

JOURNEYS INTO HI-FI IN LOCKDOWN



“Changing your speakers is not likely to make your amp sound better. However, I can confirm that changing your power amp can most definitely make you fall in love with your speakers again. ”

Isn't High Fidelity Audio just a sub-set of Professional Audio?

This feels like a question that no-one should need to answer. Much as professional racing cars are tweaked and cosseted to produce the highest performance, and engineering innovations from the R&D spent on this eventually trickle down into what we drive day to day, it seems logical that the same should hold true of pro audio and home audio.

Or should it?

Read on to find out what I discovered about my system, and the differences and also the similarities between High Fidelity Audio “components” and Professional Audio “equipment”...



Consider the engineering and user requirements for a professional audio power amplifier. In no particular order, let's start with "electrical durability". This slightly imprecise sounding term is deliberate – it should encompass the following aspects:

- Ability to deliver the specified power into the specified load and be capable of doing so for a period of time that is sonically useful (so not for half a millisecond for marketing purposes)
- Ability to tolerate loads or operating conditions outside of specification even if power levels are reduced – protection from short circuited outputs, extremes of temperature or fluctuations in mains voltage

Next up comes "mechanical durability". This one is a little more straightforward.

Will the amplifier survive a "life on the road"?

Has it been designed to be easily serviceable and can it withstand the physical abuse that comes with being hauled in and out of trucks and bounced about on ramps, and maybe even the odd drop off a fork-lift?

And perhaps not finally, "audio performance". This is another slightly murky term.

Meeting published specifications for power output is also part of the "electrical durability" but there are also the signal integrity parameters to consider – noise and distortion, intermodulation and crosstalk, phase accuracy and impulse response (time smearing, if you like). Meeting these specifications doesn't give the whole story – it still won't completely describe the ability of the amplifier to reproduce music – not just sine wave bursts and clicks.

As someone who has an interest in both the professional and the hi-fi worlds, working in one and enthusiastically engaging in the other, the listener as opposed to the engineer in me would suggest that the requirements for a Hi-Fi amplifier might be different to those above.

Sure, we want our hi-fi power amplifier to be mechanically durable, but we are willing to forego the need for it to be dropped from 5 feet onto concrete (I am thinking of valve/tube amps here!) in favour of something perhaps less industrial in appearance.

We might be OK with something that can't run at full power into a 2 Ohm load, for something that doesn't sound like a jet engine when it's doing that, admirable as this endurance might be. In all honesty, how often is a hi-fi power amplifier ever driven even close to its rated output?

Source components in the digital age (apart from the Akai 3-head cassette deck!)



Leak Stereo 20 - not one to drop off a table

And lastly, and really most importantly – “audio performance”. More accurately described I would hope as “what does it actually sound like?”! A true seeker of high fidelity performance should be focussing on the quality of the audio above all.

Does it make you appreciate the music more?
Does it suddenly encourage you to want to play another tune – and hear things you never noticed before? Does it give you a bit of a shiver when you revisit old music and hear new things?

All that. I have good and bad news on that front, from my point of view... Let's get the bad news and a little backstory out of the way. I love my hi-fi. It's been with me in a multitude of forms since I was about 15.

Its complexity and quality have waxed and waned over the years, though Quad and Leak valve amps, Sugden and NAD, dalliances with Japanese brands such as Rotel and Yamaha, and even some dark horses such as Grundig (my favourite bargain CD transport!).

I would never suggest my system is in the top echelons of the world of hi-fi, and in reality it has all been based around my record deck from day one, which is an immaculate Thorens TD124 MkII with an SME 2009 arm and a Goldring 2300 MM cartridge.

My current amp is a recently recapped Cyrus 3i and I play this through Mission 751s on Gale short stands. Digital sources are a Marantz 6005 streamer which also is used for DAC duties for my Grundig transport. I also have a magnificent Akai GX-95 MkII tape deck which, to be fair, doesn't see much action these days but I can't bear to part with it!

I am not a very serious radio listener so the tuner isn't actually the very cool Sony one you might have seen in the photos – it's the Revo DAB one next to it! I would have used the Marantz to stream radio but waiting 25 seconds to tune in is just too much of a pain...

