McINTOSH MA9000

Reviewer Peter Croft

INTEGRATED AMPLIFIER

Eye candy. Those two words pretty much describe McIntosh's new MA9000 integrated amplifier. It's the best-looking amplifier we've seen in quite a while. When you see one in the flesh, you'll be even more impressed, because there's plenty of it: the MA9000 is the largest integrated amplifier McIntosh has ever built, and if you know McIntosh, that's saying something! And to ensure that form follows function, the MA9000 is also the most powerful integrated amplifier McIntosh has ever built, being rated at 300 watts per channel which, thanks to McIntosh using the same autoformer technology it uses for its valve amplifiers, it can deliver into 8Ω, 4Ω or 2Ω loads. But the MA9000 has another feature that's also a first for McIntosh. The on-board DAC is modular, so should any future digital format come along (or one of the existing formats be upgraded), you won't have to buy a new amplifier. Instead it will simply be a matter of swapping out one module and replacing it with a newer one.

△ THE MA9000 IS NOT ONLY THE LARGEST INTEGRATED AMPLIFIER MCINTOSH HAS EVER BUILT, IT'S ALSO THE MOST POWERFUL.

△ THE SPEAKER TERMINALS ARE UNUSUAL BECAUSE EVEN THOUGH THE MA9000 CAN DRIVE ONLY A SINGLE PAIR OF SPEAKERS, THERE ARE EIGHT BINDING POSTS: FOUR EACH AT EITHER END OF THE REAR PANEL.

THE EQUIPMENT

We seriously doubt you're ever going to use all the inputs McIntosh has fitted to the MA9000. There are ten analogue inputs and six digital inputs, so sixteen in all! Six of the analogue inputs are unbalanced line-level types, and two are balanced line-level inputs. The remaining two are phono inputs, one for moving coil cartridges, the other for moving magnet cartridges. On the digital side, the DA1 digital audio module inside the MA9000 has two coaxial digital inputs (via RCA), two optical digital inputs (via Toslink), a USB input (Type B) and one MCT input. This last input, the MCT input, is actually a DIN connector but it's used to provide a digital connection between the MA9000 and McIntosh's SACD players.

The DA1 Digital Audio Module contains an 8-channel, 32-bit digital-DAC that McIntosh uses in its quad balanced mode. The USB input can process PCM signals up to 384kHz and DSD signals up to DSD256 and DXD384kHz, while the other digital inputs can process PCM up to 24-bit/192kHz.

With so many inputs, you'd never really remember what's connected to what, so the default labels McIntosh assigns to them (COAX1, COAX2, OPTI1, OPTI2, etc) are not very useful. Luckily McIntosh recognised this itself, and has included a circuit that allows you to re-label all the inputs with custom names of up to ten letters or numbers, making it easy to re-label COAX1 to 'CD PLAYER' for example. You can also use McIntosh's 'TRIM' function to adjust the sensitivity of each of the inputs so that the volume of your loudspeakers remains the same when switching from one input to another. Input switching is via the rotary control on the left-hand side of the front panel, which has a click-stop action and feels beautiful under the fingers. The volume control on the right-hand side of the front panel is a rotary encoder with a silky-smooth rotational action. The output level you set is shown at the right side of the digital display on the front panel as a percentage, rather than a number.

By now you're probably wondering what those 12 small rotary controls on the front panel are for and why we haven't mentioned them already. They're equaliser controls. The MA9000 contains a 12-band equaliser that allows you to adjust the volume by up to ±6dB at 25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1kHz, 2.5kHz and 10kHz. You can think of a 12-band equaliser as a super-evolved tone control. The MA9000's input selector can 'remember' whether you want to use equalisation on one or more of the inputs. So you could have both your phono inputs 'equalised' and the McIntosh will automatically switch the equaliser 'On' when you listen to LPs, then back 'Off' when you listen to CDs.

