

Audio Research REF 160M mono power amplifier

by Alan Sircom



It's funny, but Audio Research and McIntosh are all part of the same happy family, have so much in common, but are also miles apart. Both have their followers – in fact, both have followers who are loyal to the point of decades-long exclusivity – and both have an extensive portfolio of analogue and digital electronics (McIntosh's interpretation of 'extensive' is not put through the high-end filter, however, and is more 'comprehensive' as a result). But, in all other manners the two move in very different circles. Audio Research enthusiasts find those large VU meters in McIntosh products a bit garish.

So when the REF 160M came along with its central panel sporting a large, backlit VU meter, Audio Research's enthusiasts... absolutely loved it. In fairness, the look of the VU meters on the Audio Research are more understated and less vivid blue than the ones on McIntosh models. The REF 160M is not all about the meters, but that's the headline aspect of these excellent mono amplifiers. There is also a sense of design filtering through the whole ARC range now; this shares a lot of design cues with the influential, although now about to be defunct G-Series. The clever part is this also fits in with the styling of previous Audio Research models, which plays well to an audience who might have a collection of Audio Research designs dating back dozens of years. Classic, yet modern... nice!

This is something of a synthesis product, pulling together themes and concepts found in some of the best recent Audio Research products, which means some of the best-ever Audio Research products to most ears, as the company has been going through something of a golden age in the last dozen ▶

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► or so years. With models like the Reference 75SE, the company began to use the KT150 power valve. It's now in virtually every amplifier the company makes. And, with the launch of the VT80 from the Foundation Series, the company started using a clever auto-bias system. This means no more adjusting the amplifier until a light goes out or the meter reaches its central position. It's all done automatically now. This also means those four KT150 power valves on each channel can be exchanged for 6550, KT88, and KT120 valves and autobiasing takes care of the rest. That being said, you might want to ask 'why', when KT150s sound so damn good.

You can also switch between 'ultralinear' and 'triode' power on the fly, just by pressing a button on the front panel. The front panel changes from green to blue, the VU meters respond by leaping forward (ultralinear) or back (triode). The choice between ultralinear and triode is not completely clear-cut, and depends on sonic demands and the loudspeaker used with the amps. You can even switch between single-ended and balanced operation, although this time with a rear mounted toggle switch rather than from the front panel (that is perhaps more understandable as few are likely to switch from balanced to single-ended in the same way you might switch to and from triode operation. I would suspect the majority of REF 160M models will be used with other Reference Series models, which likely means defaulting to the balanced option every time, but that's no bad thing as Audio Research power amplifiers frequently sound better in balanced operation.

That comparison to the Reference 75SE is not just there for show. The stereo chassis was a true revelation for many audio enthusiasts, as it was perhaps the best example of what Audio Research could do with a power amplifier, and the move from Reference 75 to Reference 75SE showed just how good the KT150 power valve really was. But the amp was more than this. It was the kind of amplifier that was almost universally loved. People who didn't like Audio Research or were firmly wedded to solid-state 'got it' with the Reference 75SE. What it needed was a bigger model, and although the mono versions tried, they didn't have quite the same magic as the stereo chassis. Fast forward to today and the REF 160M. Now we have a mono power amplifier with a simple valve configuration; just two 6H30s (one gain stage and one regulator) and four KT150s. Within that simplicity lies great finesse, like the Reference 75SE only bigger and mono. ►

▶ I used the REF 160M primarily with an Audio Research REF 6 preamplifier (effectively forcing the balanced connection), because I suspect that will be how most REF 160M amplifiers will be fed. It was used with predominantly the excellent Sonus faber Amati Homage Tradition loudspeakers tested in issue 162. The front end was primarily an Audio Research Reference CD9 CD player, and cabling was by Transparent Audio. In other words, the kind of environment in which a pair of Audio Research amplifiers are most likely to appear. Granted this is the opposite of what might be considered a hostile environment for the REF 160M, but I'm not sure throwing the power amps way beyond their usual use case just to score points is necessarily honest reporting – it would be a little like a chef saying, “this is claimed to be the best frying pan in existence, but I used it as saucepan and it did a terrible job!” Context is all here, and even though the REF 160M is a flexible and fine-sounding performer in its own right, because it is a part of an extensive Audio Research system, because that system is so well respected in its own right, and because Audio Research customers are so loyal to the brand that now that the chances of them breaking out of using Audio Research is almost zero, an all-Audio Research system isn't a 'soft landing'... it's looking at it in its appropriate environment.

In a way, I could almost cut and paste the review of the Reference 75SE, just removing the references to 'possibly needing more power' and have done with the review of the REF 160M. That's because the effortless way the Reference 75SE handled music is reproduced perfectly here. That's just the jumping off point, however. Yes, a product that did what the Reference 75SE did with more 'oomph' is an excellent addition in its own right (in fact, it was the most desired thing by ARC owners once they heard that stereo amplifier) and the REF 160M has that sublime musical ease, grace, and lack of granularity that made the Reference 75SE so loved, just with more power on tap. That, and that alone would justify the REF 160M and the review could end right there.

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That would be the easy way out both for the review, but more importantly for Audio Research. Instead of 'just' making its best amp bigger, the company has made the whole concept better. That sense of effortlessness in terms of dynamic range, image projection (fore and aft), and image solidity – coupled with the kind of inner detail and microdynamic resolution that pins enthusiasts to the chair – not only remains undimmed but is actually considerably improved here.

