

Accuphase Integrated Amplifier E-460 and CD-Player DP-510

To hear a pin drop

by Matthias Böde

This can certainly be attributed to the engineers at Accuphase as the new CD-player DP-510 and integrated amplifier E-460 inhere an even keener sense of tonality than their predecessors.

But where do we hear dropping pins? Well, actually everywhere. For instance, in our recordings there are plenty of hidden “dropping pins” in form of most minute signals that want to become audible. The better this is achieved the deeper our ears can reach down into sonic as well as musical structures. Sometimes this may not be so important for musical enjoyment, at other times however this can be downright essential.

Like for example the ocean sequence in Rachmaninov's “*Études-tableaux*” on the fantastic CD from Reference Recordings: those who are to hear this music through an audio chain, of which the resolution capability remains more or less on the surface, are initially to perceive scarcely more than a rather uniform rumbling of the orchestra. So, only if the chain is able to convey the finest beats, emotional nuances as well as the dying of reverberations in the concert hall, suspense is created whilst the music is passing on its magic.

Just a particularly prominent example: whether there are ambient noises when someone is playing the guitar or the disquietness of the audience in a live concert. The fine details are the key to authenticity and to overcome the character of canned music, which is in opposition to the immediate listening experience.

Commitment to details

Lined up for testing, what have the new Accuphase CD-player DP-510 and integrated amplifier E-460 to do with all these contemplations? Quite a lot, I must say, because both are descendants of the spirit that has been searching for fragile details and the most remote “dropping pin”. This Japanese noble maker has ever since taken up the cause of this ambitious goal.

And they do indeed spare no efforts and expenses in order to achieve this. The player features the Accuphase-proprietary CD drive, which is extremely rigid and capsuled to absorb external vibrations, whereby the laser head rests on viscous dampers. Even the disc tray shows absolutely no rattle. A bottom plate of triple sandwich construction – a resin plate between two steel plates – make the foundation. Insulator feet made of high-carbon cast iron provide the transition to the underlay, which can hardly be excited in any way. In order to prevent electro-magnetic interferences, each functional array is located in its own compartment and separated from each other by insulating baffles.

The main difference to its predecessor DP-500 (tested in STEREO 01/09) however lies in the further refinement of the MDS++ D/A-converter circuitry. Instead of four ICs of

the Type 1796 from Texas Instruments there are now six of them in parallel configuration working in the "Multiple Delta Sigma"-DAC section. According to the proud statement of Accuphase, this new implementation is to reduce the error rate of each single device by factor 2.45. Well, those who are fighting for the last pinch are inclined to grab such measures.

Yet at the same time one should also consider the in-house model hierarchy. The reason that there is now a DP-510 can be owed to the fact that Accuphase's "entry-level" DP-400 has sonically come very close to the DP-500 and eventually withdrawn the "right to exist" for its bigger brother. The DP-510 features two digital inputs and may therefore be employed as a high-quality DAC for external digital signals up to 192 kHz/24 bit (coaxial). The more since it has also got a sensitive digital volume control on board. All this was meant to duly re-establish the distance within the player family.

And it did that without any doubt. We took the DP-400 for comparison purposes because the "500" was no longer available, yet actually not really necessary either. Already with the first CD the sonic differences became clearly audible: a sensitive, inwardly live performance with Jazz-diva Nina Simone and a compassionate audience in the Casino of Montreux. The DP-510 widened the space by a greater margin whereby it rendered the vibes, charged up with emotions and full of verve, with much finer details than the absolutely not veiled DP-400. When playing music that's got power and drive, absolute resolution may not be so important. With this kind of music however the DP-510 can convincingly organise the structures of sound and excels by enhanced fine dynamics. Thus, it can set itself apart from Accuphase's "smallest" DP-400 and at the same time – although at a somewhat higher price - from its predecessor DP-500, too.

Switched to MOS-FETs

A price increase for the E-460 can also be noticed when compared to its predecessor E-450. But then the latter cannot be mixed up with the new one anyway, but rather with its Class-A brother E-560. First, because it also features the digital volume level indicator and second, instead of bi-polar semiconductors amplification is done through MOS-FETs which require no control current. Recently, these transistors have also driven the power amp P-6100 to highest performance in our listening room (STEREO 03/11) and Accuphase's huge M-6000 mono amps rely on them as well. In the new model the damping factor has been increased, too, namely to take care of the best possible control over the woofers in the speakers to be connected.

Very typical for Accuphase's larger models of pre- and integrated amplifiers is the wide sub panel behind which a number of buttons and controls for various useful applications are decently hiding away if not needed. As opposed to many amplifiers of the high-end league, the ones from Accuphase are no purists at all when we are to talk about functions and features. There are plenty of inputs which may either be called up via the remote commander or with the help of the precisely stepped input selector knob, which I'm sure will give goosebumps to one or other audiophile precision freak when turning it.

Furthermore, the listener can resort to tone and balance controls, a mono button, which can often be useful when positioning the speakers in ones listening room, an excellent headphone output, a recorder facility with monitor function and quite a few things more. New on board is a phase inversion switch: if music doesn't sound as relaxed and coherent as one would have expected, switching the absolute phase can sometimes work wonders. In earlier days the "phase" button could be found on many disc players and, yes,

the E-460 allows phase inversion for all sources. The basic configuration of this integrated lacks a phono stage, yet aficionados of vinyl records may upgrade the E-460 with the optionally available "Analog Disc Input Board" AD-20. It was made to accept both MC and MM cartridges and can be mounted into one of the two slots at the rear panel of the amp. Yes, we have become pretty familiar with this board for quite some time and therefore hold it in high esteem. It's adaptable (MC load) and definitely suitable for pick-ups of even the top class without any reservation. It lets them play in a truly high-end mood and is thus expanding the amp's sphere of action.

A new kid on the block is the "Digital Input Board" DAC-30. It comes equipped with a coaxial, an optical and even a USB input for all who want to transfer their music from PC. The optical and USB input can receive data streams up to 96 kHz while the coaxial input would even accept 192 kHz.

By means of a high-quality digital interconnect we've fed the DAC-30 with nearly jitter-free signals coming from the transport of the DP-510, whereby the sound quality came very close to those signals that went through the analogue output of the player. Certainly, the MDS++-circuitry in the DAC-30 is not quite as elaborate as in the DP-510 and therefore the rendition may not be on par with respect to openness, fine details and transparency, yet the sonic differences were smaller than we expected.

One step closer to perfection

However we could not affirm the same when comparing the E-460 with the E-450. The more demanding the recordings the clearer were the audible differences in favour of the new integrated. Well, its predecessor is likewise a detail fanatic, yet what it would merely suggest is put right on the spot by the E-460. For example, Cheryl Wheeler's multifaceted "*Walk Around Downtown*" on the classy "Reference Sound Edition" from In-Akustik was more consequently fanned out by the new one, though without getting lost in every single detail, but by having things shuffled together to a homogeneous whole. Airy string quartets are mastered by this exceedingly powerful and controlled playing amp with aplomb, just as well as it would master hard rock.

Whether this is due to the MOS-FETs, the "AAVA" volume control - another Accuphase speciality - which has been further optimised with respect to precision and short signal paths, or the sum of the many other bits and pieces each serious model upgrading is usually subject to: the E-460 goes one step further on the way to perfection. And those who are going to listen attentively will hear the pin drop.