

# Perfection is Relative

*Big, shining softly in champagne, looking upscale and modest: Yes, we're once again hosting an Accuphase amplifier as our guest. And not just any model, but a representative of that category which helped the Japanese manufacturer build its peerless legendary status: the large integrated amplifier. One that nips thoughts about an even way more sophisticated solution with separate pre and power amplifiers in the bud because: what could still happen beyond this one?*

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The latest statement from Yokohama on this matter is called E-650 and changes hands for 11,000 euros. A stiff price, indeed. And at this moment while I'm still at the beginning of my intense encounter with the machine, I am prone to claim: I would not have needed this update. Why? Because its precursor E-600, which sat in our editorial rooms for quite some time, makes such a perfect integrated amplifier that this issue should be through once and for all. At least one ought to think so. Now, in this context we mustn't forget that Accuphase is one of the very few manufacturers who present steady product developments so consistently like no other competitor. Yes, back in the eighties it was very normal for the big Japanese firms to brush up their product ranges every year, but today? No way. Hi-fi has turned into a marginal subject and we should be glad that there are still classic dual-channel components made by Yamaha, Pioneer and Co. Only the folks at Accuphase stoically brave the changes, unfailingly presenting top-drawer consumer electronics. After a life cycle of about four years the E-650 now supersedes the E-600 for several reasons. For instance, it's extremely difficult meanwhile to build a device unchanged over a long period of time – all the more so when it's a classic, analog component. The semiconductor industry reacts fast to the prevailing market conditions and therefore adjusts its product portfolio continuously. This is also happening e.g. at Toshiba: for a long time, the Japanese company used to be the key supplier of high-grade MOS-FET power transistors for the audio industry, but these days are gone. Which also required from Accuphase a rethink - and a changeover to

other power semiconductors. Fortunately, there are still a few sources around for fast, linear, heavy-duty semiconductors, which is why certain parts can be found in the new, big Accuphase which in other places already furnished the stuff for sonic legends: what constitutes the means of choice for US amp guru Nelson Pass should also be able to deliver a brilliant performance at Accuphase.

The E-650 is an amplifier in the best tradition with plenty of quiescent current: we measured a good 60 watts of output power into eight and 120 watts into four ohms. Which is easily double of what the manufacturer states in his brochure, yet still overseable: here a mostly class-A operating mode takes its toll – over 200 watts of idle power **dissipation are largely responsible for heating the listening room.**

Before digging into the technical details, let's first deal with the tangible substance. De facto nothing has been added when compared to the E-600 (at least nothing I would have noticed), and how could things be any different: it's practically impossible to tailor a more comprehensive package of features for an integrated amplifier. However, we spot some cosmetic changes: several controls are now realized as rotary switches which used to be pushbuttons on the predecessor, and vice versa. One or two buttons slipped under the protective cap which covers a large part of the convenience department, whilst others moved to right of the front. Those things may rather be due to the intended discernibility from the precursor than being a technical necessity.

A large Accuphase amplifier definitely must have pointer instruments - which is also true of the E-650, of course. Plus, there are small, but nice LED bar-graphs as level indicators with a separate peak LED. This exhibits a sense for detail as can only be found in products from the Japanese. Using the super solid input selector switch on the left, one can toggle with a rich clicking sound through nine inputs, two of which are balanced XLR connections, two others belong to the optional phono and D/A converter plug-in modules. We know the AD-50 and DAC-50 already from the E-600, and they also vamp up the E-650 to the mighty centerpiece of a very upscale hi-fi chain. What can't be seen, but technically represents one of the crucial upgrades of the device, is the volume regulation which sits behind the level control on the right and offers the familiar smooth touch: the smart "AAVA" circuitry is used here in a balanced configuration and thus practically identical to that of the C-3850 preamp flagship which costs well above 30,000 euros. With this "borrowed" concept Accuphase has once again achieved considerably improved specifications: the E-650 produces much less noise than its predecessor. Just as a quick reminder: "AAVA" stands for "Accuphase

Analog Vari-Gain Amplifier“. Actually the matter is a little more complicated and based on the digitally controlled summation of differently weighted signal currents the sum of which equals the set signal volume level. Very clever and so elaborate that no other manufacturer in the world offers something similar.