So, the bad news part of my story. About two months ago, my Cyrus amplifier began misbehaving. If you are unfamiliar with them, the Cyrus 3 is a British amp, which was first sold quite a few years ago and was the companies first foray into remote control and multi-part systems, beyond basic pre-power amp configurations. Cyrus developed a reputation for offering very adaptable components with a variety of upgrade paths that included the ability to add an external power supply to the integrated amp amplifiers to power the output stages, leaving the already substantial liner supply just for the preamp.



If the Thorens is the heart, then the Cyrus is the brains...



Retro radio - the beautiful Sony St-88

“...the “amplifier” was willing, just the brains had died.”

So my Cyrus 3 was the first one with soft switched inputs, a “digital” volume control and a remote. And of course then the need for a microprocessor to control this. Herein lay the problem. Something had started to upset the microprocessor so on occasion the amp would power up on its own, refuse to power up, or the volume control would not work properly. This got worse to the point of several inputs seemingly being selected simultaneously, and then not at all with accompanying clicks and pops and BANGS, threatening the life of my speakers. Eventually this all culminated in a dead amp – buzzing quietly, all lights on, occasional pops scaring my woofers. The end. Being an electronics engineer, I was of course not willing to admit that my amplifier was finished, especially having witnessed its slow demise and knowing it had not suffered any catastrophic failure – the “amplifier” was willing, just the brains had died.

My previous dealing with Cyrus over the years had been both helpful and fruitful – spares for older Cyrus amps dispatched quickly, and quick responses when asking for diagrams. This time however, not so much – it seems like the Cyrus 3 was an experiment not to be repeated! No schematics could be found, and they won't even consider servicing the amplifiers themselves, despite covering those that came before and all that came after – it would appear the “3” is a fly in the ointment. Having managed to resurrect the microprocessor board myself, I still couldn't get it successfully back in charge of everything else, so I felt the time was right to move on.

I say “move on” – I sort of “moved sideways”...luck would have it that an updated version of the amplifier I loved was for sale on eBay and had been fully recapped and serviced (which I guess wouldn't need recourse to schematics if it wasn't faulty!). It was too good a price to pass up given that the service alone was about 50% of this and this should see it right for a further decent period of time.

Upon arrival of my new old amplifier, I was pleased to see that some lessons had been learned in the process of developing this tweaked “i” version. The most notable was that the soft switching on the inputs had been replaced with “proper” relays and there was an additional input now for line sources. The phono stage remained, as did the pre-outs which I had never investigated.

The power amp was still a class AB design and the power supply was still linear and as big as pleasingly generous as ever. I don't know if the power output had been increased, but it was going to be in the region of 50-70W/Ch.

I dropped it back into place and started to listen. Ostensibly, everything was as expected. Our memory of what things actually sound like is very fickle and I had been without the amp for quite some time. Not having my original amp in a working state to compare against meant that my recollection of how it sounded versus this “i” (for “improved”...?) version was always going to be difficult. My initial listening tests did not exactly reinforce the “i” for “improved”.

Nothing was “wrong” as such. Everything pointed to a better amplifier – it was certainly quieter, especially the phono stage, and the relay switching put an end to all pops and thumps. Clarity was great and everything seemed better controlled than I remembered. Was most of this down to the recapping procedure though? The power supply would have most certainly benefitted from new reservoir caps and a quieter phono stage might well have been a result of this too.

However, something just wasn't quite right to my ears. My lovely Missions, so familiar to me for their deep tuneful bass, and uncoloured mids, seemed to be lacking in any excitement. I could see them moving plenty when I turned things up and played some bass heavy tunes like John Grant, or Mura Masa, but the bottom end just wasn't...there. I began to wonder if I had moved my speakers and caused a cancellation somehow, so began shifting them (and my position) about, but things just weren't doing it for me.

Going back to analogue and some Joni Mitchell and Kate Bush impressed me more with some attack on drums I think had been lost as the old am deteriorated but that nagging feeling of missing depth was still there.