Although the McIntosh has a standard 6.35mm (¼-inch) headphone socket on the front panel, the circuit that drives it is anything but standard. It uses McIntosh's 'HXD' (Headphone Crossfeed Director) circuitry to make headphone sound more realistic. The circuit is based on the fact that music played through headphones will always sound different to when the same music is played through a pair of loudspeakers. This comes about because when you're listening to loudspeakers, the signal from the right channel speaker goes directly to the right ear, but it also goes to the left ear, and *vice-versa* for the sound from the left channel speaker. But in addition to this, the sound arriving at the ear that's further away is lower in level, and also slightly delayed, so its phase is different from the signal at the other ear. When you normally listen with headphones, the right ear hears only the right-channel information and the left ear hears only the left-channel information. What a headphone crossfeed director does is try to simulate the 'speaker' experience by feeding volume-adjusted and delayed musical information from the left channel to the right earpiece and *vice versa*. It's not as easy as it sounds, because to sound realistic, the amount of the delay has to vary with the frequency being delivered, and the volume of the delayed signal also has to vary with the frequency being delivered. Dolby Headphone (which was actually developed here in Australia by Lake Technologies) is probably the best-known headphone crossfeed circuit, but many other manufacturers have developed their own, and McIntosh obviously thought it could do a better version. The HXD effect delivered by the headphone socket is not user-adjustable, so you can't control the crossfeed effect, but if you would prefer the standard 'headphone' experience, you can switch the HXD circuit off. As for the circuit itself, McIntosh says it is 'optimised for impedances ranging from 100 to 600 ohms.' You can also adjust the operation of the circuit so that the speakers either stay on when you insert a headphone jack, or are muted.

As you'd imagine, given the number of inputs and outputs on the MA9000, plus the various control features, the rear panel is very 'busy' so that despite the size, almost the entire rear of the amplifier is filled with connectors of one type or another. You'll notice that the speaker terminals are unusual because even though the MA9000 can drive only a single pair of speakers, there are eight binding posts: four at either end of the chassis. The lowest post in each set of four goes to the negative terminal of the speaker. The other three posts on either end are marked 2Ω, 4Ω and 8Ω.

△ AS YOU'D IMAGINE GIVEN THE NUMBER OF INPUTS AND OUTPUTS ON THE MA9000 PLUS THE VARIOUS CONTROL FEATURES, THE REAR PANEL IS VERY 'BUSY'.

You need to determine the nominal impedance of the speakers you're using and then connect the positive terminal of the speaker to one of these three posts. If your speaker has a 6Ω nominal impedance, we'd recommend connecting to the 4Ω terminal. However, if you want more precise matching, it's best if you can find an actual measurement of the speaker's impedance across a wide range of frequencies (called an impedance curve). Using this graph, you should note the speaker's minimum impedance at low frequencies (ignore the low frequency peaks), and use this to determine which of the three terminals should be used. (Our sister publication, *Australian Hi-Fi Magazine*, publishes an impedance curve for every speaker it reviews.)

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We should point out that although almost all valve amplifiers use output transformers, it's extremely rare for a solid-state amplifier to use output transformers, yet this is the approach McIntosh uses with all its solid-state amplifiers. One reason it's rare is that it's very, very expensive to manufacture a high-quality autoformer. Another is that autoformers are very, very heavy, which dramatically increases the cost of packaging and shipping and the likelihood of the amplifier being damaged during transit. Also, autoformers are large, which increases the bulk of the amplifier. All these traits are evidenced in the design of the MA9000 which measures 445×240×558mm (WHD) and weighs more than 45kg. For transit, the amplifier is bolted to a slab of wood, then placed inside a padded heavy-duty carton, which in turn is placed inside another padded heavy-duty carton, which is then strapped with metal bands.

One advantage of using a transformer (technically an 'autoformer') is that no harm can be done if you use the 'wrong' tap for your speakers. If you connect 4Ω speakers to the 8Ω tap, all that will happen is that more power will be available for your speakers (but the amplifier will run hotter) and if you connect 8Ω speakers to the 4Ω tap the amplifier will still be able to deliver its rated power… unlike a conventional amplifier, where only half the rated power would be available. Another advantage of the autotransformer is that it provides additional protection for both your speakers and the amplifier in the event of an unusual fault condition. However, since McIntosh already has circuitry against fault conditions (PowerGuard), our guess is that the company's primary reason for using autotransformers on its solid-state products is to ensure the characteristic 'McIntosh sound' is the same as that of its valve amplifiers. Not all McIntosh amplifiers have autoformers, but this is likely because of cost (in the case of the MA5300) or size and weight (all the multi-channel units).

