

Link to original website review: <https://www.hifi-advice.com/blog/amplifier-reviews/power-amplifier-reviews/halcro-eclipse-stereo-power-amplifier/>

Review organized by Marc Loubeau / [Prestige Audio Diffusion](#)

Review sample kindly supplied by [Terrason Audio](#)

**Retail prices in Europe, incl. VAT:**

**Eclipse Stereo €47.900 (powdercoated finish)**

**Eclipse Signature Stereo €55.900 (premium high quality painted finish) (as reviewed)**

### **Halcro History**

Halcro was the brainchild of Bruce Candy, a renowned physicist and inventor. He invented an audio power supply and amplifier topology that all but eliminated distortion. Halcro, which had become a subsidiary of Bruce's metal detection business, Minelab Electronics, stunned the world with their first amplifier, which had distortion measured in parts per billion at full power.

Since Stereophile's 2002 gushing review of the dm58, numerous awards and ultra-positive reviews soon followed, and Halcro grew into one of the world's most respected hi-fi brands. Over the years, a series of improvements were made to the dm58, culminating in the dm88 monoblocks and the dm38 stereo amplifier. The family was later joined by the dm8 and dm10 preamplifiers and a foray into home theatre with the MC series of multichannel power amplifiers.

In 2008 Minelab was acquired by Codan, a large military communications company, because of the synergistic fit with their mine detection capability. Codan had no interest in Halcro, so the company was retained by the original shareholders and shelved. This was in part due to the fact that what Codan was really buying was Bruce Candy's genius and Halcro was seen as a distraction for his time.

Halcro briefly licensed their products to be manufactured by Vivid Audio, but unfortunately, this ended with the onset of the Global Financial Crisis. Subsequently, the Halcro assets were mothballed and left in storage.

At some point, the owners of Magenta Audio, a specialist Australian Hi-Fi importer, became aware that Halcro was intact but lying dormant in a

warehouse just on the other side of the city. Longwood Audio was founded by Magenta's Dr Peter Foster, Mike Kirkham, and Halcro's former lead engineer Lance Hewitt. Soon, a deal was negotiated to acquire all the assets of Halcro, including the brand, the considerable patent portfolio, stock and tooling. This brings us to the brand's revival in 2023. The new Halcro team has spent the past couple of years exploring every aspect of the unique platform for possible improvements, which culminated in the new Eclipse power amplifier.

### **Eclipse Power Amplifiers**

Available in both stereo and mono versions, the Eclipse power amplifier enjoys a completely redesigned input stage, further reducing non-linear effects and distortion. There are multiple independently tracking power supplies, superior internal shielding and a higher output power. The distinctive Halcro aesthetic is retained but is updated with smoother and gentler curves to offer a new, modern, 'lighter' take, which is said to contribute to even better performance as the new, machined-from-solid casework reduces microphonics.

Halcro amplifiers are said to offer very precise imaging due to their unique ability to avoid adding 'ghost' notes that are thrown into the mix by the non-linear distortion of a conventional amplifier. Lack of distortion aside, one of the key aspects that defines Halcro amplifiers is the way they maintain the phase coherence of the signal source and thus the relative timing of various notes or tones within complex music.



### **Technical Aspects**

The Eclipse power amplifier is comprised of four heavily shielded individual compartments: a power supply unit, an input amplifier section, a power amplifier compartment, and an output filter compartment. These individual sections have all been located in ideal positions with the interconnecting cabling neatly located in the two side pillars that also function to disperse heat from the power amp section. One might expect such large "fins" to disperse a lot of heat but in practice, the amp only ever gets moderately warm to the touch, certainly never hot.

The precise Halcro schematics are a close-guarded secret. Key component markings have been removed and some boards are coated in epoxy to protect the intellectual property. But in essence, Halcro Power Amplifiers are Solid State Class AB FET designs with a specific two-stage PFC switchmode power

supply. The power supply employs active power factor correction, which minimizes mains current harmonic distortion. It offers less than 100 parts per million mains hum and ripple on the amplifier power rails. The supply section has two variants: the 110V model operates from 100-120 Volts R.M.S, 45-65Hz, and the 240V model operates from 220-240 Volts R.M.S, 45-65Hz.

The first switched power supply buffers the amplifier from the AC power by generating a very high DC voltage, from which the second switched power supply delivers the rail voltages for the power amplifier. The power amp stage uses complementary FETs and a reasonably high quiescent current, and although no information is supplied regarding feedback, the output impedance is said to be vanishingly low. In and of themselves, these components may not seem all too radical. What makes the concept truly unique is the way the building blocks are put together, physically and electrically, using the Halcro-proprietary distortion compensation topology.



