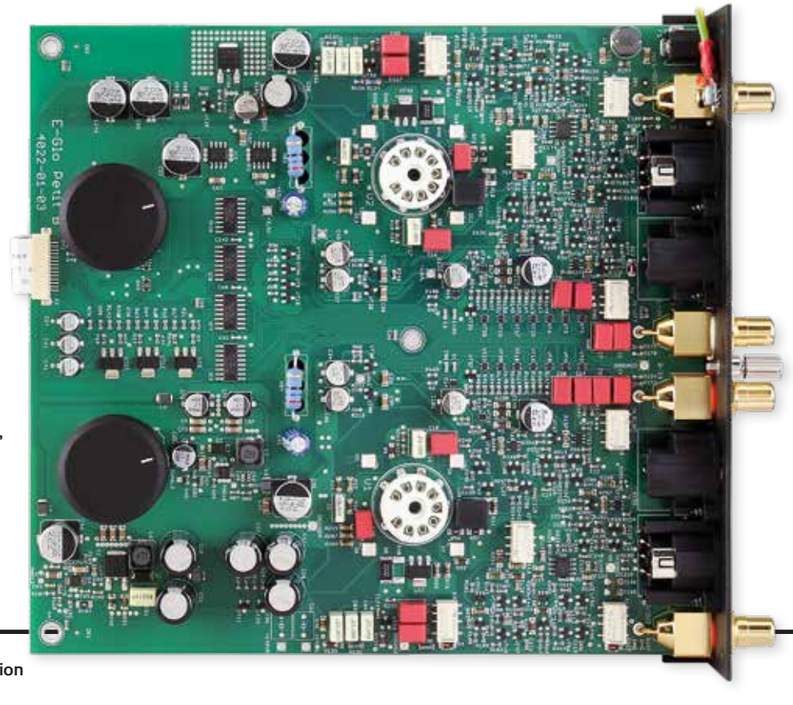
'Superior ECC83S triodes are used here, with tube dampers'

As well as the gain and impedance settings, MM load capacitances of 50pF, 150pF, 270pF, 370pF, 520pF, and 620pF can be selected via another toggle switch.

LET IT GLOW

Do remember that very few moving-magnet cartridges are suitable for balanced operation. Generally speaking, the internal coils of an MM are grounded on their right channel, undermining the concept of a balanced, isolated generator. A few special MMs designed for balanced operation are available, such as the Pro-Ject Pick-IT PRO Balanced [*HFN* Jan '25]. Any MM can be used into the E-Glo Petit 2's unbalanced RCA input.

Switch five brings a subsonic filter in and out of circuit and number six selects white, red, blue or green illumination of the two valves when moved in one direction, and three levels of LED brightness (including ⇨



RIGHT: Powered by an outboard 18V DC PSU, the E-Glo Petit B combines a discrete, low-noise J-FET front-end [far right] with a two-stage ECC83S triode-based RIAA preamp [centre]. Gain and loading options are switched by logic [left]

'To better project the LED lightshow, the Petit B's two tubes are set within protective glass cylinders'

LEFT: Compact and versatile, the E-Glo Petit B offers six gain and capacitance options, 16 load settings, and a subsonic filter, all addressed via rotaries and toggle switches on the top

off) when moved in the other. To better project the light show, the new metal valve covers seen on the E-Glo Petit 2 are replaced here by protective glass cylinders, but it does mean the Petit B's valves are uncapped and open to the elements. There's one small hiccup, too, as neither the top plate markings nor the instruction manual tell you which position is 'On' and which is 'Off' for the phono stage's subsonic filter. By way of hi-fi public service, we can reveal that the subsonic filter is 'Off' when the toggle is facing front!

EAT's original E-Glo Petit came with wooden side cheeks. These are now an optional extra – you can specify magnetically attached cheeks in Macassar or piano black for £189. Also, while we tested our E-Glo Petit B with the supplied 18V DC plug-top PSU, EAT offers its £1349 LPS 2 Linear Power Supply as a further optional upgrade.

SPELLBOUND BY SOUND

Having selected the appropriate LED illumination colour (green during daylight to match the 'EAT' logo; blue at night to match the front panel LEDs…), I connected the E-Glo Petit B's balanced output to my regular Yamaha C-5000 preamplifier [*HFN* Aug '20]. With an Ortofon 2M Black MM cartridge in the SME309 arm of a Michell Gyro SE turntable [*HFN* May '99], it took just about as long for me to fall under the 'Petit B's spell as it did Ken Kessler when he was bewitched by the original.

This phono stage is superb at capturing the character of the music, presenting it in a natural, unforced manner that simply feels correct. It avoids exaggerated HF sparkle, an overly prominent midrange, or thunderous bass in a bid to impress. Instead, it delivers a beautifully judged tonal balance across the frequency range. The result is that the performance itself takes centre stage.

