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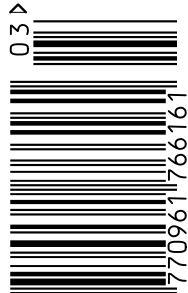


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VOL. 19 No. 1



# Golden EARS

**Noel Keywood basks in the glow of EAR Yoshino's new 868 balanced input preamplifier, and the updated 890 matching power amplifier...**

A modern preamp such as the new EAR Yoshino 868 is an interesting partner not only for EAR power amplifiers like the 890 I used, but also for solid-state power amplifiers, forming a hybrid partnership, with attractions for those not convinced about using a valve power amplifier, perhaps simply because of the heat it produces. A classic arrangement of a preamp like the 868 on display, feeding a power amp tucked away on the floor or a low shelf, makes a lot of sense.

This physical arrangement of items utilises the ability of the 868 to drive balanced signal lines, and also its superb sense of time domain precision and deep clarity to inject much needed zest to the otherwise flattened perspectives and dynamic contrasts that beset solid-state. The bottom line about this preamp I found is that it is, relatively speaking, both an active and intrusive partner.

Don't get me wrong, by 'intrusive' I don't mean it in a bad way, so much as the fact that the 868 is a thoroughly modern thermionic product, quite extraordinarily vivid and dominant. It makes its presence known in no uncertain manner, unlike a passive preamp such as

the Creek OBH-22. The 868 costs £3,552 with valve (tube) phono stage. It has remote control but it is an unattractive and out of style general purpose TV remote from Italy – disappointing at the price. It controls the Alps motorised pot only and cannot select inputs. That's the 868's main drawback however, and for some lack of a headphone output; all the rest is good news for what I found to be a cracking product.

Domestic hi-fi is steadily moving toward using balanced connections and the 868 reflects this. It has one pair of balanced line inputs through XLR sockets, and also two pairs of balanced line outputs supplementing two pairs of standard phono-socket unbalanced outputs; twin outputs allow bi-amping. The balanced XLR socket inputs are for CD players with balanced outputs; the XLR outputs are for connection to a power amplifier with balanced XLR inputs. I used the fine Stello DA100 Signature DAC with balanced outputs and EAR Yoshino 890 power amplifier with balanced inputs to accompany the 868.

Those of you interested in the finer details of such matters may be interested to know that the 868 is a conventional unbalanced design fitted with input and output transformers

to interface with balanced cables, in order to reject common mode interference pickup within the cables. So this is not a fully balanced preamplifier and nor is the 890 power amplifier. Whether this matters or not stirs debate. My view is that tangible benefits do seem to arise from using balanced connections; this doesn't mean that further improvement may not arise from all balanced internal circuitry.

## SOUND QUALITY

Generalising, balanced connection seems to result in very well defined leading and trailing edges, making music start and stop sharply, bringing to it a brisk sense of pace and timing. Often it seems almost over-sharp, razor sharp in the time domain, and as I sat and puzzled at the peculiarly tight grip on pace and progression of the 868 I realised that I seemed to be hearing yet again the characteristic signature of balanced cabling, a little more obvious than usual through thermionic amplification perhaps. I should point out that this was with carefully constructed Chord balanced cables between DAC and the 868 preamp, and from preamp to the 890 power amp. As the use of balanced connection spreads I find my

increasing use of it is acclimatising me to its characteristic signature.

Once, the fast edge of transients seemed a little too vivid to be real and a little contrived, like the extra sense of speed and insight that comes from simple treble lift. But whereas lifting say, the treble output of a metal dome tweeter to add such a sound works in the short term, it is tiring in the long term - a sure sign of contrivance. Not so with balanced connections and the 868; it was just lightning bolt fast, even at times when it had no right to be so, for example with old recordings!

A few years ago I bought an old classic, The Who's 'My Generation' LP, in newly mastered and minted 180gm vinyl - and have struggled to get it sounding right ever since. The 868 made it sound very right; on this alone it strode over a lot that went - unsuccessfully - before it. Roger Daltrey had sounded like he was singing through a baked bean tin and the rest of the band sounded flat and distant. The 868 changed this, getting right into the performance, bringing Daltrey to life by giving his vocals a raw presence that perfectly matched the Who's cutting lyrics in 'The Good's Gone'. Pete Townsend's guitar cut out of the mix and the whole took on the sort of challenging presence that was The Who. Gone was the flat sound, replaced by a powerfully dynamic and forcefully paced delivery that held me captive, as The Who have done in the past. The 868 has tremendous midband insight that gets out all the finest details in a mix, placed in a coherent delivery that come over as all-of-a-piece. Daltrey was placed hard centre, Keith Moon's drumming was tight and fast behind him, both strongly embodied and dynamically vivid. It was lovely to hear, with a clean cut, freshly minted sound that had the force of a good modern recording, even though 'My Generation' was recorded in 1965.

