

# Thai Silk

**An unassuming 60W power amplifier from Thailand surprises Noel Keywood, with both its novelty and its sound...**



**N**ow that valves have become all but a mainstream occupation for small audio companies around the world - especially outside the UK - there are endless variants of design, most of which seem to arrive in our office sooner rather than later! This amplifier, the Silk Glowmaster KT-88, is up amongst the good and the great in my view. It's a fascinating design with more going for it than most - and a king's ransom isn't required before ownership is yours.

Briefly this is a 60 watt stereo power amplifier from Bangkok, Thailand, priced at £1,699. Thailand isn't a place associated with valve amplifiers, nor hi-fi if it comes to that, at least in the Western mind. But the whole Far East region is awash with consumer electronics and the Glowmaster shows an understanding of underlying basics that reflects this, giving me hope that it could just offer a little more than the usual thermionic fare we see so much of nowadays. Happily, it was hope fulfilled!

The Glowmaster is big. It stands 230mm high at the front panel, 320mm wide and a substantial 470mm deep. The weight is 28.5kgs, or 63lbs, which is a two man lift for most of us. Most of it is taken up by a huge transformer set, comprising two output transformers and one mains transformer, flanked by 5H smoothing chokes. The valve complement is three Russian 6N1P double triodes per channel, followed by KT88 Kinkless Tetrodes in push-pull for each channel.

This is a reasonably conventional line up, common nowadays because

the KT88 is a superb 'modern' audio output valve - rugged, with a great sound and not overly expensive at around £22 apiece. You typically get 40 watts from a pair, but here is where the Glowmaster differs from the herd: it squeezes 65W from KT88s by using what is known as 'fixed bias'.

## IN THE BALANCE

What I found really interesting is that the Glowmaster is a true all-balanced amplifier, from input to output. There are very few of these around at present, solid-state or valve, but valves lend themselves to the topology and it is an interesting one - one with a future I believe.

In a nutshell, balanced amplifiers cancel certain forms of distortion and noise. The same property exists in balanced connecting cables and it's an idea that works, generally resulting in a more concise sound, free from a slight sense of fuzz and vagueness that, in direct comparison, colours unbalanced connections.

The same benefits are there to be had in amplifiers, but at present amplifiers are unbalanced - except this one. It has a set of balanced inputs, via XLR sockets as usual, and the loudspeaker outputs (i.e. transformer secondary winding) are balanced around ground too, measurement showed. As balanced preamplifiers are as rare as hens teeth, Silk also fit a pair of standard unbalanced phono inputs.

Silk make a variety of balanced preamplifiers but none were available in the UK at the time of this review, so I used an unbalanced, tweaked World Audio Design KLPI. The Silk

preamplifiers are pricey, at £1,600 - £2,100 I was told, but this is less expensive than the fabulous Melody Pure Black 101D, price £3,295, I reviewed in our March 2007 issue.

There's no special difficulty in producing an all-balanced valve preamp so less expensive designs may become available in future. However, there is currently no great demand either, because few power amplifiers or sources are balanced. Some high end Marantz CD players have balanced outputs, and the Aqvox 2Ci phono stage is all-balanced. If you are interested in the idea of running LP balanced, go to <http://www.aqvox.de/phono.html> for a discussion on the subject.

I converted my SME312 some time ago and look forward to running an all-balanced system from input to output, because the more I hear of balanced designs - including this one - the more I believe in the principle. But whatever preamp is used, it needs to have gain because input sensitivity of the Glowmaster KT-88 is low.

There are no front panel controls. The power switch is at rear, which is inconvenient. Switch on is unremarkable - no thumps or thrums - and the display, which shows the bias current for each valve, lights up blue. Our amplifier came direct from Thailand and each valve was matched to its base with removable

sticky labels. After plugging them in, the amplifier was left to run for 30 minutes and then bias adjusted, using a small screwdriver. Silk recommend 50mA per valve. Fixed bias amplifiers, where the bias must be adjusted (!), are usually adjusted initially and every few months using a multimeter, which is inconvenient. With this amplifier you can at least see quickly and easily whether bias adjustment is necessary. If it is, then a slow twiddle with a small screwdriver is all that is needed to restore balance in the output stage.

Externally, the Glowmaster KT-88 is a fairly undistinguished design, by Shanling standards anyway. Internally, it is very well built though, part hard wired, part circuit board, all components being of high quality. It did its job quietly and unobtrusively I found. However, the job it does is pretty impressive.

**SOUND QUALITY**

Initially I wondered where everything had gone with this amplifier. Half of the musicians playing in Santana's 'Yaleo' had walked off for a tea break, or so it seemed. Worse, not only had the performance suddenly lost musicians, there was little apparent treble; the sound was dark, seemingly silent at high frequencies. Having measured the amplifier, I knew it wasn't errant, so I sat back to take in more. And what a fascinating experience it was...

