TUBE MAGIC

The Octave remote control is made of metal and handles only volume adjustment.

In Octave V110 SE, all the tubes – both output and preamp – can be changed, and you can even alter the sound with an unusual damping factor adjustment

Who said integrated amplifiers were all about simplicity? That's far from the case with the new Octave V110 SE, which has some special technical features.

Some thing, though, don't change – typical for this manufacturer, we have before us a push-pull pentode output circuit with a very high power rating (2 x 110 watts), and the amp is extensively protected against incorrect operation, such as shorting of the loudspeaker outputs and even failure of the output tubes. It's even possible to operate the amp without tubes, with only a partial complement or without a load on the end of the output (for testing purposes), all without problems. This protection and reliability is something to which Octave attaches great importance.

The V110 SE was designed for use with the KT 120 output tube, but allows the use of other power tubes such as KT 150, KT 88 and 6550 via rear-panel switching for the use of the more powerful KT 120/150 (high) and weaker types (low, 2 x 70 watts).

Brand new on the V110 SE – it's not found on the original V110 – is the damping factor tuning. This concept works with the so-called „Octave Dynamic Technologies", which covers revised power supplies, new output transformers and a driver stage that also monitors those KT 120/150 tubes, allows the amplifier to deliver almost twice the power of conventional push-pull designs. The idea of the damping factor tuning is to achieve the best possible adaptation to the loudspeaker to be driven.

For this purpose, a circuit was specially developed which, depending on the input tube used, influences the attenuation

factor in three stages without any further changes having to be made. Only the different amplification factor of the tube controls the necessary settings and thus the damping factor due to the enormous broadband feedback circuit. That the damping factor of an output stage can be varied simply by replacing the preamplifier tube and thus influence the control of the connected loudspeaker and its bass reproduction may astound some readers, but if you look at the amp as a complete system, with over-all negative feedback, it looks quite different.

The replacement of the characteristic preamplifier tube changes an essential link in the voltage amplifier of this circuit chain. The V110 SE is equipped as standard with three ECC81/12AT7 preamp tubes, providing medium attenuation, but one tube – on the right when the amplifier is viewed from the front – can be replaced with an ECC82/12AU7 for lower attenuation and an ECC83/12AX7 for higher attenuation. Both tubes are included for this purpose.

Audible impact

In the listening room, Octave once again proved that modern circuit design with correspondingly up-to-date, superior components and power supply can combine the desirable strong character of the tubes in use with the control and tightness familiar from semiconductors.

In principle, most tube amplifiers have „only" single-digit damping factors, but the V110 SE's damping factor adjustment, depending on the tube configuration, can vary this between 3 and 10 (measured at 1 kilohertz into 4 ohms). At 8 ohms, these values must be approximately doubled, as is confirmed by our measurement results.

But what does that actually do? It is well known that the frequency-dependent damping factor as the ratio of the output/internal resistance of the amplifier to the input resistance/impedance of the loudspeaker dampens the oscillation (but to a lesser extent also the excursion) of the drive units, thus delivers a degree of control.

A rather low damping factor "loosens the grip" a bit, and may be recommended for the operation of high efficiency horn or full-range loudspeakers that would like to be let off the chain; a high one, meanwhile, can "rein in" for more critical electro/magnetostatic speakers in the mid-high frequencies or simply speakers that generally require more control.

Octave says that modern loudspeakers with large mid-range drivers benefit most from an average value as an ideal compromise, but the scope is there to experiment.

Top facilities

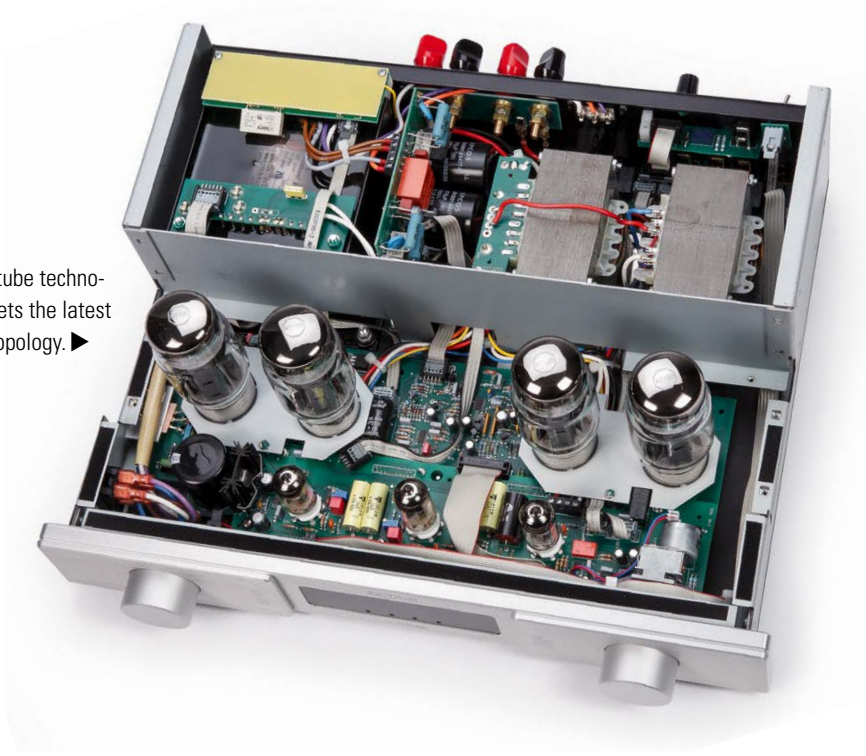
Thanks to its preouts, the preamplifier section of the V110 SE can also be used alone or for operating subwoofers or for biamping, and the output stage can be used for home cinema purposes an input bypassing the preamp and volume control stages.