For reliability, all semiconductors in the power supply and amplifier are at least industrial grade, and all electrolytic capacitors are rated to 105°C. The critical audio path employs only highly linear resistors and MKP10/ FKP1 capacitors. Six-layer PCBs are used in the power amplifier to minimize stray magnetic fields and define voltages accurately. Four-layer PCBs are used in the power supply to minimize E.M.I. and voltage transients, which improves reliability and power efficiency.

The Frequency Response is 7Hz – 90kHz within -1dB and 3Hz – 215kHz within -3db. The maximum slew rate for both small signal and the maximum output voltage is 100V/μs, which is equivalent to a maximum output voltage at approximately 250 kHz.

To ensure trouble-free operation under any circumstances, the Eclipse amplifier is exceptionally well-protected. The power supply is protected against most mains transients. It will cut out if common faults are detected, such as over-voltage, master clock at incorrect frequency, or excessive temperatures. The power amplifier section is short-circuit proof and protected against most input overloads. It has over-current limiting and gradual power limiting if the amplifier becomes too hot. It will cut out if a continuous DC offset appears on output or if the output current continuously exceeds 12 A average over a period of a few minutes. The latter may seem like a compromise but Halcro has rigorously tested this and confirmed that this condition never occurs in normal music reproduction, hence, it poses no limitations.



## **Stereo/Mono**

The Eclipse Stereo produces 180 watts per channel into an eight-ohm loudspeaker and 350 watts per channel into four-ohms. The Eclipse Mono produces 300 watts/per channel into an eight-ohm loudspeaker, 550 watts/channel into four-ohms with a peak power of 2.1kW.

The Eclipse Stereo offers three input modes:

- An unbalanced voltage mode input with an impedance of 22 kOhms
- A balanced voltage mode input with an impedance of 22 kOhms + 22 kOhms
- A minimal path voltage mode with an input impedance of 660 Ohms

The Eclipse mono has the same inputs and adds a current-mode input with a 60-ohm input impedance (infinite-impedance current source).

For this review, I used the balanced input exclusively.



### **Aesthetic**

There's no way around it: Halcro products look truly unique, and chances are they are quite the opinion-dividers. The design has a strong Sci-Fi vibe, and I love it. There's no other place for this amplifier than the floor, but even then, placed between the two speakers, the amplifier is visually dominating.





At 40 cm wide, 40 cm deep, and 79 cm tall, the Eclipse is significantly wider and twice as deep as a Magico S1 MkII speaker and taller than the 3-level Artesania Exoteryc audio rack, which it almost completely blocks from view. So, this is a beast of an amp, but even so, I absolutely dig it. This is an amplifier that makes no excuses for what it is: a no-holds-barred design where form 100% follows function. But in spite of its heft, the Eclipse is beautifully elegant.



The amp comes in a very clever 3-piece flight case with detachable sides to allow it to be installed without having to lift it all the way up and out of its case. Given its weight of 62 kg, however, you better bring an extra pair of strong hands to help unpack and install it. Once the amp is on the floor, though, it is very easy to move around by one person, especially on a laminate floor.



### **Finish**

All models are available in two external chassis finishes. The Standard version's chassis is powder-coated. The Signature version is available on special order. For this version, the chassis has a special, high-quality painted finish. This finish is very expensive to fabricate, which explains the 8.000 euro price difference.

### **Future Products**

Halcro is also working on a new preamplifier, a successor to the DM10, called the Equinoxe. As it stands, I have no further information on it, but I'm betting that it will also be something very special.



### System Context

The Halcro Eclipse stereo power amp will be listened to in my [main system](#), consisting in the basis of the [CH Precision C1.2](#) DAC, [L1](#) preamp, and [A1.5](#) power amp with the Magico S1 MkII speakers. The main digital sources are the [Grimm MU1](#) and [Antipodes Oladra](#) music servers and the [Aqua La Diva M2](#) CD transport. Speaker cables used are the [Jorma Unity](#). Interlinks are the balanced (XLR) [Driade Flow Link Reference 808](#). The CH system sits on Artesania [Exoteryc](#) and [Aire](#) racks, while the digital sources and most review components sit on [HRS EXR](#) racks. Due to its size, the Halcro amp will simply be placed on the floor.

