



Tubular Sells

Devoted to all things analogue, VTL has released a valve-encrusted integrated amplifier. Paul Rigby reviews the VTL IT-85.

US-based company Vacuum Tube Logic has been known as a power amp manufacturer. For many years, users in the 'States would buy another company's pre-amp and pair it with a VTL power amp. This was slightly



perturbing to Luke Manley, owner of the company and manager of an experienced team of engineers who see valves as the path to aural utopia and who produce excellent pre-amps and phono amps of their own. That is why the IT-85 integrated amplifier reviewed here is just a bit different from other

amplifiers of its class, "It's not just an amplifier with a volume on the front," said Manley. "We have two stand-alone models called the ST-85 (ST for stereo, a Stereo Power amplifier) and the TL-2.5 which is a blind line stage (TL for Two Line stage). We decided to combine the two into one chassis. That's why you see so many valves in the front end of the IT-85. The first two are our 12AU7s (ECC82) which are standard line stage gain valves, the second two are 12AT7s (ECC81). Once you get into those, that's similar to the valve complement of the ST-85."

Mixing the pre-amp and the power amp stages and putting them into a single box allowed VTL to have a full pre-amp with a Pre Out to possibly drive a sub-woofer or another power amp. "The emphasis is on reliability. We bias the valves

low so that they give long life, half of the value used by our competitors, at 30mA. We are after a modern and dynamic sound that I feel that only valves can provide."

On the outside of the chassis, the selector switch is a standard rotary model, "...but if you could take off the bottom cover of the amp, you would see that it runs all the way to the back board so you don't have to bring signal to the front panel, this lowers noise," said Manley.

The headphone jack sits next to the switch for headphones or speakers, a high current switch that connects to the output stage. The volume control is a motorised, 27mm pot, "a higher quality than the typical 16mm pot."

The Processor switch, in the up position, selects the direct amp input, turning the IT-85 into a power amp.,

by-passing the pre-amp section. The next button is Mute selector.

The safety cage can be removed to replace valves or bias the amp., because this is a Fixed Bias design - meaning bias needs adjustment every few months.

Around the back, the speaker binding posts are situated at an angle: it saves a bit of space and doesn't bend the cable at such a drastic angle when spade connectors are used. There are eight pairs of phono sockets including a Tape, Amp In and Pre-Out. There are no balanced sockets here, it would have taken up more space and would have cost a lot more.

Inside? "It's a classic circuit. The ECC82 line stage is cascaded. This means that the first stage is driven which then drives the second stage, in sequence. The first half of the first 12AU7 (ECC81) is a buffer, the second half of that is the input stage for the power amp. The second ECC81 is the phase splitter for the push/pull output stage, then it's a push/pull output stage (one EL34) for each phase. It's a pretty simple circuit path, plus the output transformer."

Feedback is handled in a typically VTL manner, "There are two loops,



you great measurements and great speaker or amplifier control but the music becomes disjointed and boring. It's no longer engaging."

Known for its meaty bass, the IT-85, spanning 400x300x180mm and weighing in at 27kg, prevents core saturation or soft bass problems by special attention to the transformer, "Some of our competitors have designed saturation into the output transformer so that it provides tone

rectifiers or regulators. The purists would say that you have to go 'all valve' but I don't think that valves are ideally suited to power supplies, they are not very linear current devices, they wear out and they can collapse. If anything, this design lowers distortion because you have a stiffer power supply and better regulation."

SOUND QUALITY

Slipping Skunk Anansie's 'Hedonism' into my Densen B-475 CD player, the bass was different when compared to my reference Icon MB845 monoblocks. The VTL provided a slightly dryer tone. There was just as much thump with possibly a touch less mass that gave the VTL a little more focus. Although the Icon is known for its powerful and forceful bass, the VTL produced a more involving sound that dug down into the subtle low frequency range.

What stood out like a beacon, however, was the raw emotion from lead singer, Skin, plus the instrumental separation in and around the ordered soundstage. The more insightful detail of the secondary percussion, such as tambourines, was deliciously highlighted and detailed. Connected with this was the low distortion levels spotlighted by the delicate cymbal work that could easily be discerned behind the loud, angry power chords of the lead guitar.

Moving to jazz and Horace Silver's 'Cape Verdean Blues', the first thing that attracted my ear was not the trumpet, sax or piano, but the quietly conscientious drum rolls that simmer beneath the brass leads.

Onto the piano lead which, at any time, is deceptively complex in



"one of the most 'realistic' integrated amplifiers on the market"

one around the power amp and one around the preamp., because it consists of two active stages and this means that you can look at the two stages as standalone circuits. Keeping the feedback low gives you more emotional connection to the music. Increasing the feedback gives

into the bass. I don't want to do that because saturation means distortion. I don't think that's the right approach, I'm not after a 'valve sound', I'm after an accurate sound. Valves should be linear and accurate. The bass is sorted via our use of solid state rectifiers. We don't use valve





It also provided top quality playback of the rest of the track. Hence, bass was tight, well formed and characterful while the variety of additional percussive elements and considered guitar work sounded marvellously metallic in a rounded sense while the soundstage possessed enough room to allow each band member to have their moment in the sun.

