

# Halcro Logic MC20 Amplifier

January 17, 2010 · [1 comment](#)

in [Amplifiers](#)



by **Andy Fawcett**

*“Some are become great, some achieve greatness, and some have greatness thrust upon them.”  
Shakespeare*

Let's start with a simple question – what do you want from a power amplifier? While you're thinking about it, I'll give my answer. Firstly, interaction is for source components; I don't want anything more than a switch to turn it on. Secondly, the smaller and more discrete the better; I don't need a Greek sculpture or a surrogate Christmas tree. Plenty of power, and the ability to drive an awkward load, are mandated by my speakers. I'm as green as the next guy, so low energy consumption (and its corollary, low heat output) eases my conscience and improves my listening environment. Sonically, I do not require it to add warmth, even-order distortion or colouration to the sound; in fact, I don't want to 'hear' it at all. I expect it to function reliably, year after year, without parts replacement. Ultimately, then, I have the simplest of requirements – I want my power amplifier to disappear! Oscar Wilde would surely have approved.

That's all easily said, but behind the glib statement lies something more. If the amp compresses dynamics then I will hear it and be conscious of its presence; likewise if it lacks transparency, diminishes the soundstage, or otherwise imposes a fingerprint upon the music. This appeal for the amplifier to 'disappear' is, then, essentially an exhortation to perfection ... which explains why I've had so much trouble finding a replacement for my own elderly unit, and also why the new breed of Class D amplifiers have fired my imagination. A number of worthy contenders have been enthusiastically reviewed by this magazine – most recently, the [NuForce Ref-9 V2SE](#) and budget-priced offerings from [SeymourAV](#) and [Wyred4Sound](#) built around B&O's ICEpower module – and it was clear that they ticked virtually all of my boxes. Why, then, should my colleagues have all the

fun?! Arranging to hear a Class D amp for myself proved something of a dilemma ... until I finally realised that the granddaddy of them all was, figuratively speaking, right here on my own doorstep!

Halcro (based in Adelaide, South Australia) has always tended to go about its business quietly and let the products do the talking. In the last year or two, though, the company has been so quiet that rumours of its demise had started to circulate online. The fact is that, after a period of uncertainty, Halcro has been bought out by South African company Vivid Audio (makers of some rather striking loudspeakers). Refinanced, reinvigorated and with mercurial design genius Bruce Candy back in the fold, we will undoubtedly be hearing more from them in future. For my part, the first time I encountered the Halcro name is indelibly etched upon my memory. While surfing audio websites back in late-2002 (everything I know about patience, I learned from that accursed dial-up connection ...), the implausible headline “Australian company makes world’s best amplifier” slowly materialised on my screen. It was a link to Stereophile’s famous review of the amazing DM58 amp and, almost a decade on, no competitor has come close to rivalling its astonishingly low measured distortion. Indeed, it must be conceded that, of all the firms who could claim to produce the ultimate amplifier, only Halcro has hard evidence to support the assertion. The descendents of the DM58, plus a matching pre-amp, now form Halcro’s *Reference* series, with price tags that place them far out of reach of the ordinary audiophile. However, a range of multi-channel power amplifiers using the company’s proprietary Class D technology was launched back in 2003, under the Logic line of Home Theatre components. Whether due to the newness of the technology or the antipathy of audiophiles to its ‘Home Theatre’ label I don’t know, but the 2-channel MC20 apparently took several years to attract much attention. Typically for Halcro, it remains in its product line unchanged; not given to “Mark II” or SE upgrades, the company tends to do it once and do it right.



Halcro's approach to Class D amplification is technically unusual – and, rather than a ham-fisted attempt to paraphrase it myself, I'll simply refer those interested to the [Lyrus page](#) on the company's website. Each Lyrus module is a complete single channel of amplification, with a toggle switch to select between single-ended or balanced input and a pair of conventional multi-way speaker terminals. Continuing Bruce Candy's crusade against distortion, which reached such a remarkable zenith in the *Reference* range, it is claimed that Lyrus' unique circuitry produces only a fifth to a tenth the distortion of competitors' Class D amps, at high power outputs; the quoted full-power THD figure is a remarkable <0.007% at 1kHz. While we're on the electrical specifications; power output is 400W RMS continuous into 4 ohms, the -3dB points are 5Hz and 45kHz, input impedance is 10k ohms on both inputs, output impedance below 80 milliohms, efficiency given as 94% at close to full power, and input sensitivity is not quoted (but appeared similar to the amps I compared it with).