Expanded Cyrus set-up with external PSUs (PSX)

“Oh well,” I sighed. “Maybe it's all in my head – it's not likely they've made a worse amp. Maybe I've got used to woolly warm bass due to deregulation on the power supply.” I didn't actually think that second part – it was more like “Maybe I liked my crapper amp better.”

Anyway – it was far from crap – it still sounded great, just not quite as great as I fondly recalled. In the scheme of things, we now had Coronavirus to deal with and working from home looming and so I put it out of my head.

Dragging all my kit from work to home, I remembered the pre-outs on the back of the new amp and had an idea. A sadistic idea, but one that would prove interesting and possibly fruitful. Why not try an amplifier built for “professional” use, freeing up the Cyrus integrated amp's power supply to just run the preamp and see how it compares?

It's thin, it's happy on the floor and it's not making a show of itself - Delta 20...



If you read the introduction, you'll remember all the reasons cited that would maybe put you off the idea of using an amp designed for a rigorous life versus one designed for a charmed life in a hi-fi rack – maybe not a focus on audio quality per se: maybe big ugly rack ears and noisy fans, maybe not as living room friendly as it could be.

I know that the MC² Delta Series have been used in some very audio quality focussed applications in the last couple of years – the kitting out of Air Studios in London across 5 different rooms, and the OEM rebadged versions for Quedstedt (professional studio monitors) and Dynaudio (same again). Multi-way high power studio monitors are one thing, quality aside, and separate control and machine rooms get round any noise concerns. What about for my house, my hi-fi?

My thought turned to the smallest model – the Delta 20. Four channels in a pleasing thin 1U box. Low noise fan mode. Auto standby mode. All of this was looking good. So I packed one up and brought it home.

It's pretty clear that the Delta 20 has been designed for a practical life. That's not to say it's not got any style, but the style is definitely industrial. Standing out from the crowded mass of black pro-audio amps with a muted grey chassis, accented by the blue handle that anchors it as an MC² amplifier, it looks and feels like a quality product. There certainly isn't that first impression (so often felt with smaller class D amplifiers) that you are paying for a box of air – this feels solid and suitably engineered.

Before I got up and running, I needed to confirm a couple of things that were operating options as explained in the manual. First off was the fan mode. This intriguing feature was designed specifically to address previous customer comments about the fan noise in the S Series amplifiers, themselves designed for studio use.



Not lacking depth - Delta 20 has plenty of engineering inside



MC² Audio S800 Reference Amplifier Review

Unbelievable transparency and power - as required professionally Tested at £2646

VOLUME

★★★★



THE VERDICT

Makes perfect sense to us that a professional studio reference amplifier should sound consistently effortless and impart no character to what you are hearing, but at this price nothing short of amazing.

Reviewed by Charles Teofil Aryee [email address supplied]

The S800 in my system is an amazing experience and a very healthy addition that it is always worth to consider every option available, however they may seem at first.

A quite industrial looking, beefy amplifier in a domestic setting is the first choice, if at all. I was off lucky, because I had been listening to the renowned MC-1250 years ago in a very expensive and went away dumbfounded.

"Pro-audio goodness" has never since and the moment I saw the ATC speakers, also a audio roots, I knew that I MC² amplifier with them.

My system line-up that the part of:

Reaga Planar 6 turntable + Hana SL MC cart; Graham Slee Accession MC phono stage with the upgraded Enigma PSU power supply; Chord 2020 DAC with a Teddy Pardo power supply; Accuphase C-2400 preamplifier; ATC SCM40 Mk2 speakers; Acoustic Revive cabling; Gigawatt passive power filtering; SolidSteel racks.

My preamplifier is a very renowned Japanese high-end piece of kit and together with the S800 they provide true high-end amplification. I could consider this combination to be a sort of a "Beauty and the Beast" scenario, the beast being the S800, but what a fine beast.

In and of itself the S800 could actually be considered unremarkable, because it just gets on with the job under any circumstances, without drawing any attention [to itself].

We say a big hello to Devon's MC²

MC² Audio S800 Reference Amplifier Review

Unbelievable transparency and power - as required professionally Tested at £2646

VOLUME

★★★★

"But it is only after experiencing this level of performance that one realises... Why wouldn't a reference level studio amplifier actually be the optimal choice also in a home setting?"