△ THE SMALL ROTARY KNOBS CONTROL A 12-BAND EQUALISER THAT ALLOWS YOU TO ADJUST THE VOLUME BY UP TO ±6DB AT 12 DIFFERENT FREQUENCIES. THINK OF IT AS A TURBO-CHARGED TONE CONTROL.

LISTENING SESSIONS

A McIntosh really wouldn't be a McIntosh without those big blue power output meters and that beautiful black glass front panel — not forgetting those stainless steel end caps — and we really have to hand it to McIntosh for sticking with the same look for so many years. The company came up with this design shortly after it was founded in 1949 and it's stayed with it ever since, so even though the MA9000 is a brand-new model, it's very obviously part of a lineage that stretches back nearly 70 years. To call this look iconic would be an understatement.

In fact the meters have changed over the years, in terms of both their electro-mechanical design and their appearance, but this current implementation is the best yet, with the meters moving fast enough to show what's happening, but with a nicely damped peak hold. McIntosh has managed to arrange the ballistics so that even when the volume is low the meters are always quite active and not just noodling around at the left of the meter face.

You can hear the precision of the McIntosh MA9000's pace, rhythm and timing on *Votes For Women*, one of the many great tracks on Harry Howard's new album 'Sleepless Girls', a project with Near Death Experience (Dave Graney, Clare Moore, Edwina Preston). The intro has Graney (bass) and Moore (drums) playing around the beat with dazzling synchronicity yet at the same time managing to imply the off-beat. And the MA9000's implacable hold on the pedal of the Moore's bass drum is illuminating.

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The way the McIntosh MA9000 delivers the drum sound is impressive. The next track, *Primitive Girl*, aurally contrasts Howard's clangy guitar against Preston's keyboard and yet again the MA9000 pulls it all together, bringing a cohesiveness that lesser amps just can't manage. Listen too to the tone of Moore's drum kit in the run-out, as well as in the lead-in to *Thunderclap*: you're listening for the clarity and the tonal depth of the sound. The guitar harmonics are also beautifully rendered.

The depth of the stereo image created by the MA9000, along with the way it's able to transmit the actual acoustic of the venues in which musicians are playing, is insightful. One of our favourite venue-demonstrators is Cyndi Boste's album 'Scrambled Eggs' (also known as 'The Rose Street Sessions') which was mostly recorded in an ordinary room straight to DAT, but has one track recorded in a wine bar (*Roller*) and one on stage at the Port Fairy folk festival (*Holy Waters*). You can hear Boste's voice bouncing off the walls and appreciate the differences in tonality as she moves to and from the microphone. We get the bonus of Linda and Vika Bull on backing vocals and Mia Dyson on lap steel. But contrast this acoustic with that of the wine bar, then listen to how the walls disappear on *Holy Waters*.

The same disc also served to demonstrate the neutrality of the MA9000's midrange… a neutrality that extended way up into the treble register and beyond, though becoming perhaps a little warm at the extreme top end… a warmth that was rather welcome, actually.