A fabulous universal MM/MC phono input is available as an option, and this isn't the only reason why the user manual is an outstanding example of how such an important document can be executed in a customer-friendly manner. The bias setting (negative grid bias) for the individual power tubes is also optimally explained, and there are also explanatory and instructive tips everywhere on how best to handle tube amplifiers, how they work and what to look for.

This attention to detail is also apparent in the soft-start circuit with inrush current limitation, which also ensures a very

The optional „Super Black Box" increases the capacitance of the power supply tenfold, bringing more breath, power and control to the sound. ▶

◀ The V110 SE is attractive due to its wide range of connections, with Phono available as an option. As is usual with Octave, there are no taps for different impedances.



Classic tube technology meets the latest circuit topology. ▶

gentle start-up and thus a long service life for the tubes.

The Octave proved to be a fantastic all-rounder in the listening room, as expected, and with the optional Super Black Box, which dramatically (tenfold) increases the screening capacity of the power supply, it was even more so in all respects. The effect of the rather fast tube changes - only one tube was replaced, mind you - was immediately comprehensible even on easygoing speakers such as B&W 802 D3 or DALI Epicon 6, but more often than not was a matter of taste. Most of the time the standard equipment was the best.

ODT circuit noticeable

In broader terms, the damping control adjustment can even be used as a tone control of sorts, altering the character of the sound delivered. It gave voices such as that of Cara Dillon a touch more freedom and provided the aforementioned high-class dynamic speakers with a colorful and detached sound image as well as fascinating graduation and illumination of chiseled bass, for example Mangione's „Children of Sanchez". This also applied to the interaction with the T+A TALIS S300 and even smaller loudspeakers such as the B&W 705 S2, which benefited from the standard fitment and settings, meaning these are perfectly suited for most loudspeakers. For more difficult loads such as the Quad ESL, however, we would certainly prefer the even tighter sound provided by the higher damping factor, as predicted by Octave.

This revelation of the function of the preamplifier tube is therefore not only interesting, but actually of tonal relevance, and makes it clear that the tube amplifier itself is still far from perfected – as is often claimed – and can still hold surprises. Octave boss Andreas Hofmann, who more than 30 years ago specialized in tube amplifiers on the basis of his family's transformer production is firmly convinced that such sound results were almost impossible a decade or two ago.

However, it must also be said that a modern Octave amplifier, with its highly developed monitoring and control processes, its enormous bandwidth or the „no impedance power supply", for example, is technically far away from what many people consider a classic tube amp design. Here simplicity isn't all; instead, the strengths of the tube are worked out and perfected in the high-tech circuit technology.

Musically, the V110 SE is extremely close to its big brother V80 SE, meaning that this Octave, especially with the retrofittable Super Black Box, belongs not just to the handful of the best-sounding tube amplifiers I have ever heard, but also to the even larger group of the greatest integrated amplifiers.

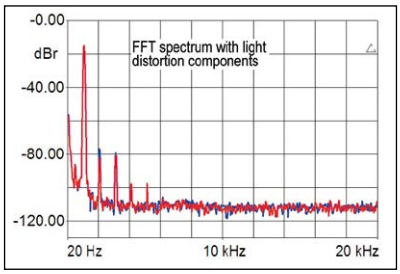
Tom Frantzen

OCTAVE V110 SE

from €6990
(Phono MC €450, MM on request, Super Black Box €2500)
Dimensions: 44 x16 x42 cm (WxHxD)
Warranty: 3 years
Contact: Octave
Phone: +49 7248 3278, www.octave.de

The most powerful, and second-best, integrated amplifier in the Octave range makes music with tube-typical emotional color and luminosity, plus the precision and control normally attributed to semiconductors. It allows the adjustment of the damping factor by simple preamp tube replacement, optional retrofitting with an MM/MC phono stage, and swapping of the output tubes.

MEASUREMENT RESULTS



Continuous power (8 Ω / 4 Ω)	63 W/97 W
Pulse power 4 Ω (1kHz)	112 W
THD at 50mW/5W/1dB Pmax	0.03 %/0.07 %/0.2 %
Intermod. 50mW/5W/1dB Pmax	0.04 %/0.05 %/0.1 %
Signal to noise ratio at 50mW/ 5W	67.9 dB/87.4 dB
Attenuation at 4 Ω (63Hz/1kHz/14kHz)	3/6/10
Upper cut-off frequency (-3dB/4Ω)	65 kHz
Crosstalk Line 1 > Line 2	64 dB
Synchronization error Volume at	-60dB 0.3 dB
Power Consumption Stby/idle	<2 W/155 W

LABORATORY COMMENT: Very high performance and top-notch laboratory values throughout. In particular the distortion and noise values are remarkably good for a tube amplifier!

FEATURES

Remote volume control, bias adjustment, selection of damping factor, various output tubes accommodated, optional MM/MC phono stage, plus offboard power supplies increasing capacitance by 4x (Black Box) or 10x (Super black Box)

STEREO-TEST

SOUND QUALITY 93%

PREIS/LEISTUNG

★★★★☆

EXCELLENT