Helping EAT's model stand out from similarly priced competition is the insight that it confers upon instruments. I've never subscribed to the theory that either valves or transistors offer a fundamentally better performance compared to each other – at least in a line-stage application – but there's no doubt that a good valve-based design can really score in the area of musical subtlety. The E-Glo Petit B showcased this wonderfully.

SCALE FORCE

The piano that's the major driving force behind Diana Krall on 'I Don't Know Enough About You' [*Love Scenes*; Universal 602547376985] was a masterclass in dynamics and realism. This is a difficult instrument to get 'right', but the E-Glo Petit B brought it forth with a palpable sense of texture and vivid tonality. There was authentic weight and impact behind each note.

The scale of this phono stage's performance is equally well-judged. The E-Glo Petit B doesn't render a cavernous acoustic to fill the listening space, but the stereo soundstage it creates is still pleasingly sizeable. Good width is accompanied by notable front-to-back depth, leading to an uncluttered, lifelike sound.

After its solo piano introduction, Gerry Rafferty's 'On A Night Like This', from the 1988 LP *North And South* [London Records LONLP55], slips into a bouncy, pop/pop rock rhythm with numerous percussive parts ⇨

LIGHTSHOW

The EAT E-Glo S [*HFN* Mar '17], the original EAT E-Glo Petit [*HFN* Feb '19] and the E-Glo 2 [*HFN* Feb '25] were either all-tube or tube/transistor hybrid designs but all, to a greater or lesser extent, had limited input overload margins. This is important, for while it's tempting to think of, say, an Ortofon 2M Red [*HFN* Oct '08] producing just 6mV (re. 1kHz/5cm/sec), it may deliver in excess of 50mV when navigating the boldest of grooves. All phono stages must have sufficient input headroom to accommodate these peak MM/MC signals, preventing overload and crushing distortion. And difficulties can arise here if tubes are employed in relatively low-voltage circuits.

Like the E-Glo Petit, the Petit B is still powered from an 18V wall-wart DC supply and offers the same +40dB, +45dB, +50dB, +55dB, +65dB and +70dB gain options. However, the Petit's input overload thresholds of 60mV, 55mV, 33mV, 16mV, 5.5mV and 3.9mV (for 1% THD), respectively, are increased to 122mV, 65mV, 38mV, 20mV, 6.5mV and 3.45mV in this new model. EAT has achieved this, in addition to balanced inputs and outputs, by increasing the 'transistor count' and overall internal gain. The input features three discrete low-noise op-amps, the RIAA EQ is fully active with a triode/transistor buffer, and the balanced output is a DC-coupled, J-FET op-amp-based stage. There's another boost to performance too – distortion is 10-100x lower than we saw in the Petit and significantly better buffered against changes in output level, and all without sacrificing the A-wtd S/N ratio. There's much more to the new Petit B than a tri-colour light show... PM

ABOVE: The Petit B boasts both single-ended (RCA) and balanced (XLR) inputs and outputs (the XLR input is suitable for MCs only). Note the ±18V DC PSU input socket

scattered among the performers. Through a phono stage offering a curtailed depth perspective this can end up being presented as merely 'backing percussion', but the 'Petit B shone a light on every element and its position within the performance.

During my listening sessions I alternated between the Ortofon MM and a Clearaudio MC Essence [*HFN* Aug '17], the latter loaded to 150ohm. The advantage of a single circuit serving all cartridge types, rather than dedicated MM and MC sections, became clear. The character of each cartridge was allowed to shine, as there was no feeling that two slightly different signal paths were adding their own colour to proceedings.

SMASH AND GRAB

The E-Glo Petit B therefore offers a subjectively consistent and largely neutral window onto the pick-up of your choice, and thanks to this I was able to enjoy every nuance of MT Jones' performance on 'Tough Love'. On this second track from the singer/songwriter's untitled 2024 EP [self-released, limited edition] his voice evokes the soul greats of the 1960s and 1970s. EAT's phono amp revelled in every nuance and rasp.

Next to this was a bassline that had weight a-plenty, but was also taut and finely controlled. Such low-end authority was present no matter what was playing through the E-Glo Petit B. The phono stage grabs rhythms and hangs onto them like a limpet, so provided your cartridge is secure in the groove you'll never miss a beat. The thumping pace of 'Go!', from Public Service Broadcasting's *The Race For Space* [Test Card Recordings TCRVA02], was handled with ease, conveying this track's upbeat freneticism with both confidence and control.

Even when things are slower and more considered, the E-Glo Petit B remains within its comfort zone. 'Opera House' by Cigarettes After Sex, in this instance from the *Killing Eve Season 2* soundtrack [Heavenly Recordings HVNLP175], is a great in-a-nutshell example of the band's output, being engrossing yet beautifully soft and mellow. Here the listening enjoyment came from the blend of tones, the delicacy of Greg Gonzalez's voice, the gentle percussion and a deep, rolling bassline that, with less sympathetic electronics, might have sounded somewhat sluggish. Instead, the presentation here was warm and languid but never less than gripping.