### Setting the Stage

The only occasions where I heard the original Halcro amplifiers are show demos, such as the ones Terrason owner Bert Bazuin hosted with Vivid Audio at the iEar show, among others. As such, I don't have the required personal knowledge to make any references as to how the old and new models compare.

To whet the appetite, Marc Loubeau, the organizer of this review, mentioned that the new generation offers all the qualities of the previous models in terms of transparency, absence of distortion, etc, but infused with a more "musical" and emotional touch. He is not alone in feeling this way, though, as this

sentiment can be read in more online publications, which leads me to believe that some may have found the original model to sound somewhat sterile. Well, upon listening to the Eclipse in my own system, I can say right away that there is absolutely nothing sterile about the new Halcro amplifier, quite the contrary!

### **Warm Up**

I was forewarned that the Eclipse amplifier needs some warm-up time after having been fully switched off and cooled down entirely. Bert Bazuin of Terrason Audio mentioned it really needs about one day to get on steam fully, adding that one might even wonder what makes the amplifier so very special when listening to it after it has just been switched on. Once it has reached its optimum performance level, it will retain it. Although the amplifier can safely be left switched on indefinitely, one can also use the pneumatic switch on the underside of the top module to activate standby mode, after which it recovers in 30 minutes to an hour, which is entirely normal for a power amplifier.



### **Listening**

Of course, despite the warning, I could not stop myself from listening to the amp immediately after connecting it and powering it up in the morning right after it was delivered. Coming from the CH Precision A1.5, using the same power cable and interlink, it was certainly no letdown, far from it, in fact! The Halcro Eclipse performed more or less at the level of the A1.5 despite not

being warmed up. Neutrality, linearity, transparency, low-level detail, and refinement, all these boxes were ticked right away. Honestly, it sounded really good. But I had to admit, beyond this, nothing stood out to make it extra special. Of course, the CH A1.5 already sets a very high standard, but surely, I felt, the Halcro must have more on offer. Fortunately, I was warned not to reach any conclusions prior to the amp having properly warmed up.

While the amplifier was left switched on, I tended to other business in the other room, returning to the audio system every now and then. Sure enough, with every hour it played, it got lush, airier, and more refined. After a few hours, I noticed a major increase in fluidity, and later in the evening, the sound was beguilingly liquid and continuous. "Effortless", in a word.

The next day, the amp was nice and warm—not hot, but clearly fully warmed up. Immediately after starting the first track, it was evident that the deep warming up had elevated the amp's performance to a level that I had not yet achieved in this room. Just as Bert had indicated, the "specialness" comes after a day of warming up. But what precisely is this "specialness," you ask?

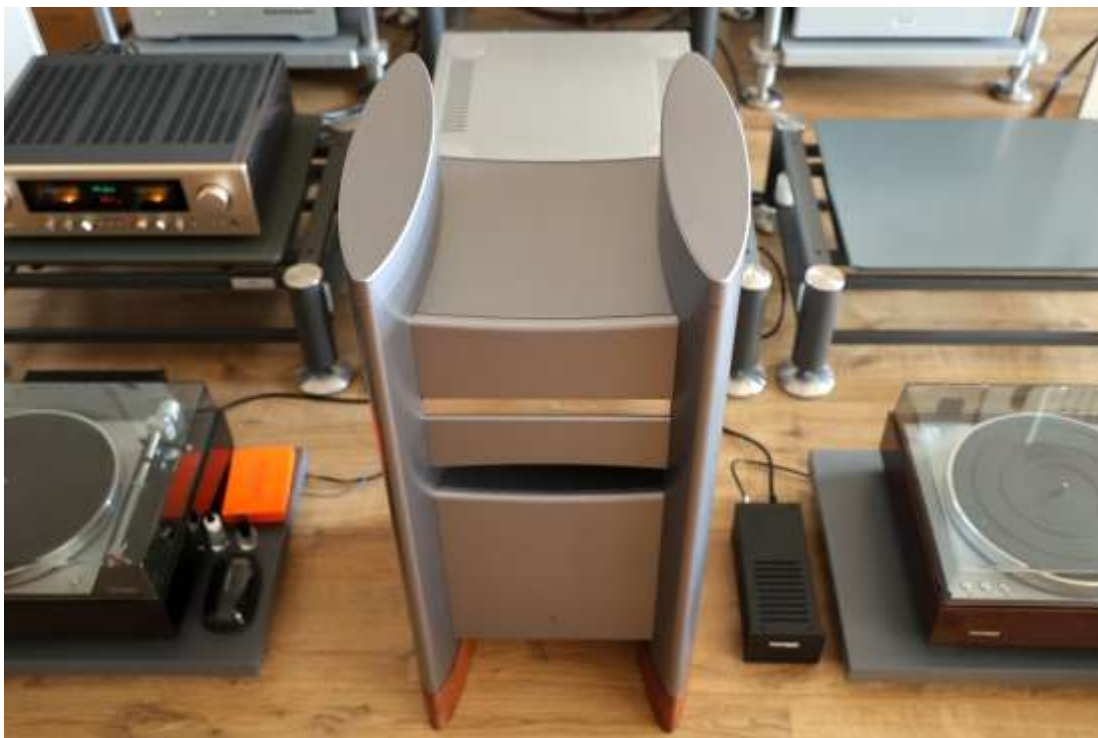
I'm glad you asked!