SPECIFICATIONS

McINTOSH MA 9000 INTEGRATED AMPLIFIER

POWER OUTPUT: 300 watts/channel
SPEAKER IMPEDANCE: 2Ω, 4Ω, or 8Ω
RATED POWER BAND: 20Hz to 20kHz
THD: 0.005%
DYNAMIC HEADROOM: 1.8dB
FREQUENCY RESPONSE:
20Hz–20kHz (±0.5dB)
FREQUENCY RESPONSE:
10Hz–100kHz (–3dB)
SENSITIVITY PHONO: 0.3mV (MC)
SENSITIVITY PHONO: 3.0mV (MM)
SENSITIVITY HIGH LEVEL:
0.6V/0.3V (Bal/Unbalanced)
SENSITIVITY (POWER AMP INPUT): 1.7V
S/N RATIO: 82dB (MC)
S/N RATIO: 84dB (MM)
S/N RATIO (HIGH LEVEL): 98dB
S/N RATIO (POWER AMP INPUT): 114dB
INPUT IMPEDANCE:
10kΩ/22kΩ (Bal/Unbal)
HEADPHONE IMPEDANCE: 100–600Ω
DAMPING FACTOR: >40
MAXIMUM OUTPUT: 8V/16V (Bal/Unbal)
HEADPHONE OUTPUT: 6.35mm with Crossfeed Director (HXD)
DAC) TYPE: 8-channel, 32-bit/192kHz PCM/DSD, Quad Balanced
COAXIAL INPUT SAMPLE RATE:
24-bit/44.1kHz to 192kHz
OPTICAL INPUT SAMPLE RATE:
24-bit/44.1kHz to 192kHz
MCT INPUT SAMPLE RATE:
16-bit/44.1kHz (CD), DSD64 (SACD)
USB INPUT SAMPLE RATE:
32-bit/44.1kHz to 384kHz (PCM), DSD64, DSD128, DSD256, DXD352.8kHz, DXD384kHz
STANDBY POWER: <0.25 watts
DIMENSIONS (WHD): 445 × 240 × 558mm
WEIGHT: 45.8kg
WARRANTY: Three years
PRICE: $19,995
CONTACT: Synergy AudioVisual on 03 9459 7474
www.synergyaudio.com

The top-end warmth was certainly preferable to the steeliness of the high-end sound delivered by a great many solid-state amplifiers. So definitely no glare, and very definitely no harshness, but at the same time not quite as warm as McIntosh's tubed amplifiers. But the definition was still super-precise, there was no blurring of any kind and absolutely no distortion.

Melba has a reputation for producing some of Australia's best-sounding CDs and SACDs, thanks not only to the performers it's signed, but also because of its fanatical attention to recording detail. That's evident on its recording of Christopher Wrench playing J.S. Bach's Organ Sonatas (BWV 525–530) on the organ in Garnison's Kirke, Copenhagen. The 1995 Carsten Lund instrument has a gloriously bright, vibrant sound and the organ's size perfectly complements the size of the church itself, so it neither overpowers the acoustic space nor falls short in filling it. But as well as capturing the sound of the organ, which is delivered exactly by the MA9000, Engineer Viggo Mango has captured the acoustic space perfectly as well. The background noise of both the recording and the MA9000 is so low that in the quieter passages you hear the sound of the manuals of the organ. You can also hear perfectly the sound decaying in the furthest reaches of the church. Such is the noise floor of the MA9000 that you can also hear the exact point faders have been introduced during post production at the conclusion of movements… and a little too prematurely by our estimation. Perhaps there were constraints on playing time that caused the decay to be curtailed… 77:45 is approaching the limit of an SACD's playing time.

The tunefulness of the deep bass sonorities of the Carsten Lund organ was also the perfect vehicle for demonstrating the tunefulness of the McIntosh MA9000's own bass delivery—strong and highly controlled, as well as outstandingly clear and highly dynamic. If you'd prefer to hear this demonstrated using rock music, you could do as we did and play Rage Against The Machine's self-titled album, throughout which Brad Wilk's kick-drum is a constant pulse, sometimes soft yet other times threatening to crack the skin, while all the time Tim Commerford's bass is a perfect foil, always nimble, sometimes explosive, but always the driving force behind the maniacal energy, not least on *Bullet in the Head*. You might also try the late David Bowie's *Putting Out Fire* where the kick drum catapults what starts as a sleepy opening into a masterpiece of driving anthemic rock.

CONCLUSION

OK, we were wrong, McIntosh's MA9000 is more than just eye candy, it's ear candy as well. It also has more inputs than you'll ever need, more power than you'll ever use, and its digital section is upgradeable so you won't ever be caught out by a new format. And we were also wrong about having to use two words to describe the McIntosh MA9000. We can do it in one. *Sweet!*

▷ WE SERIOUSLY DOUBT YOU'RE EVER GOING TO USE ALL THE INPUTS MCINTOSH HAS FITTED TO THE MA9000. THERE ARE TEN ANALOGUE INPUTS AND SIX DIGITAL INPUTS, SO SIXTEEN IN ALL.