Fantastic that the 868 could bring 'My Generation' to life so capably, bringing it into contention with the sort of sound I get consistently from 45rpm 12in singles like Goldfrapp's 'Ride a White Horse'. They weren't the same; 12in 45s always kick harder than LPs, especially when they are recorded forty years later. Needless to say, this single punched out powerfully, that trademark synth ripping through the air in the room, the pulsing bass line having visceral power; I was impressed. The 890 power amp kept a tight grip on the Spondors, giving bass both strength and fluidity and balanced connections helped keep the 868/890 sounding tightly timed.

I was of course using the 868's

phono stage here, into which was connected an Ortofon 2M Black cartridge in SME 2.10 arm on a Pioneer PLC-590 turntable. The 868's phono stage isn't like the old 834P, which had somewhat inflated bass under measurement - audible in use. This stage has a little less gain at low frequencies and in consequence it comes across as dry, yet fast and punchy, a bit like our favoured Eastern Electric Minimax I found.

Switching over to CD courtesy of a Stello DA-100 DAC perhaps surprisingly gave a very similar presentation to LP. The 868 has extraordinary midband insight, lifting

"this valve preamp seemingly has magical properties that all but had me puzzled..."

detail right out of any recording I gave it. The 890 power amplifier is grippy and fast, its sense of speed coming both from the use of balanced connection and the KT90s I suspect, a muscular sounding valve, if a little less finessed across the midband than the KT88.

In addition to the balanced XLR input, there are normal phono socket inputs (unbalanced) marked CD, Tuner, AV and Aux, all switched from the front panel rotary selector. There is also a Tape Monitor input with its own front panel switching that allows an off-tape signal from a monitor head to be compared with direct signal being recorded.

Our review sample came with an optional all-valve phono stage. This has a rear panel push button switch for selection of Moving Magnet (MM) or Moving Coil (MC) cartridge compatibility. With MC selected the signal is stepped up through a pair of input transformers. The handbook quotes a 40 Ohm input impedance for MC and doesn't mention there are adjustable options. The circuit diagram shows an optional 4 Ohm primary tap and when I looked inside the 868 I found a 12 Ohm tap as well! Lower impedances better match very low output cartridges, damping the generator to reduce high frequency ringing. There's no need for the extra gain however, because plenty enough

is available from the 40 Ohm tap. Measurement showed very low levels of hiss have been achieved, as low as it gets in fact, and there's huge gain so even the weakest output MC cartridges - often the very high quality esoteric ones - will work with the 868. EAR use an unusual grounded grid input arrangement with an input FET in the cathode of the first valve, making this is a hybrid phono stage. The 868 can be had in L form without phono stage for £2,667.

It strikes me that apart from doing the obvious, that is driving a valve power amp like the 890, the 868 is an interesting integrated preamp

solution for driving a solid-state power amplifier too, where it will inject its own character to produce an interesting hybrid combination able to bring life to all sources, including LP. Hybrid setups like this don't lack power of course, are compact and produce little heat, and have a longer life as power valve replacement isn't required. With all necessary bits onboard the 868 is the only item needed.

Like all EAR products the 868 is strongly built. It has a thick, chrome plated front panel, and steel cover over a steel chassis. With specially turned, gold plated knobs this is a product of its local



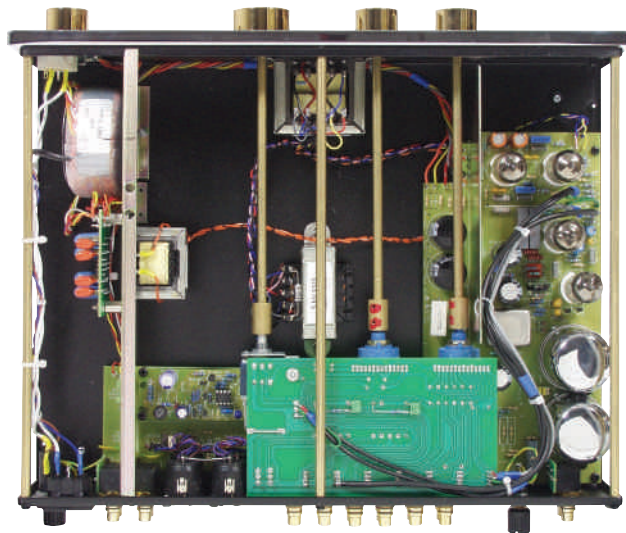
environment, not one built from parts sourced around the world. The power switch has an illuminated escutcheon, a neat touch. All controls have a solid feel to them and, being weighty (10kgs), the 868 sits firmly where it is put.

The 890 power amplifier uses paralleled pairs of KT90 output valves to achieve its claimed 70 Watts output

[see MEASURED PERFORMANCE]. The output transformer secondaries of our amplifier were wound to match 8 Ohm and 4 Ohm loudspeakers (our handbook circuit showed 8 and 16 Ohm windings).

