

# MOON BY SIMAUDIO 888

Reviewer Peter Croft

## POWER AMPLIFIER

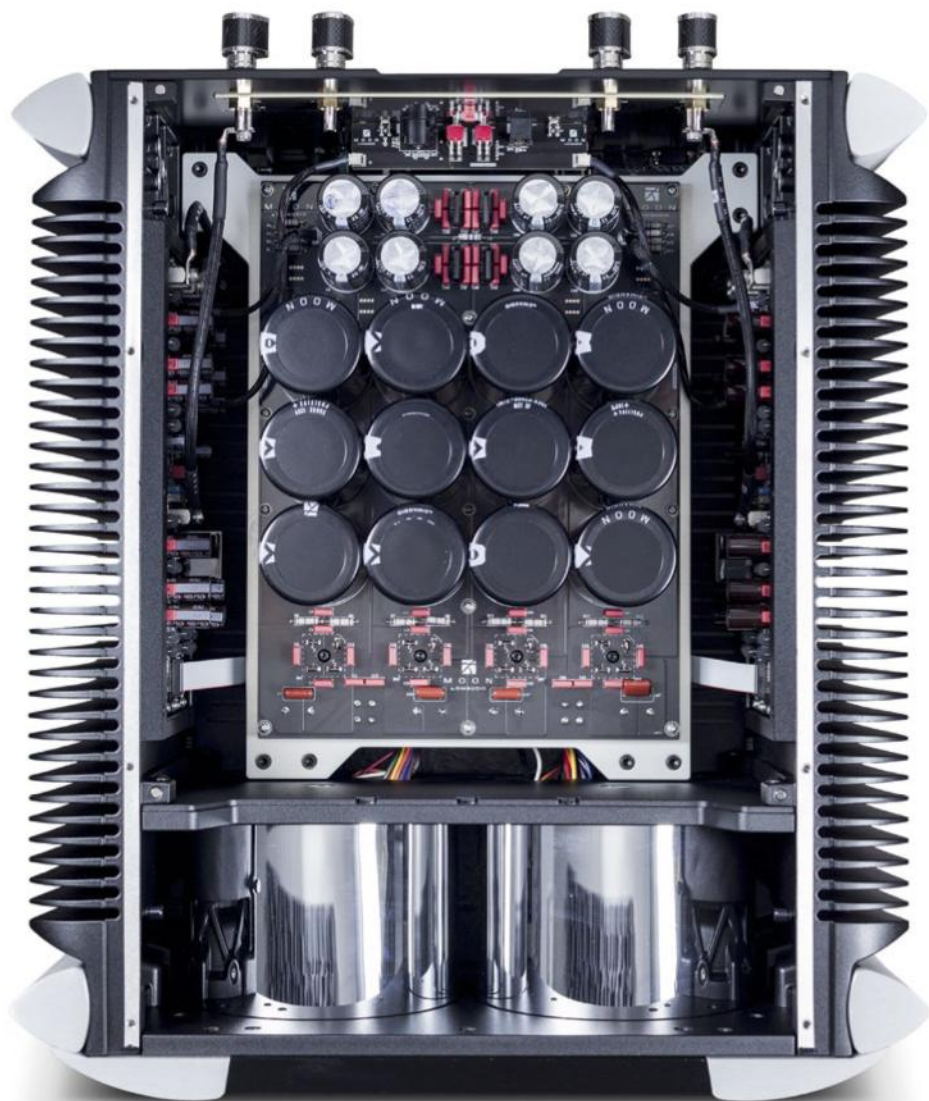
**W**e've heard of RMS watts, we've heard of Peak watts, and we've heard of Continuous watts, but we've never heard of Lucky watts, which is what Moon's flagship monobloc power amplifier is claimed to be able to deliver 888 of. At least it's rated with a power output of 888-watts into 8Ω loads. Into 4Ω loads it's rated at 1776 watts. And here in Australia, because our mains supply is 230 volts (kinda), Moon says the Moon 888 is able to deliver 3550 watts into a 2Ω load.