The *Logic* range of amplifiers offer 2, 3, 5 or 7-channels of amplification by installing the requisite number of Lyrus modules into a common chassis. Hence, while the modules themselves have the compact form factor typical of Class D, the MC20's profile (7"x17"x16" HWD) and weight (46.5lbs) are more akin to a conventional muscle amp. Its power supply appears substantial, and is certainly overspecified given the high electrical efficiency figure quoted earlier. Construction of the casework is more complex than might be expected, and retrofitting additional amplifier modules would certainly not be a simple undertaking. Fit and finish is, as you'd expect from Halcro, **impeccable** – available only in silver, an inlaid gold trim line on the front panel adds a touch of class and, though the styling motif common to all of the *Logic* components appears somewhat aesthetically random to me, it does add a degree of visual relief for those who might otherwise be offended by its slabiness.

While on the subject of the case, my interest was piqued by concerns raised in another review over the resonant top plate. Running a fingernail over the cooling slots does, indeed, cause it to ring like a bell ... but the lack of energy in any real-world music signal at such an elevated frequency will ensure that the resonance is never excited in practice. Placing a hand upon the amp while music was playing suggested that the case is actually *less* resonant than the norm; which, given the evident care with which Halcro build it, is only as you'd expect.

Liberated from its double boxes, the MC20 and I didn't get off to the best of starts. Firstly, it was too large to fit in my rack, requiring partial disassembly of same to get cables to it out on the floor, and preventing use of my beloved MAC Burly power cord (an HC cord deputised ably). Secondly, having spade terminations on my speaker cable required that I use the horrible, European-mandated shrouded terminals; Halcro can't be blamed for the need to fit those, of course, but the left channel points the cable directly at the adjacent power socket, while the right module's terminals also exit to the left, forcing that cable to make an awkward 180° turn. How much of an issue this is depends upon the stiffness of your cable (not a euphemism!); banana plugs are a complete solution. Otherwise, a rear-panel rocker switch puts the amp into standby, with a gentle press of the electronic switch on the front panel causing the red LEDs (one for overall operation, plus status indicators for each channel) to turn blue, and sending a muted switch-on thump through the speakers. If left permanently in standby mode (which I did - power consumption is 14W), just a few minutes of warm-up seemed sufficient for the amp to give of its best. The efficiency of Class D operation, coupled with a case that offers plenty of ventilation, ensured that the MC20 only ever got mildly warm in use, despite the high ambient temperature and humidity of an Australian summer.

## Listening

The owner's manual states that the amp is preconditioned at the factory and requires no further burn-in. It did, indeed, sound impressive straight out of the box; most particularly, a fabulous sense of intensely-focussed sounds emerging with stark clarity from a huge, pitch-black soundstage. While subjecting familiar discs to this unique (in my experience) presentation was engagingly novel, there were several shortfalls apparent in absolute terms; the sound was lean and bass-light, with an almost self-conscious politeness, while the extreme level of image focus was clearly unnatural. After having been fully powered for several days, though, the amp's character changed markedly and very much for the better; its sound bloomed, becoming much richer, more colourful and musical, and it lost its very overt (and, again, unnatural) sense of hyper-clarity. The bottom line is that if you have the amp on home demo, be sure to keep it for a few days; some burn-in is still required.