It is perfectly transparent, tonally right and utterly effortless with endless reserves, just what an amplifier should be.

But it is only after experiencing this level of performance that one realises that most amplifiers, even some very expensive ones, in one way or another simply fall short. This is exactly what makes this seemingly unremarkable amplifier remarkable. And so becomes the initially unorthodox solution to the problem the one that makes the most sense, namely, why wouldn't a reference level studio amplifier actually be the optimal choice also in a home setting?

An incredibly impressive combination of power and finesse, truly high-end performance for a relatively negligible price. Anyone looking for a high-end amplifier with ample power owes it to themselves to try the S series from MC² Audio. Just to paint a complete picture I might add, that I was hoping that the fans would be somewhat quieter.

They are by no means loud or overly intrusive, just something one has to get used to. Needless to say even at lower listening volumes they are no more audible. I'd also like to point out the very high build quality and the extremely smooth start-up - there is not a single pop or thump coming from the speakers.

The unassuming looks of the amplifier with the black front plate have also really grown on me.

All in all I am extremely satisfied with the S800; an end-game amplifier for me.

PROS: Remarkable, transparent sound and ability to drive anything. Exemplary build quality and a 5-year warranty.

CONS: Designed for work, not your living room; industrial styling might not be your thing. Fan could irritate.

www.mc2-audio.co.uk

S Series user review is on our website in News...

The S Series are already fitted with lower noise fans than are in use in other AB amp ranges from MC², but being linear amps with a linear supply, heat when idling still needs to be dissipated. Typically this would be in the region of 120-150W for this size of AB amplifier (S Series), and this will of course increase somewhat under load.

The higher efficiency of the Delta 20 (plus the fact that its rated output is lower) means that idling it will only be needing to dissipate less than 30W – smaller fan (which is inevitable in 1U!) but also turning slower as smaller normally means faster speed to shift any appreciable air and so more noise.

The neat option in the Delta 20 relies on the fact that there are no big heatsinks to store energy so the fan can be very responsive to load as there is little thermal inertia to worry about, and that in idle, the amp can virtually be passively cooled. Assuming that if the amp is under a heavy load, it is most likely LOUD and so you won't hear fan noise when the load reduces, the fans can also slow down quickly to a quiet level.

In a hi-fi situation, the likelihood of the amp having to deliver anything close to full power on all channels for a sustained period is small, so the low noise mode fixes the fans at a very low speed, and only allows them to increase slowly up to a set (lower than max) speed. This system works great as it hasn't throttled back on the full power being available for a short time, so dynamics and headroom aren't affected, but in the case of excessive demands being placed on the exhaust system, optical limiters will reduce the power of the amplifier for protection.

In the "non-low noise" mode, the system's aim is to keep things cool and so they can idle faster, respond faster and hit a faster max speed so allowing more power for much longer. Elegant and simple. (As a post-script to this, I wandered up to the hi-fi last night and did the dad thing of feeling the radiator next to it as I thought I could hear the central heating on which seemed odd, given that it was about 22 degrees. What I could actually barely hear was the amp fan – that's how quiet it is!)

The other important option that appealed to me, and to many hi-fi fans (excuse that pun) is having a standby mode. You'll rarely read a review of any component in the world of high fidelity that doesn't consider the concept of a "running in" period. As was pointed out by one of my colleagues, who comes from a speaker design background (Acoustic Energy) and now also produces his own ultra high end offerings (SP Acoustics) the "running in" period for speakers is a lot shorter than most people think – you are mainly loosening up any excessive stiffness due to adhesives and varnishes on surrounds and spiders, and this only need take a couple of hours, not days of use.

With electronics, the running in period is more related to the ideal operating temperature of the components. Electronic theory would suggest that keeping things as cold as possible should calm all those excitable electrons, so reduce noise, and anything that would impede signal clarity. "Hi-fi theory" is not electronic theory and so the perception that circuits stabilising over time is a convincing argument for letting things "warm up" and reach an optimal temperature. Much as a car engine will still work when cold, there will be improved performance when the oil is a little looser and the engine runs a little smoother. This is not all hi-fi smoke and mirrors – getting systems to a stable operating point is always a good thing.