### AN EXERCISE IN ENGINEERING

The Moon 888 is the amplifier you get when you ask your team of electronics engineers to build the best 888-watt amplifier possible, and give them *carte blanche*, so they don't have to worry about how large it is, how heavy it is, or how much it will cost to build. Moon's 888 it's not just huge, it's enormous. It's basically half a metre wide, half a metre deep and a third of a metre high. And because it's a monobloc amplifier, you need two of them, with a stereo pair weighing in at 272kg... not so much a 'two-man lift' as a team-building exercise in logistics.







◀ THE POWER SUPPLY COMPRISES TWO ENORMOUS POTTED 1kVA TOROIDAL TRANSFORMERS WHOSE OUTPUT AFTER RECTIFICATION IS SMOOTHED BY A TOTAL OF 350,000 MICROFARADS SPREAD ACROSS THREE INDIVIDUAL CAPACITOR BANKS, ALL THE CAPACITORS IN WHICH ARE MADE SPECIFICALLY FOR MOON.

panel you'll find both unbalanced (via gold-plated RCA) and balanced (via gold plated XLR) input terminals. You can use one or the other of these, but not both. We'd recommend using the balanced inputs. Between these two inputs are two toggle switches, one for selecting the input type (balanced/unbalanced) and the other for selecting between a.c. input coupling and d.c. input coupling (about which more later). You'll also find two standby mode switches (also about which more later), and 12V trigger inputs and outputs, so you can have the 888 turn on automatically. There's also a 240V mains power socket (a non-standard 20-amp type) with associated mains power rocker switch and fuse, plus three red LEDs that glow if the amplifier's protection circuitry activates.

The Moon 888 has multiple protection modes. These include thermal protection, which shuts the amplifier down if the heat-sinks become too hot, and d.c. protection, which triggers in the event that d.c. is detected at the input. If this d.c. protection trips too often, Moon recommends you set the coupling switch on the rear panel to a.c. If the amplifier goes into protect mode, the speaker outputs will be disconnected, the front panel's blue LED will flash, and one of three red LEDs on the rear panel will illuminate to indicate the reason: 'Thermal'; 'DC Level'; or 'Other'.

Although there are two pairs of high-quality heavy-duty rhodium-plated speaker terminals, both sets carry exactly the same signal, and have been provided simply to make it easier to bi-wire your speakers.

#### IN USE AND LISTENING SESSIONS

To turn on the 888, you operate the main 'Power' switch on the rear panel, after which the front-panel LED turns on and blinks while the 888's own internal circuitry stabilises, after which it turns off. If you now press the 'Standby' button on the front panel the LED will glow continuously to indicate the 888 is ready to use.

The Moon 888 has two basic standby modes: 'default' and 'low power'. If you elect to use the 888's default standby mode, all the various gain



Even when the Moon 888 is delivering its maximum 3550-watt power output, the output transistors are still working well within their comfort zone

The gorgeous heat sinks you can see down either side of the 888 are not ordinary extrusions, but moulded. What you can't see is that on the opposite side of the sink to the fins, the main printed circuit boards are mounted inside the heatsink itself, which Moon says ensures optimal thermal behaviour. The power supply comprises two enormous potted 1kVA toroidal transformers whose output after rectification is smoothed by a total of 350,000µF spread across three individual capacitor banks, all the capacitors in which are made specifically for Moon. The 24 bipolar transistors in the output have a total capability of 8000 watts, so even when the 888 is delivering its maximum 3550-watt output into 2Ω, they'll still be working well within their comfort zone.

#### THE EQUIPMENT

The front panel is bare except for a single standby power switch, above which is a single blue-coloured LED status indicator. On the rear

▷ THE MOON 888 HAS MULTIPLE PROTECTION MODES WITH LED INDICATORS ON THE REAR PANEL. THESE MODES INCLUDE THERMAL PROTECTION, WHICH SHUTS THE AMPLIFIER DOWN IF THE HEAT-SINKS BECOME TOO HOT, AND D.C. PROTECTION, WHICH TRIGGERS IN THE EVENT THAT D.C. IS DETECTED AT THE INPUT.