An input switch optionally parallels the channels to facilitate bi-amping and, if the 8 Ohm outputs are connected together with a piece of wire, Tim de Paravicini told us, they will feed over 100 Watts into a 4 Ohm loudspeaker. The 890 becomes a monoblock in this mode. Unbalanced phono and balanced XL inputs through transformers are also selectable.

KT90 power valves are heavy duty versions of the KT88, and a fairly recent development. They aren't quite as smooth and refined as the KT88, having a harder edge to their sound in my experience, yet at the same time they are gutsy and provide plenty



**Twin MC input transformers can be seen at bottom right, and valves above. A slide switch selects MC input impedance, not mentioned in the handbook!**

of grunt in the right circumstances. In the 890 distortion levels are low even at low frequencies, allowing this amplifier to swing oodles of clean bass from '90s. With feedback giving a fairly low output impedance as valves go, and a damping factor of 12, not so far from that of a Naim at 15, the 890 sounds tight, punchy and fast. It's a real power house, yet has a dry,

controlled bass and a well lit upper midband in usual KT90 style, making for a cuttngly fast delivery, but with the very strongly resolved dynamic contrasts valves can provide. This is another valve power amplifier that makes solid-state sound rather flat and lifeless by way of contrast – and it matches the 868 of course.

**CONCLUSION**

The new 868 is a great preamp package. With a lively sense of clarity and the usual extra sense of spaciousness to the sound valves bring, it injects life into any system. I'd suggest anyone considering using a pre/power combo tries the 868 within it, especially if they intend to run LP as well as silver disc. It's always a shock to hear just how good LP sounds when run through a front end so well wrought, and CD too. I was immensely impressed by the way it got the best from both sources.

**MEASURED PERFORMANCE**

The new 868 preamplifier offers a gain of x4 via its line inputs (CD, Tuner, etc) and outputs, and also phono in to XLR out, and XLR in to out, so its gain is the same whatever input and output combo is used, unlike many preamps with paralleled ins and outs. Distortion was low, as was noise.

The phono input has a very high gain of x1119 with MM, equivalent to x284 in addition to the x4 of the line inputs. With MC selected this was boosted ten times to x11,110 overall, more than enough for the weakest output MC cartridges. Gain can be trimmed back using the 890 power amplifier input gain trimmers for those who don't like a low volume control setting. With MM and MC overload was high at 60mV/6mV and input noise very low at 0.25uV/0.03uV. Equalisation was identical for MM and MC, with a slight +0.3dB lift across the upper midband.

The EAR890 power amplifier develops 70 Watts for 1% distortion limit, but clips at 66 Watts. The 4 Ohm tap is well coupled, so develops nearly the same amount, 64 Watts against 66 Watts using visual clip on a 'scope as the reference point. The amplifier's claimed 70 Watts is a bit optimistic; most amplifiers are conservatively rated well below clip and in most books this would be a 60 Watt

amplifier. However, subjectively the difference isn't great.

Distortion levels were very low, down to an extraordinarily low 0.006% in the midband. Even bass distortion was low at 0.3% close to full output at 40Hz, a great result. Feedback is used and, with a damping factor of around 12 - high for a valve amp - the 890 has nearly the same output impedance as a Naim!

Input sensitivity measured 1V maximum via both unbalanced phono inputs and balanced XLR inputs and distortion and noise values were similar through both inputs.

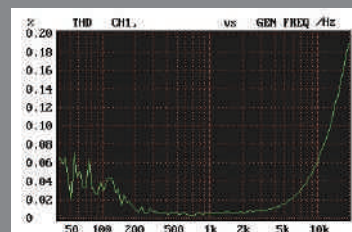
The 890/868 combination works well, offering good amounts of power from an amplifier that will exert good loudspeaker control. The preamp has a lot of options and is well thought through. NK

<b>EAR 868 PREAMP</b>	
Frequency response	1.2Hz-81kHz
Separation	72dB
Noise	-102dB
Distortion	0.05%
Gain / overload	x4 / 8V out

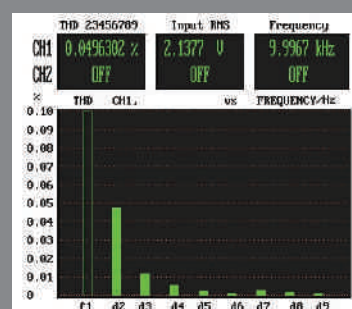
<b>Disc (MM/MC)</b>	
Frequency response	12Hz-58kHz
Separation	57/55dB
Noise (e.i.n.)	0.25/0.03uV
Distortion	0.06%
Gain / overload	x1119 /x11110

Overload	60/6mV
<b>890 POWER AMP</b>	
Power	70watts
Frequency response	4Hz-46kHz
Separation	76dB
Noise	-93dB
Distortion	0.05%
Sensitivity	1V
Damping factor	12

**DISTORTION SWEEP**



**DISTORTION SPECTRUM**



**VERDICT** Super fast and vividly clean sounding valve preamplifier with fine phono stage. Superb...

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 - superb phono stage  
 - balanced operation

**AGAINST**  
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