Rather than having to leave the amplifier running permanently, having a standby mode means it will reduce its idle power and still be ready to operate optimally almost instantaneously. The Delta 20's auto-standby mode works a treat by taking this one step further – a period of no signal drops the amp into standby silently – the output stages are powered down, and but the output relays stay engaged so when required the amp can immediately be ready (in a less than 100 milliseconds!). The power supply is kept running so there is ambient heat warming the output devices just enough so performance is optimal from the get-go.

I was also pleased to see that this can be disabled but that remote control of the standby mode is possible, meaning easy integration with preamps or home automation systems if this is preferred. In practice it took me a few days to notice that the amp was switching to standby in between me selecting music – it's so quiet and does this so silently that only the standby LED illuminating on the front panel gave the game away!

So let's talk about music. This would be a poor review if it didn't shed some light on the audio performance of the Delta 20.

In some ways, I didn't want the amp to be great. I wanted it to be good but not as good as my Cyrus's power amp: a class AB amp with a very generous linear toroidal supply; modestly specified power delivery (in that very English way!) but capable of high current peaks.

There's no other way to put this apart from it was bloody awesome. Annoyingly, slightly devastatingly so. All my concerns that I thought were in my head were 100% laid bare as being the truth – this was just better.



Digging deep & sounding glorious - Mission 751s

If you want to skip to the end, you can read the closing paragraph as to why. If you want to read about some of the music and what made me grin and also sigh at the inevitability of NEEDING one of these amps now, please carry on...

I have listened to a lot of music over the past couple of weeks. I have actually sat down in a chair beside a pile of records, with a remote and even with some CDs and it's been a truly pleasurable experience. Without wanting to gush too much – I feel very lucky to have had this time and very lucky to have had the Delta 20 for this time. Now I just have work out how to engineer keeping it!

In recent years my "goto" tracks for great production have been by two artists – Everything Everything and John Grant. In particular "Final Form" by EE from their first album I absolutely love – it's warm, it's got a bass drum thump like a pillow against a window but still with perfect definition. The precision of Jonathan Higg's falsetto vocals sit superbly with the complex guitar arrangements that tie the whole track together. The almost inverted compression that kicks in during the chorus and disappears like vapour in the verses brings the dynamics so clearly into focus it gives you a shiver. This is lost on lesser amplifiers.

Sticking with male vocals, I often turn to John Grant and "Pale Green Ghosts" and the title track. His rich resonant vocal appears out of nowhere pinned into place by some potentially very sharp double tracked sawtooth synth lines, which ramp up in their severity as the track progresses, pulling it into tighter and tighter rhythmic spaces along with meaty bass percussion. There's a delicate electronic woodblock that bounces about syncopating with the beat and the placement of this was so precise I could have touched it. I love the use of reverb to trail off his vocal in this track and the swells of it against the lush string arrangements give real ebb and flow to the music that just makes you want to close your eyes and be enveloped.

Female vocals can be a real indicator of quality for a system (mainly for speakers and colouration issues) but more often they seem to have a closer mic'd quality that brings the singer right up to you. Eska's self titled debut album does just this, and her voice on Gatekeeper is the most amazing recording I have heard in recent years, maybe helped by the sparse production of the rest of the track with its pizzicato eastern inspired accompaniment and her unique jazz style delivery. The whole album is so unlike 21st century contemporary music – open, uncluttered and yet modern.

The Delta 20 facilitated this and had me wondering who had swapped my Missions for something a lot more expensive!

A brief nod to Feist and “One Evening” from her album “Let it Die”. The most sumptuous, velvety production with close miked languorous vocals and the almost lazy delicate percussion make this track a pleasure, but most of all with a good pair headphones. To bring this intimate quality to a pair of speakers has pretty much evaded me, with one previous exception – the Focal system in my car – I think the acoustically inert interior of most cars (as long as stationary!) and being up close and personal with the speakers makes this possible. Now I have two places to enjoy it, and don’t need to be sat on my drive with the engine off, looking like an idiot!



