

Test Accuphase A-46 & C-2420
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A MATTER OF DISCIPLINE

Actually I was pretty sure that I had reached the edge of my own personal Accuphase universe, when I encountered the superb E-600 integrated amplifier. But that's the way it is with the universe: it seems to be infinite.

Things get simpler. Calmer. Every time. Accuphase test equipment is not simply delivered by your local parcel service; it's more a case of the German distributor bringing it round, unpacking, installing and getting the equipment up and running and explaining what it can do and having a quick listen along with the editor responsible. And that's the way things should be. The distributor wants to make absolutely sure that the equipment is showcased to the optimum and that nothing untoward creeps into the process of sound making its way to the tester's ears. We have been doing this for a while now and the confidence that the distributor has in what we do has also gradually grown, meaning the whole process is quicker than in the past.

Nevertheless this approach says a great deal about how they work at Accuphase – and also about the German distributor, which has championed the product for decades.

Accuphase – that is the pursuit of perfection in every conceivable respect. That's easy to say and many manufacturers subscribe to that kind of philosophy, but only very few actually put that philosophy credibly into practice. Accuphase equipment has been marketed by the same distributor in Germany for 40 years, and every one of the myriad models is characterized by the absolute desire to deliver the very best quality. Such consistency is unique.

Just like the careful model upgrade process, which is characterized by plenty of steady evolution but hardly by revolution. And the appliances that we are dealing with here are two really fabulous examples of just that kind of smooth evolution: the C-2420 preamplifier (11,560 Euros) with AD-2820 phono equalizer unit (3,885 Euros) and the A-46 power amplifier (10,700 Euros). And in checking out this preamplifier means I personally have come full circle. I reviewed the granddaddy of this generation of appliances, the C-2400, back in 2004 – shortly before I relocated to Duisburg and the "birth" of "LP". Of course

there was a C-2410 model in between the C-2400 and the C-2420 – also typical of Accuphase's consistency.

The preamplifier currently ranks third in the product hierarchy, although given its substantial specification package and audio performance, it is difficult to imagine that there is any significant room for improvement. The same applies to the power amplifier. The A-46 is indeed the second smallest model in the Class A range (there is also a range of models designed for performance using less quiescent current) and nothing here can really be described as "small". Nevertheless beyond that there is also a stereo and a mono model.

Champagne-colored, of course. Accuphase's portfolio used to feature black fronts, but it soon abandoned that experiment. These days every Yokohama-made appliance features this bright-shining, unmistakably golden color, and that is entirely right and proper. The C-2420 preamplifier has a proper preamp facade. Input selector (for nine inputs including optional phono input, two symmetrical connections) on the left-hand and the volume control knob on the right-hand side. In the center beneath the display panel there is a flap, behind which a large number of other controls are concealed. So far, so typically Accuphase, but so far removed from other products available on the market. Nowadays nobody makes such opulently equipped amplifiers any more.

The rear panel normally features a chamber or duct covered by a piece of sheet metal; in our case this is where the not exactly inexpensive phono equalizer unit is located, which is certainly a crafty aluminum box of tricks. Once installed, you never have to access it again. All settings can of course be adjusted very conveniently from the front of the appliance and are relay-translated into electric parameters in the phono equalizer unit. You can connect two pickups, both can feature MM or MC cartridges. There is a choice of gain options – 60 or 70 decibels for MCs and 30 or 40 decibels for MMs. There is a four-stage choice of input impedance settings ranging between 10 and 300 ohms, for MMs it is fixed at 47 kilohms. So that is pretty much what you need in practice and it actuates practically any halfway normal pickup to perfection. The inside of the equalizer unit features two superbly designed dual-mono-configuration printed circuit boards, on which a largely discreet and to some extent balanced circuit operates. Gain is essentially managed by parallel-connected, noise-reducing JFETs, whilst equalization is a two-stage affair.

Accuphase makes supremely equipped and technically advanced appliances; our test devices are perfectly made experts in their respective functions.

The preamplifier features a large number of connector options for both symmetrical and non-symmetrical appliances.

This is a really full-fledged and elaborate solution that would suit many an expensive external phono preamplifier superbly.

As far as the current Accuphase preamplifiers are concerned, we need to talk briefly about its volume control system, which is different and more complex compared to all other competitor products. The system is called "AAVA" (Accuphase Analog Vari-Gain Amplifier) and it works more or less as follows. The music signal to be adjusted is converted into 16 binary-weighted partial currents by 16 voltage-to-current converting amplifiers. Depending on the volume level desired, the required partial currents are aggregated and the outcome is converted back into voltage. This enables 65,536 different volume levels to be selected. The configuration is extremely low-noise and low-distortion, very high-precision and displays practically no signs of aging. However it requires a sophisticated level of circuitry and is therefore only used in upper-price-range appliances. It goes without saying that you can also perform things like balance control, muting and similar using this appliance. I won't bother to list other features at this point – you won't find anything that this preamplifier can't do. And of course it all works free of cracking noise, entirely without odd logic errors, put simply it works to perfection.