My standard test discs for me are almost worn musically flat – 'Memphis Soul Stew' by King Curtis [*King Curtis Live at Fillmore West*, ATCO] is a fine example; every time I hear it, the enjoyment of the musicianship is replaced by a desire to reach for the notepad

and start jotting! So, for an amplifier to cut through 'review mode' and not only make me listen to the track as a piece of music, but then continue deeper into the album again (at least until the so-so version of 'Whole Lotta Love', which fails the test of time in my opinion)... that suggests an amplifier that combines excellent detail resolution and dynamic range, with something akin to a 'musical passion reset button.' Yes, of course the imaging is superb (it's an ARC power amplifier – the day one of those doesn't do superb imaging as standard is the day the high-end audio world closes for business), and the way you can follow individual themes within the musical whole is inspiring (it's the reason that 'Memphis Soul Stew' track gets used), but there is also an organic nature to the sound of the REF 160M that simply doesn't happen with many other amplifiers. Music – all kinds of music – *breathes* through the REF 160M, and it perhaps goes some way to explain the preponderance of late 1950s jazz in audio. This music is all about 'feel' and so is an amplifier like the REF 160M. Playing 'Make It Good' from Luke Pearson's *The Right Touch* [Blue Note XRCD] highlights this perfectly: the interplay between Pearson and Freddie Hubbard on trumpet in the bridge needs an amplifier that has that sense of musical 'breathing' and as a consequence the REF 160M shines here. ▶



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► There is so much more, and you could include every musical style and genre for examples. How the REF 160M deals with vocals is sublime, for example: the singer is standing there, between the speakers, singing for you, almost as if the microphone and recording chain fell away. The little finger squeaks on a fretboard are also tell-tale signs of quality, because they root you in a seemingly more realistic environment than normal, and the REF 160M delivers that kind of inner detail with ease and aplomb. But this falls into a trap the REF 160M never hits; these individual aspects of a performance can suggest a product is simply a collection of sublime moments, with no overall cohesiveness. The REF 160M ties these sublime moments together to make an even more sublime gestalt. The sum of the parts is excellent, but the whole takes things to new levels.

Finally, there is something so eminently satisfying about the sound of the REF 160M. There is no other word for this, but don't confound 'satisfying' with 'smug'. You put on a piece of music and the stresses of the day are gently removed with a sense of satisfaction that normally comes from a good single malt or gin and tonic. Other products also do this, but the REF 160M does it faster, leaving you ready for more music. Power them up, and by the end of the first track you played, you are fully chillaxed. That might take an hour of listening in some systems, but the REF 160M puts you in your musical happy place inside of the first five minutes. Yes, that sets you up for extended listening sessions without fatigue, but for the time-poor it also means you can get into that more calm and cerebral place music can take you far faster than usual. Of course, if you don't want 'calm and cerebral', slam on some Infected Mushroom, turn up the volume, and enjoy the energy pump it creates. The REF 160M doesn't differentiate, and is just as comfortable playing music at cobweb shake-out levels.

Back when the Reference 75SE hit the streets, what we wanted was a bigger version. Now the roles are reversed; what we want is a REF 160M but in a stereo chassis. Fortunately, that is on its way, and much is anticipated and expected from that upcoming stereo power amplifier.

The headline-grabbing part of the Audio Research REF 160M is those big, see-through VU meters, but you'll note they barely got a look-in during the review. They are great to have and look wonderful when the music plays, but you quickly realise that the REF 160M is more than just a pair of meters; it's a wonderful pair of power amplifiers in their own right. I've played with a number of Audio Research amps over the years, many of which have been some of the most memorable musical experiences I've had, but I can't shake the notion that this is the best of them. It's so musically faithful yet so musically entertaining and enjoyable, this takes the already high standards of Audio Research and raises them to new levels. It delivers grace, space, and no small dose of pace, too. This is a rare jewel; one of the best ever! +

TECHNICAL SPECIFICATIONS

Type: mono valve power amplifier

Tubes Required: Two matched pair
KT150 (Power output V1-4); Two
6H30 (Gain stage V5 and V6)

Power Output: 140 watts per channel

Power Bandwidth: (-3dB points) 5Hz
to 70kHz

Frequency Response: (-3dB points at
1 watt) 0.5Hz to 110 kHz

Input Sensitivity: 2.4V RMS Balanced for
rated output. (25.5 dB gain into
8 ohms.)

Input Impedance: 200K ohms Balanced

Output Taps: 4, 8, 16 ohms

Output Regulation: Approximately
0.6dB 16 ohm load to open circuit
(Damping factor approximately 10)

Overall Negative Feedback: 14dB

Slew Rate: 13 volts/microsecond

Rise Time: 2.0 microseconds

Hum & Noise: Less than 0.2mV RMS –
110dB below rated output (IHF-A
weighted, input shorted, 16 ohm
output)

Power Supply Energy Storage:

Approximately 900 joules

Power Requirements: 105–130VAC
60Hz/260–250VAC 50Hz. 400 watts at
rated output, 700 watts maximum,
260 watts at 'idle,' 1 watt off

Dimensions (WxDxH):

43.8 × 47 × 25.4 cm.

Handles extend 5.1 cm forward

Weight: 25.5 kg ea

Finish: Natural or Black

Price: £28,998 per pair

Manufactured by: Audio Research

URL: audioresearch.com

Distributed in the UK by:

Absolute Sounds

URL: absolutesounds.com

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