But before I get to that, let me get the usual audiophile parameters out of the way. Much to the amplifier's credit, I can be brief, as it simply matches or even "eclipses" most of the competition in very nearly all the usual parameters. Neutrality, linearity, low-level resolution, transparency, focus, refinement, air, spaciousness, and the list goes on. In all of these parameters, the Eclipse equals or betters any other amplifier I heard so far, including the CH. But this is where it gets really interesting as the amp takes all these qualities and adds unbelievable flow and what seems like eternal sustain. With typical transistor amplifiers, especially those with many parallel output devices, intermodulation distortion spoils the party by adding smear and making successive notes blur into one another. The opposite can also happen, with a distinct black hole between successive notes, which can be interpreted as a lack of self-noise but, in reality, could potentially be a result of limitations in the design. In real life, there is no intermodulation distortion, and there is never 100% silence between any two sounds. Rather, the sounds tend to linger on and decay naturally. This is where the Eclipse truly shines: instead of the aforementioned blurring on the one hand or black-hole choppiness on the other, it sounds utterly natural and gloriously non-transistor-like. The Eclipse has absolutely

astounding low-level resolution but presents it in a natural, decidedly non-electronic, fully organic manner: fluidly and continuously and never etched.

If I had been seated in this system without knowing better, I would not have guessed a transistor amplifier produced this ultra-liquid and free-flowing performance, let alone one with a complex switching power supply and vanishingly low distortion. Adding to this, the amp has an unusually high damping factor but portrays absolutely zero of the typical aspects one would normally associate with such a design, such as overdamping or suffocating control. Evidently, all these properties do not necessarily lead to an aseptic performance but can also achieve the inverse!

There is an utter absence of transistor-like behavior, and the Eclipse excels in aspects that I would normally ascribe to a tube amp but without any coloration, thickness, slowness, or added bloom. Oh, there's rich texturing and deep tonal saturation, but only when this is in the recording.



When the Eclipse was just powered on, it performed more or less on par with the CH A1.5. But when comparing it now, fully warmed-up, the Eclipse makes the A1.5 sound comparatively coarse and dry and, most of all, rather matter-of-fact. This came as quite a shock. So far, the A1.5 has made all other transistor amplifiers sound like, well, transistor amps. More specifically, one of the CH amp's key strong aspects was that it so successfully avoided sounding like a transistor amp and offered fluidity, refinement, and air not normally

available from a big transistor power amp. The Halcro is tonally just a little bit warmer but otherwise just as neutral and essentially free of inherent character. It sounds relaxed yet nimble, fast, and spritely. In addition, it is even silkier, more free-flowing, and incomparably more liquid. Even difficult recordings with many overlapping instruments in complex arrangements retain perfect definition and despite its relaxed and fluid nature, the amplifier simply refuses to clog up. All this amounts to a sonic rendition that is, perhaps most of all, natural and lifelike.

This made me think of another unusual amplifier, which is the [SAEQ Hyperion Ge](#). Don't get me wrong, this humble amp is in many ways not the Halcro's equal, and certainly not in terms of power, but it does resemble it in terms of the overwhelming sense of liquidity and naturalness, and in that case, also coming from a solid-state design, albeit one that uses Germanium transistors.



There's also something special in the Halcro's bass. It's not thicker, louder, quieter, or leaner, but at once lush and free, as well as highly detailed. In the lowest bass, I heard subtle details like the scraping or plucking of strings, now more present than ever. But, again, not forceful or overaccentuated, but in an entirely natural manner. The bass does not go lower, but the amplifier has a way of unveiling hitherto unheard details, which makes it sound even more linear and revealing than the CH, even though it does not behave any more explicitly.