Suddenly, it struck me that I knew exactly what was going on, but I had just never heard the effect in an amplifier before - especially a valve amplifier where everything is much more apparent than a solid-state design. 'Yaleo' as a performance had been cleaned up dramatically, becoming starkly clear, superbly concise, the muddle that passed as complexity expunged. I must admit to feeling a little sense of chagrin here; I should have known better, but then whilst I use a valve amplifier at home by choice, I know only how conventional ones sound and the sort of differences to expect between them. This broke out of the mould; it is a world apart - and mightily impressive.

There was no lack of treble. Strummed guitar at the start of Santana's 'Put Your Lights On' demonstrated this. The guitar's strings had real bite to them, with a gloriously strong harmonic spread. The amplifier simply lacked the fussy background detail that invariably garnishes this track.

Does it lack insight, I asked myself? No, the opposite. I could hear further into Jackie Leven singing 'Boy Trapped In A Man' than I am used to, his delivery to the microphone, the slight echo from the studio and some artificial reverberation. The Glowmaster KT-88 teased it all out, erasing muddle and mess to reveal a stark but full-bodied sound that was gloriously large.

Images on the sound stage were sharply defined from far left to full right, making the start of Steve Earle's 'Waiting On You' a gripping experience as a firmly anchored, powerful kick drum stabbed out in front of me. This was helped by the power and sense of control of the Glowmaster's bass. Here is a valve amplifier without soft bass. It has the dynamic contrast valves are known for, but it exploits it with grip, downward into the bass and low bass regions. Our in-house Spendor S8es were persuaded to do things they had rarely done before on the end of valves.

It wasn't just Rock that fared well. Spinning Tchaikovsky's Symphony No 6 on CD revealed the Royal Philharmonic Orchestra in a wide sweep between the loudspeakers, with horns, strings, woodwind and timpani sounding full bodied and rich in timbre, but clearly positioned in front of me. The Glowmaster KT-88 capitalises on the natural ability of valves to convey the timbral properties of instruments, whilst at the same time uniquely cleaning the muddle from between them, as



it were, to light them smoothly and clearly in space of their own. It was a delight with complex Classical works, as much as it was with Rock.

**CONCLUSION**

Considering its broad spread of ability, and its uniquely dramatic sound, the Glowmaster KT-88 is quite a package - especially at the price. Whatever way you look at it, as it stands or as the basis of an all-balanced future system, this is a fine amplifier. It has all the punch and power of solid-state, with the superb naturalness of valves. A compelling combination if ever there was one.

**VERDICT**   
Dramatic clarity and superb dynamics make this a class-leading star.

**SILK GLOWMASTER KT-88** £1,699  
Acoustic Perfection  
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www.sacthailand.com

**FOR**  
- unrivalled clarity  
- expressive bass  
- wonderful imaging

**AGAINST**  
- large size  
- needs regular adjustment  
- rear power switch

**MEASURED PERFORMANCE**

The Glowmaster KT-88 has one output winding, suitable for 4-16 Ohm loudspeakers, the manufacturers Silk say. A single, untapped secondary winding is more tightly coupled than a 4 Ohm tap of an 8 Ohm winding, where half the copper goes unused; World Design transformers use this principle, being optimised for 6 Ohms. Matching to the widely varying impedance of real loudspeakers is better. The Glowmaster KT-88 delivered 66W into 8 Ohms and 64W into 4 Ohms before clipping (overload), into our balanced loads/test equipment.

The amplifier isn't a low distortion design, as triangulation (3rd harmonic) creeps in progressively as level increases, the 1% limit being 20 W (8 or 4 Ohms). This isn't due to the transformer cores, as results were identical at 40Hz to those at 1kHz and 10kHz. Distortion was predominantly third harmonic, with no crossover or higher order components at all. The distortion pattern was stable with level and frequency, a good sign. Silk's quoted distortion figures were not met, except at 1W (0.03%), but this isn't especially consequential, due to the stable pattern, absence of high order components and low bass distortion. Results were identical balanced and unbalanced.

Silk claim their balanced transformers are wideband and they proved extraordinary, running cleanly from 4Hz all the way up to an amazing 110kHz (-1dB). Sensitivity was low at 2V and damping factor a normal 3.6.

The Glowmaster KT-88 turns in varying results. It measures well enough though, taking into account dynamic behaviour. NK

Power	65 watts
Frequency response	4Hz-110kHz
Separation	82dB
Noise	-88dB
Distortion	0.12%
Sensitivity	2V
Damping factor	3.6

**DISTORTION**