As my first experience of Class D amplification at home, I brought some preconceptions to the MC20, and it surprised me by sounding like a very good amplifier ... period. Nothing in its blend of qualities drew attention to its mode of operation, or required any excuses. Its sound was, at all times, smooth, composed and 'musical', very easy to relax into and enjoy. This almost limpid musicality, which I encapsulated with the ungrammatical but flattering synonym 'un-hifi-ish', was indeed unexpected – a prejudice derived from the common 'digital' misnomer for Class D operation, no doubt. Its excellent detail resolution and unusually good layering of depth perspectives in the soundstage were achieved without any brightness, image etching or exaggerated precision. The MC20 was deathly-quiet; with the volume turned up and nothing playing, no trace of hum or hiss could be heard from the speakers. Its bass was taut, articulate, extended and powerful. Its transients were effortlessly clean and fast, with no overhang. Unlike some muscle amps with similar power rating, it did not wear its potency on its sleeve, yet still its dynamic headroom appeared to be unlimited. It also proved particularly adept at retaining its poise when musical programme made the transition from simple to complex, something that many amplifiers struggle with. Its presentation had an organic wholeness, founded on a tremendously open, uncongested midrange and great top-to-bottom consistency; I could detect no emphasis or unevenness anywhere across the frequency range. That may be part of the reason why the amp's demeanour seemed slightly on the cool, reserved side – it lacked any of the quirks or aberrations that give some amps such a pronounced sense of character. Don't mistake that for criticism; my belief is that 'character' is often better appreciated in the short term than the long. I will say, though, that I preferred the MC20 with the more lively-sounding of the two CD players used during the review period.

What we have, then, is an excellent all-rounder. This amp does nothing badly, and I find it hard to imagine anyone taking a strong dislike to its sound ... which is not to say that I didn't have a couple of issues with it. In my system, the MC20 had clarity to burn but lacked the last degree of transparency – the delicious palpability to the image that allows you to close your eyes and believe you're really there. My acid test for this is naturally-recorded birdsong; with my own amp I could easily imagine myself transported to the rainforest, yet the Halcro, despite resolving and soundstaging the recording superbly, somehow held it at a distance from me. Fortunately, I took the trouble to audition the MC20 in a friend's system (where it replaced a much more expensive amplifier), in which setting it had all the transparency you could wish for, so I'm happy to accept this reservation as a specific synergy issue with my gear. Both of my other concerns were still manifest, though. Firstly, there was a slight softness – a lack of aggression or 'slam' – on low frequency tones with a 'sharp' leading edge; kick drum, electric bass and synthesizer. It was never apparent in classical music, and in other respects the reproduction of low frequencies was very fine, so whether you notice this at all will likely depend on your musical preferences and the capability of your speakers in the bottom two octaves. It was probably the reason for my earlier, subjective observation that the amp never sounded quite as overtly powerful as its rating (which measurements

have proven to be conservative) suggested it might. I also felt that there was a mild lack of timbral definition in the bass – not to the extent of confusing electric and upright instruments, more in the way of blurring the subtle distinction between Fender’s Jazz and Precision bass guitars – but that turned out to be a case of not seeing the forest for the trees; both of the (high-power MOSFET) amps used for comparison had considerably more timbral colour right across the range, and more texture, sparkle and energy in their presentation too. This lack of timbral colour gives a dark hue to the MC20’s sound, which invested many classical pieces with an appealing sense of drama and portent, but was also partly responsible for the slight diffidence or politeness in its presentation. Those looking for a lush, tube-like midrange will not find it here. In fairness, though, these issues were only brought into stark relief by an A/B comparison; listened to in isolation, the MC20’s sound was thoroughly convincing on its own terms.

Overlooked to this point is a unique feature of the amp, one to enthuse the techies and baffle those of us who seek in music a respite from the horrors of the computer – Halcro’s Reliability Assurance Service (HRAS). Install a software program on your PC, cable the amp to your home network via its Ethernet port (there’s also a RS232 port, for more intimate liaisons with the PC) and the MC20 can notify Halcro of an impending failure in one of its modules, potentially before it even happens! Very 21st Century ... though I can’t help but suspect that such a failure is particularly unlikely to befall the MC20. Not that it didn’t give me a scare along the way, mind. Playing the opening track from Craig David’s *Born To Do It* CD for my daughter, after 30 seconds the right channel’s status light flashed red and it shut down ... returning to action a few seconds later, but again shutting down after another half-minute. Every time I played that track, the outcome was the same ... yet no other track on the album, and nothing else I spun over the months I had it, ever caused the MC20 any hint of distress. In due course I stumbled across the cause – the shelved-up setting of the high frequency contour on my electrostatic panels was presenting a load of well under 2 ohms in the high treble. Set back to its nominally flat position (which still left the impedance around the 2 ohm mark), young Craig could be enjoyed in all his glory! Few indeed are the commercially available loudspeakers that present such a difficult load, so it shouldn’t give any general grounds for concern; Apogee Scintilla owners will need to look elsewhere. At least I can report that the amp’s protection circuitry functions elegantly and effectively!