Special attention should deservedly be given to the improved headphone output; it's the reason why on the lead photo for this story a "sound hat" is pictured for once. Indeed, the headphone output of the E-650 is among the best I've ever heard, and even with a low-Z headphone like the 20-ohm Audeze LCD-XC it has no problems whatsoever. The combination sounds utterly colorful, crisp and detailed and doesn't make me wish for an external device. No wonder: the manufacturer rates the module output power at 0.5 watts per channel; this would even be sufficient to get substantial sound levels out of a speaker pair.

On the back of the E-650 we see the usual picture: solid terminals allow to connect two speaker pairs, but behind them is again some "Accuphase magic": no despicable relays with their susceptible mechanical contacts are employed for the switchover, but the latest generation of the switching device using MOS-FETS, which can also be operated by the protection circuit. Boasting an even lower impedance than its precursor, here's one of the reasons for the amp's increased damping factor. And in 30 or 40 years this will be definitely quite as high as on the first day, because there is nothing prone to wear. We also need to mention an impressive number of sockets for the various in- and outputs, two metal sheets covering the module slots as long as they are unloaded. What's missing? Nothing at all. More is just impossible in an integrated amplifier. Well, typically Accuphase.

Now let's talk about the actual power amp. Of course, it features strict channel separation and a modular layout, so we find two corresponding pc boards on the amp directly attached to the voluminous heatsinks. Two times three MOS-FETs switched in parallel – the mentioned classics from Infineon (previously International Rectifier) confidently deliver the required power outputs. The circuitry of the current feedback amplifier was once more improved in detail and even more ambitiously than before: e.g. a balanced instrument amplifier layout now guarantees the extremely immune return of the output signal straight from the speaker terminals to the amp input – that's what it takes for the feedback. At the same time this update delivers less noise and higher damping values. As we all know, the devil's in the details which in this case add up to about one pound of overall weight gain as opposed to the previous model.

And what's happening in the demo room? Nothing which should urge an E-600 owner to change sides, but a lot that could provide ample food for thought to users of almost any other amplifier. Including myself who have been leading a king's life with the Accuphase C-2420/A-47 duo by my side over the past few months. In fact, compared to the recently propagated Accuphase sound image, the E-650 reveals a slightly different character: the E-650 is bursting with power. Yes, it seems to underscore the energetic nature of the music a bit more clearly than the even more sophisticated pre/power duo, yet without neglecting the finest details. To demonstrate this, the latest album "Dionysus" by "Dead Can Dance" is ideally suitable. One may well be of different opinions on the musical content of the 37-minute opus, but not on the production quality: the complex, spherical work is challenging the reproductive equipment in many regards. The big Accuphase handles it exceedingly well and puts the more fragile elements of the sound structure on a rock solid fundament of sheer low-frequency force: never exaggerated, without a hint of softness, but with unflinching power it builds the foundation for Brendan Perry's epic. Lisa Gerrard's vocal parts are rare, but owing to the E-650, they're hovering perfectly dissociated through the aether, outlined with ultra fine precision and perfectly locatable. Magnificent – this record could hardly be reproduced with any more atmosphere.

Musically only a few lightyears away Dorthia Cottrell, the singer of the four-piece US doom battleship Windhand, is loitering about. Certainly not as filigree and spherical as Perry and Gerard, their new album "Eternal Return" still knows how to please over the E-650. Again it's the unshakeable basis that immediately enraptures the listener. With flying colors the Accuphase sculpts the heavy, dragging body of sound which is complemented wonderfully by the singer's melodic voice. The playing partners certainly have a major share in it: the brilliant Accuphase C-37 phono preamp and the topical MC AC-6 complement the sound of the E-650 in an absolutely perfect way. For those who want to know how the apogee of stereophonic consumer electronics sounds today, I strongly recommend to arrange a date with the champagne-colored treasures from Yokohama.

*Holger Barske*