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Accuphase Integrated Amplifier E-450

Masterpiece

by Lothar Brandt

By launching the new integrated amplifier E-450 Accuphase is once again going to surpass itself.

Some new audio components are eagerly awaited by high-end aficionados with a kind of joyful anticipation, because the respective predecessors may have left something to be desired. Others are awaited with a kind of malicious glee because the previous model left nothing to be desired.

Well, for a new integrated amplifier from Accuphase things are twice as hard. Everybody is expecting nothing else than excellent specs, only that the - usually home-made - benchmark has once again been set very high. In the product range of the Japanese the new E-450 is the top model within the line of so-called integrated Class-AB amplifiers. Next to it, yet with a substantially more expensive price tag, is the E-550 of the power consuming Class-A variety. This mode of operation keeps the solid-state devices under full and steady bias in order to avoid cross-over distortion during signal transmission, but all this on the expenses of efficiency.

In Class-AB amplifiers, like the E-450, the bias current is very low when being in idle state, i.e. no signals on the way. For this reason power and at the same time efficiency can be much higher. A badly designed circuitry however, with even some mediocre or compromised electronic parts - absolutely unthinkable from Accuphase - may well degrade the music signal.

In the E-450 the most important technical novelty is embracing current and voltage, too, which however puts it in a different league as opposed to its predecessor E-408 (reviewed in AUDIO 12/2003). Taken over from the "absolute preamplifier" Accuphase C-2810 (reviewed in AUDIO 09/2006) the E-450 also features the AAVA-II volume control. This unique "Accuphase Analog Vari-Gain Amplifier" technology can do completely without voltage potentiometers in the signal path. Instead, input voltages are transformed into currents which by means of micro processors are then volume-regulated with a precision of 65.536 ($= 2^{16}$) steps, depending on the position of the volume control knob. In the following the circuitry is to transform current into voltage again. The big advantage here is that neither frequency response nor signal-to-noise ratio are impaired by the position of the volume control respectively playback level.

When viewed from outside, the old and new amp can be distinguished only by minor details, such as more noble side cheeks and - finally - speaker binding posts that would also accept banana plugs. From a sonic point of view Accuphase fans should not expect a revolution either. Tried and tested in many listening sessions and

in combination with nearly all speakers we've auditioned to this date, the faithful E-408 is and will remain a superb integrated amplifier - and definitely an honourable predecessor.

The newcomer needed a considerable warm-up time until it could put itself into the limelight against the E-408. Although not to be blamed on Accuphase alone, this is evidently a current high-end trend: just like the simultaneously operating DP-500, which, after all, has been awarded 125 sonic points (reviewed in AUDIO 05/2007), the E-450 also needs a kind of "formatting period" during operation.

Well, the DP-500 was stopped by the brilliant DP-78 very short before it could reach the score of 130 points. The new integrated however marched silently - occasionally also loud and not at all surreptitious - to the highest regions. The subtle and sometimes overlapping transients, which make "Siegfried's Funeral March" a thrilling listening experience, were rendered by the E-408 in a somewhat denser way, whereas the E-450 displayed the numerous brass voices slightly more three-dimensional and a tad more detailed. Simply perfect was the structure of the soundstage from the enchanting live recording of the AUDIO CD "pure music, Vo. 1" (05/2007, Sennheiser) as rendered by both amps, yet a bit wider with the E-408 and a bit more in depth with its challenger.

Lots of excitement was also offered in the Pop & Rock round to follow. Depending on the "degree of hardness", recording philosophy and not the least on the connected speakers, the E-450 overwhelmed us with its spotless vividness, more than any other integrated amplifier we've heard to this date. Add to this some wonderfully shaped and fascinatingly controlled basses. It didn't matter if we played Indigo Girls or Kari Bremnes, Tony Joe White or Dream Theatre: there was always a tad more information, which, although not scoring a full point, eventually gave the E-450 the lead by a small margin. It's true: with the E-450 Accuphase has once again surpassed itself.

SUMMING UP

Our ranking list about integrated amplifier has been thrown out of joints a bit. The E-450 couldn't quite achieve a 5-point-lead over the other amps scoring 120. That's why it could "only" hit the old record, yet with a big plus. It has therefore been taking over the top position (printed in bold letters) alone, among the best integrated amplifiers on this planet - rightly so, because it's a masterpiece, indeed.