## Conclusion

The still-youthful marketplace for Class D amps has split into two distinct groups; those based on a fairly straightforward implementation of B&O’s ICEpower module, and a much smaller clique offering a proprietary design from the ground up, this including NuForce, Halcro and Audio Research. The former can (so my colleagues affirm, and I believe them) provide a lot of amplification for the money; but if you really want to shoot for the sky then you generally have to do it yourself. The MC20 is my first hands-on encounter with Class D, and I was sufficiently enthused to belatedly attempt to score some NuForces for comparison ... though a shortage of the brand-new V3 board doomed it to failure. A shame, because it’s a contest I’d certainly want to read about.

As a package, there is much to admire in the MC20. It is beautifully built and finished, thoughtfully engineered, and there is no higher compliment I can make of its sound than to have labelled it “musical”. Is it perfect? Of course not – if it were, there would be no need for Halcro’s *Reference* series. Interestingly, my main criticism – a lack of timbral colour – is, if memory serves, the same reservation that colleague Anthony Kershaw expressed of the NuForce amps, so maybe a pattern is emerging. My personal preference leans towards a more extrovert, energetic presentation; yet I greatly appreciated the MC20’s very fine resolution and soundstaging, its top-to-bottom consistency and its sheer unflappability. System matching will be the key, and I can imagine it working superbly in a system that is slightly bright (which, to my ears, is most – so that’s no backhanded

compliment!). While I could not compare it directly to similarly priced non-Class D rivals, I have heard a few of them in recent times (both tube and solid-state) and place sufficient faith upon my audio memory to suggest that the MC20 is likely the pick of the crop. If you're shopping for a power amp in this price range, audition of the MC20 is mandatory.

There's one more message I hope you'll take away from this – Halcro is back! From top to bottom of the company, there's an effervescent pride in what they've achieved and a healthy determination to remain at the top of the heap. Blessed with new owners who share their ambitions, they plan to push the envelope again and, with Bruce Candy leading the charge, I'm guessing the result will be spectacular. Sure, whatever it is they come up with I won't be able to afford; yet we must cherish this industry's true innovators, because where they lead others are sure to follow, and that process inevitably results in better sounding gear for all of us. Just for a short while, though, when a fellow enthusiast queried what amp I was using, I've been able to casually reply “Halcro” – and savour that look of quiet admiration (or is it envy?). I know ... I'm so superficial!

### **Associated Equipment**

Analogue: Linn LP12 / Lingo PS / Ittok LVII / Audio Technica OC30

Digital: Meridian 507

Amplification: Custom-built AC Magnum dual mono P200 pre and power

Speakers: Acoustat Spectra 1100 hybrid electrostatics

Cables: MAC Reference & Mystic interconnects / MAC Shotgun speaker cable / MAC Burly, HC & Digital power cords

Accessories: Sound Mechanics Performance isolation platforms (on each source component) / Target & Sound Organisation stands / Aerolam & RATA Torlyte shelves / Herbie's Audio Labs isolation products / Eichmann Toppers / Caig ProGold

### **Halcro Logic MC20 Amplifier us\$ 5,490.00**

Manufactured by Halcro International

Suite 1 Level 1 8 Greenhill Rd

Wayville South Australia 5034

Telephone: +61 8 8238 0807

Facsimile: +61 8 8238 0852

**Website:** [www.halcro.com](http://www.halcro.com)

**Email** [info@halcro.com](mailto:info@halcro.com)