The A-46 power amplifier is a magnificent product weighing 32kg, featuring, as is entirely proper, two large output level selectors on its front panel (which can of course be switched off). The manufacturer specifies a continuous average output power rating at 45 watts per channel into eight ohms and at 90 watts per channel into four ohms (which is more than adequate in real life), but it can indeed achieve more than twice that. That's what you call understatement.

The AD-2820 phono equalizer unit is an extremely credible alternative to external phono solutions.

The phono equalizer unit is to a large extent discreet and features a dual mono configuration.

Accuphase is using MOS-FETS for the first time in its power amplifier (left side of the picture) as protective circuitry components.

Metrology Comment

Accuphase appliances perform to their usual masterful standards in the laboratory as well. The preamplifier has other strings to its bow in addition to the phono input detail, and features a very linear frequency response of up to well over 100 kilohertz. Its unweighted line-input signal-to-noise ratio is a record-breaking 110.5 decibels(A), and channel-separation SNR a massive 95.4 decibels. Harmonic distortion? Non-existent: 0.0005 percent. It of course deteriorates if the phono equalizer unit is involved, but it remains negligible. The power amplifier has an output capacity rated for 102 watts into eight ohms and 176 watts into four ohms. Its frequency response at five watts is a massive 113.5 decibels(A), channel separation 79 decibels, and harmonic distortion is a minuscule 0.00043 percent. In idle mode it consumes 232 watts and the preamplifier consumes 36 watts. It is practically indestructible; the manufacturer even specifies one-ohm-loads as being feasible.

At the sides there are substantial heat sinks with pre-screwed brackets, which make transportation a whole lot easier. The large heat sinks are required because a reasonable amount of heat has to be dissipated, as the appliance functions in Class A operating mode. Every heat sink features an amplifier module with 2 x 6 high-performance MOS-FETs, actuated by the latest incarnation of Accuphase's proprietary symmetrical current-feedback high-speed circuitry technology. Refined over the course of many years, this topology these days enables the company to make major advances. The protective circuitry is also well worth a mention. It does not use relays but features MOS-FETs with a continuous current rating of 130 amperes as circuitry components for audio signals. Are there any additional semi-conductors in the signal path? Not many manufacturers would have the confidence to do that. There are guaranteed no damaging side effects, given how actuation works here. One's gaze wanders to a pretty powerful power adapter with an appropriately substantial power transformer and two large electrolytic capacitors. The signal paths are short, the circuitry layout is smart and here too we can screw the lid back on, safe in the knowledge that absolutely everything humanly possible has been done.

Once again the Clearaudio DaVinci acted as the signal supplier for the audio test. After I had initially listened to some sounds using, as is my wont, Clearaudio's new "Absolute Phono Inside" phono preamp, and took real delight in the immensely detailed and composed reproduction, I plugged in the tone-arm cable into the Accuphase phono equalizer unit. That's where I then left it until the end of the test, because this combination at any rate is simply a better

match. The AD-2820 with 300-ohm minimum load impedance hooked up to the DaVinci simply sounds fierce, and I never thought that I would say this in connection with Accuphase equipment.

That is such an unbelievably deep, dry, warm and sonorous bass sound, that you can hear it crying out from a distance: "I am a record, I can do that better than any other medium". Yet this ebulliently vibrant character is not what primarily distinguishes this amplifier combination. It is in fact its ability to conjure up complex creations so seamlessly out of nothing, to prime events to explode in places, where you would never ever have imagined that music could exist. Actually I am no great three-dimensional music listener, but what this combination has in the way of party pieces up its sleeves is simply breathtaking. And that's even involving thoroughly unaudiophile material such as heavy underground rock from Scandinavia, which I admit I am currently really into. Our busiest loudspeaker is a two-way system based on a "seventeen plus flattened dome" formula, but what emerges from this piece of kit is refrigerator-sized monster loudspeaker stuff. Unbelievable. OK – the A-46 seriously gives the lie to its classification, it can do so much more.

Sorry, I am talking about "making noise" again, but that works really well. In the meantime I even take a pretty "been-there-done-that" copy of Abba's "Arrival" from the cabinet, and do you know what? I would have loved to have seen your face when we got to "Knowing Me, Knowing You": That's got compulsion, that is perfectly convivial, that sounds magnificent and supremely detached from the loudspeakers. Absolutely superb, move-you-to-tears, emotional theatrics. My admiration for this form of Japanese endurance has definitely increased significantly again.

Bottom line ...

» Nobody else makes such completely thorough(bred) amplifiers. Furthermore they sound supremely fine-resolution, spacious, variable and if required really mean too. A particular goody is the optional phono equalizer unit, which just crowns off these amplifiers, which are practically impossible to improve on any more.

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