The E-Glo Petit B revealed the musical message offered up by this El Paso dream-pop band, ensuring the whole track demanded my attention, even while part of me just wanted to slide down the sofa and wallow in its aural massage. EAT's E-Glo Petit B may offer a literal RGB light show, but its approach to making music is more nuanced. It draws you gently into the music's true colour, almost without you realising.

HI-FI NEWS VERDICT

This new, balanced version of EAT's fine E-Glo Petit phono stage is a very impressive performer. Based around a refined and thoughtfully engineered circuit that's flexible enough to extract the best from virtually any cartridge, this small unit has a big sonic footprint. Above all, and beyond the tri-colour light show and technical prowess, the E-Glo Petit B is both a pleasure to use and a captivating listen.

Sound Quality: 88%

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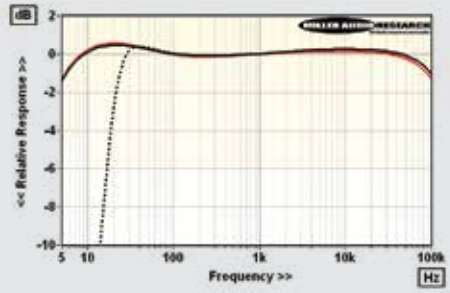
LAB REPORT

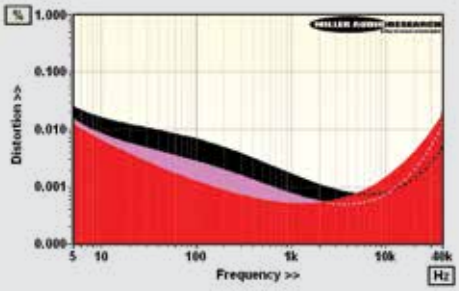
EAT E-GLO PETIT B

Tested via the E-Glo Petit B's RCA in/XLR out, the gain achieved is typically +5dB higher than indicated, specifically +45dB, +50dB, +55dB, +61dB, +71dB and +76dB for the 40, 45, 50, 55, 65 and 70dB settings, respectively. For a 0dBV (1V) output this equates to MM/MC sensitivities of 5.69mV for the 40dB setting, ideal for MMs with a healthy output like Ortofon's M series [*HFN* Mar '11], down to 158µV for the 70dB setting, suited to very low output MCs like the Kensington Audio C-600 [*HFN* Dec '25]. Allied to this impressive gain range are comprehensive input loading options ranging from 10ohm to 1.2kohm suited to most MCs, and 30-70kohm (with 50-620pF) if you fancy fine-tuning the load 'seen' by an MM pick-up. However, because the E-Glo Petit B has no formal MM/MC inputs – the user selects the gain and input loading required, regardless of cartridge type – the A-wtd S/N ratio jumps between 81.1-84.4dB for a 5mV input (MM) and a lower 64.2-66.1dB for a 500µV input (MC).

Input overload margins are very generous provided the first three gain settings (40-50dB) are treated as MM and the higher three (55-70dB) are used with MCs. In this case all settings offer in excess of 20dB input headroom – sufficient to accommodate the wildest of grooves. Distortion is very low and tolerant of a wide output range – figures of 0.0005-0.0055% (re. 0dBV, 20Hz-20kHz) being illustrative [see Graph 2]. The Petit B has a gentle +0.5dB bass boost between 10-100Hz [see Graph 1] but this is rolled away below 20Hz (–3dB) to 10Hz/–17dB with the subsonic filter engaged (toggle pushed back). The latter will be the 'safe' option if you have large, reflex-loaded loudspeakers placed anywhere near your turntable! **PM**



ABOVE: RIAA-corrected frequency response (black, left; red; right; subsonic filter, dashed)



ABOVE: Distortion versus extended frequency (from 5Hz-40kHz, +40dB gain; 500mV output, black; 1000mV output, pink; 2000mV output, red)

HI-FI NEWS SPECIFICATIONS

Input loading	10-1200ohm (30k-75kohm)/50-620pF
Input sensitivity (re. 0dBV, MM/MC)	5.7, 3.1, 1.7mV / 925, 293, 158µV
Input overload (re. 1% THD)	122mV, 65, 38, 20, 6.5, 3.45mV
Max. output (re. 1% THD) / **Imp.**	21.0V / 96ohm
A-wtd S/N ratio (re. 0dBV, MM/MC)	81.1-84.4dB / 64.2-66.1dB
Freq. resp. (20Hz-20kHz/100kHz)	+0.46dB to +0.2dB / –1.1dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0005-0.0055%
Power consumption	13W
Dimensions (WHD) / **Weight**	186x87x262mm / 2.7kg