## SPECIFICATIONS

### MOON 888

**CONFIGURATION:** Fully-

balanced differential, mono

**POWER TRANSFORMERS:**

2 × 1.5kVA potted

**SUPPLY CAPACITANCE:**

350,000 $\mu$ F

**AMPLIFIER CLASS:** A/AB

**INPUT IMPEDANCE:** 24k $\Omega$

**INPUT SENSITIVITY:** 2.4V

**OUTPUT DEVICES:**

24 × bipolar

**OUTPUT POWER INTO 8 $\Omega$ :**

888 watts

**OUTPUT POWER INTO 4 $\Omega$ :**

1776 watts

**OUTPUT POWER INTO 2 $\Omega$ :**

3550 watts

**FREQUENCY RESPONSE:**

10Hz–200kHz  $\pm$ 3dB

**GAIN:** 31dB

**S/N RATIO:** 120dB

(ref rated output)

**IMD:** 0.006%

**THD:** 0.04%

**POWER CONSUMPTION:**

50 watts (at idle)

**WEIGHT:** 136kg

**DIMENSIONS (WHD):**

561 × 351 × 676mm

**WARRANTY:** Ten years

**PRICE:** \$188,888 per pair

**CONTACT:**

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stages in the amplifier will remain fully powered up, so that the amplifier maintains optimal operating temperature and will deliver maximum performance the minute you switch it to 'active' mode. The 'low power' standby mode, on the other hand, turns off all the amplifier gain stages, leaving only the control circuitry active. If you use this standby mode, the amplifier will not deliver its maximum performance immediately after you switch to 'active' mode. You'll instead have to wait a while (the wait time will depend on the ambient temperature and how long the 888 had been in standby mode). No matter which mode you use, you can elect for the amplifier to enter it automatically (which happens after the control circuitry has not detected an audio signal for 20 minutes) or for it to stay permanently powered on, ready for instant use.

We auditioned a pair of Moon 888s used in a combination with a Moon 780D DAC and Moon 850P preamp and Moon 820S power supply and using two different speaker systems — a pair of Rockport Technology Cygnus speakers and a pair of Dynaudio Evidence Platinum loudspeakers, both of which have a reputation for being difficult to drive. The Moon 888 obviously hadn't been told about their reputations, because it drove both systems with consummate ease.

The sheer amount of power that's on tap from a pair of 888s is mindboggling, and of course we're spoiled here in Australia with our 230-volt mains supply, because the Moon is able to use our high mains voltage to deliver even more power — and thus greater current — than it is in either America or Canada, where the mains voltage is only 120 volts. Not that we ever got anywhere near utilising the 888s'

maximum power output capabilities. Despite the thunderous and at times ear-splitting volume levels at which we were listening, the 888s were just idling along, no matter how hard we tried. We did check the heatsinks from time to time, and they were barely above blood temperature.

But it's not enough for an amplifier to have power — it also needs to be able to demonstrate finesse, and the 888s exhibited this too, whether they were delivering the twangy yet delicate sounds of Joni Mitchell's Appalachian dulcimer, or the pure voice of Melody Gardot as she almost scats *Ain't No Sunshine* over a background of double bass, brass and a tinkling tambourine. On more sparse arrangements of jazz trios, the individual timbres of the instruments are extracted from the recording and placed delicately in the room, seemingly holographically removed from the plane of the loudspeakers.

Indeed, no matter what music we played, or how loudly we played it, this Moon 888 pair proved to be a truly superior amplifier system.

## CONCLUSION

It turns out that Moon calls them 'lucky' watts because the number 888 is considered a lucky combination of numbers in Chinese numerology; in part because when you say '8' in Cantonese, it sounds similar to the word meaning 'to prosper'. So '88' is doubly lucky, and '888' triply so. And to make sure the amplifier is even luckier, Moon not only rates it at 888 watts, but makes sure there are lots of 'eights' in the price as well, no matter what currency you're using to buy it. With regard to that, we don't know if buying a pair of Moon 888s will bring you luck, but we do know you'll be very lucky if you own a pair! 