While on that subject, the Eclipse possesses amazing resolution and unveils hitherto unheard details, but in comparison, and using the same cables, the Eclipse does feel a little rounder on the transients, less incisive in the bass, and perhaps a bit over-polished and certainly more reticent in its expression and impact than the A1.5.

The redeeming quality of the CH is that it has more grip in the bass and sounds more articulate and expressive. But even so, the Halcro is dynamically easily as capable.

Now, I mentioned using the same cables so that the two amplifiers are judged on equal grounds. Although... the CH was not placed on the floor, it had the advantage of the Artesania Aire platform and its Krion linear arms. But never mind that, as the single tweak that I did next would prove transformative for the Halcro.

### **The Unexpected Influence of the Power Cable**

So, I make no secret of using Belden power cables. I use these in addition to GigaWatt and other cables for certain components, such as the CH preamp and DAC. But the digital components, as well as review components, usually are powered using the Belden cable. The type I use is the well-known 14-3 SJT series 19364. But a little-known fact is that this cable comes in three variants. The only time I encountered the first variant was with cables that came with Jeff Rowland amplifiers. They looked just like all Belden cables but were unshielded. The second variant is probably the one that most people with over 10 years of audiophile experience know and use, with a foil shield. The third (and still current) variant has all the same properties as the second variant but uses thinner conductors and, contrary to the second variant, specifies this on the outer sleeve as 2.08 mm<sup>2</sup>. Indeed, the 2,5 mm<sup>2</sup> cable has "silently" been reduced to a smaller diameter. Leaving out the first variant due to its rarity, there is indeed a sonic difference between the second and third variant. The second variant (with the thicker conductors) sounds more relaxed and free-flowing, while the third variant (with the thinner conductors) sounds tighter, more incisive, and more explicit. Otherwise, the two are still recognizably "Belden-like" in their overall behavior. Over the course of time, I all but phased out the second variant and predominantly used the third variant so that my components, as well as review components, are treated equally.



I am explaining this because my CH amp is the exception to the "Belden rule" in that I feel it sounds most well-balanced with the second Belden variant. Evidently, the CH amp's tightness and control is perfectly offset by the power cable's relatively more relaxed nature. But because the CH amp used this cable variant, the Halcro had to use the same cable in the name of equal grounds. As we know now, the Halcro is much more fluid and relaxed than the CH, thus, the next logical step was to swap its power cable to the third variant.

Sure enough, as soon as I had swapped the power cable, with the amp still warm but no further running in, the difference was clear as day. Gone were the mild polished nature and reticence, replaced with a performance that was still organic, liquid, lush, and gently sweet but every bit as intimate, impactful, and communicative as the CH's.

The Halcro's bass is not of the "chiseled-from-granite" kind, which is one reason it sounds so organic. In this area, the A1.5 remains arguably, at least technically, more impressive, although this advantage in the bass carries on through the entire frequency range, leading to relatively "square" treble and an overall more technical presentation than typical tube amplifiers... or indeed the Halcro amplifier. Previously, I had assumed that when treble was exceedingly fluid, it had to be the result of smear and inaccuracy. While this is probably true in many cases, it does not apply to the Halcro. The Eclipse allows me to hear more low-level detail, not less! And yet, it is supremely liquid.

Otherwise, the return to my own amp was rather sobering... All of a sudden, the magic collapsed, and the performance became matter-of-fact. Oh, it was still very, very good, but relatively "blunt" and considerably less liquid. In a word, the CH was more *mechanical*, with a strongly reduced sense of naturalness. It was as if I went from a superb tube amplifier with infinite resolution, engulfed in an emotionally transformative performance, to a really good transistor amplifier, with the emotional content much reduced. Rhythmically and dynamically, the A1.5 still ticked the boxes for me, but the human, intimate, organic, mesmerizing components just did not come across as vividly anymore.



## Conclusion

Honestly, I did not think the moment would come that another transistor amplifier would put up serious competition for my treasured CH A1.5, but here we are. For its exceedingly natural, liquid, organic, and infinitely resolving rendition, as well as its emotionally transformative performance, the Halcro Eclipse is the top of the bill.

Such elevated performance comes with a very serious price tag, but as it stands, this is, quite simply, the best amplifier I have heard, be it tube or transistor. And for that, not only do I highly recommend it, but also award it with the Magnificent Masterpiece award!



## [Associated Equipment](#)

### External Links

Manufacturer: [Halcro](#)

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