I should reference some of the music I played, dismayed, in part one of this review – much loved tracks that were not making me feel the love any more. Joni Mitchell's “Hissing of Summer Lawns” with its languid title track is so soft and laid back with her trademark minor vocal harmonies that somehow unsettle the torpor needs a depth and dynamic quality that was now missing from my Cyrus. There is no forced dynamic in this track – no plunges into silence to highlight that which follows, there's just an element of effortless surprise that happens during “Harry's House” and the segue into “Centerpiece” that can make me shudder. It's dark and it's a little chilling but it's also so safe and comforting – the feeling of ill at ease. That may not be selling the music very well, but it can easily be lost and it was there in spades once more.

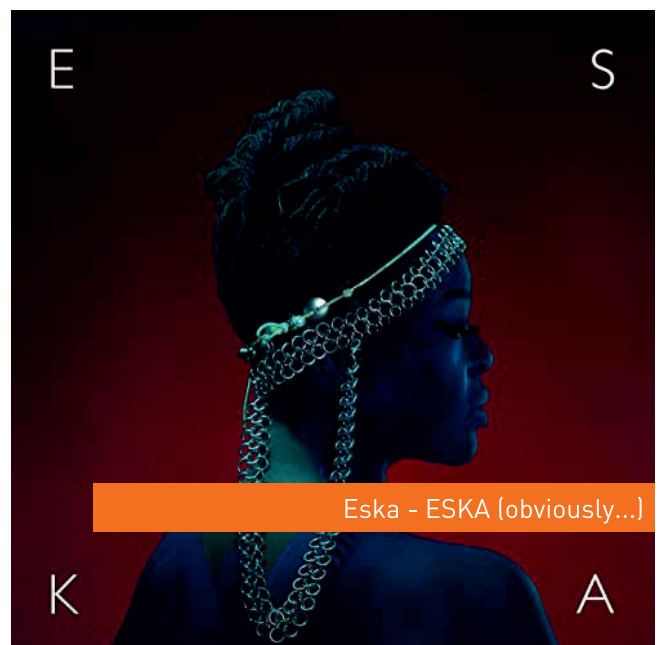
The same unsettling feeling exists with Kate Bush and especially if you sit and listen to the entire second side of “Waking the Witch” from the Hounds of Love. If I am honest, this used to scare the crap out of me growing up – this album was released about the same time as a magazine doing the rounds in the UK called “The Unexplained” which took as its subject matter each issue some topic that would now be called an urban myth – spontaneous human combustion, poltergeists, voices from beyond the grave...

that sort of thing – the “Voices from Beyond the Grave” issue came with a free flexidisc that spooked me so much I buried it in the garden!

“Waking the Witch” is such a masterpiece of production, and my favourite track of all “Watching You Without Me” is so melancholy and yet creepy it's been years since I felt slightly compelled to turn it off before the end, but you guessed it – I shivered and did just that – superb!



Finally, let's not get too stuck in the recent past with worthy choices – let's talk Mura Masa, Slowthai. “Doorman” by Slowthai simply rocked – I was back to remembering how I used to be amazed by the amount of air my Missons could shift without breaking a sweat and that uber-tight control and depth was back – I found myself walking about the house, marvelling at how solid and deep the bass on this and Mura Masa's collaboration with Slowthai on “Deal Wiv It” sounded. Big smiles on my face. Play it again. And maybe once more.



Everything goes through your amp. Everything comes out of your speakers. Changing your speakers is not likely to make your amp sound better. However, I can confirm that changing your power amp can most definitely make you fall in love with your speakers again.

The Delta 20 took control of my Mission 751s like never before digging down to produce the lushest bass with control that meant the woofers seemed to barely move. Dynamics were breath-taking – with a power supply designed to allow for long term delivery of power way in excess of any home system it really shows. The care taken with the balanced (pro) inputs shines through with retrieval of detail that has made me relisten to tracks again and again just for sheer enjoyment.

And surely sheer enjoyment is what your hi-fi should be all about – revisit your music collection and fall back in love with your stereo – you need to hear the Delta 20.

<https://www.mc2-audio.co.uk/products/delta-series-amplifiers/>



“...and surely sheer enjoyment is what your hi-fi should be all about. Revisit your music collection and fall back in love with your stereo. You need to hear the Delta 20.”