Playing the original jazz album, 'Chet Baker Sings', this superior master showed what the VTL, for an integrated design, could do on the analogue plane. Baker's cultured tones were expressive with a series of nuances that told of the subtle tonal vibration here and a delicate sustain there, while his trumpet

playing was crystal clear. The lack of distortion provided a scarily focused delivery that gave the vocalist a real sense of being there, live, in the listening room. This humanism, the realism of reproduction from analogue source and the IT-85 is what music is all about, I felt.

CONCLUSION

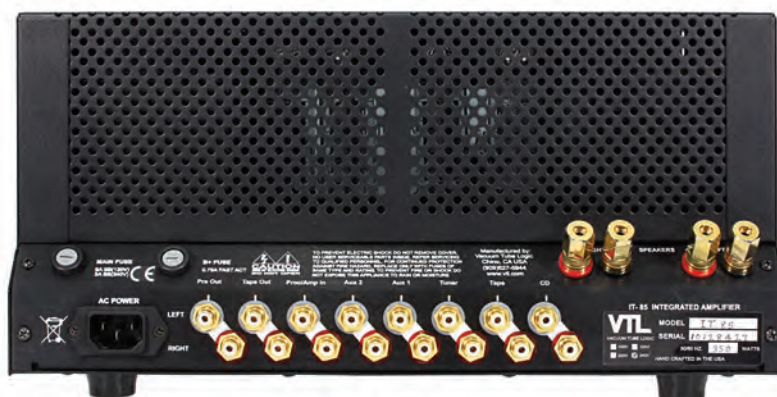
With a well recorded source, the VTL made me forget that I was listening to a hi-fi system at all. The music existed like a sonic projection. That's what the VTL is capable of doing, becoming seemingly invisible. It is one of the most 'realistic' integrated amplifiers on the market I feel and highly recommended.

this piece and subject to blurring. The VTL succeeded in defining each note, zeroing in upon the complex solo piece to add tremendous focus that gave the keyboard a balletic thrill.

The Icon thrived in extracting the emotional guts of the sax but the VTL went even further, adding a subtle yet important essence that provided a critical metallic flavour that was subtle yet significant in contributing to tonal colours. Call it 'reality', if you will, it provided what can only be called 'credibility' to the music.

Stevie Wonder's 'Sir Duke' played like a dream, right from the off. The sense of air being blown into the brass, right from the first few bars, was palpable. The bass was never dominant here but the tightness and security that it offered formed a sonic backdrop that the other instruments worked against, adding pure groove.

Turning to vinyl and spinning the Kansas album, 'Monolith' on my Avid Accutus turntable. This LP suffers from a level of compression which does produce bright moments during vocal crescendos. The linearity of the VTL was evidenced here via an inherent honesty. There was no overt sweetness to colour the output. This is a compressed LP and the VTL was here to confirm that. Hence, the compressed vocals experienced upper mid lift while the treble was rather bright. The VTL added nothing to the slightly harsh tones, it was neutral all the way. It just told the bare facts of the recording of this LP.



MEASURED PERFORMANCE

The VTL IT-85 produced 54 Watts into a 4 Ohm load and 45 Watts into an 8 Ohm load (1% thd) so it appears power matched for load values below 8 Ohms – a good thing. Most loudspeakers use 4 Ohm bass units and this is the common minimum load value of modern loudspeakers, one the IT-85 matches better than most. Being a U.S. amp, it is quite likely power matched to 4 Ohms.

One pair of EL34s in push-pull typically produce 40 Watts in self-bias. The IT-85 uses fixed bias to get higher output but the 60 Watts VTL claim is optimistic. How much power you get from valves depends upon how hard they are run, but run them too hard and their lifetime is shortened. EL34s produce a good sound and are cheap though, making this issue less critical.

The output transformers are good ones, as full output was produced at 40Hz, for 1% distortion. Midband distortion figures were very low too, around 0.1% as shown in our analysis.

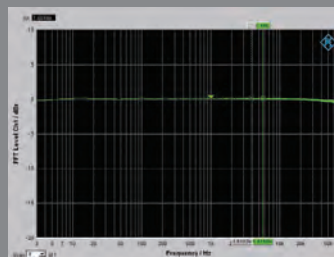
Frequency response was unusually wide, reaching 100kHz (-1dB). This is down to good transformers plus the use of feedback. The low end was not curtailed so LP warps will produce core saturation. There was plenty of gain, meaning high input sensitivity.

The VTL IT-85 is basically well designed. It should provide clean bass, due to quality output transformers. It

also develops plenty of power into low loads. However, squeezing 54 Watts of power from one pair of EL34s is asking a lot. NK

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| Power | 45watts |
| CD/tuner/aux. | |
| Frequency response | 2Hz-110kHz |
| Separation | 75dB |
| Noise | -82dB |
| Distortion | 0.23% |
| Sensitivity | 120mV |

FREQUENCY RESPONSE



DISTORTION



VERDICT

With a surprisingly strong bass kick, the VTL IT-85 provides a sense of passion and emotion that drags you into a performance.

VTL IT-85 £5,100
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 www.kogaudio.com

- FOR**
- engaging sound
 - clarity
 - insightful detail
 - bass response

- AGAINST**
- nothing