MOON
by SIMAUDIO

The performance of a lifetime



Owner's Manual
MOON 250i
Integrated
Amplifier

WARNING

Do not ingest the battery, Chemical Burn Hazard
The remote control supplied with this product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death. Keep new and used batteries away from children.
If the battery compartment does not close securely, stop using the remote control and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

To prevent the risk of equipment damage or personal harm, use only Class 2 rated loudspeaker wire properly terminated and connected securely to the binding posts.

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Important Safety Instructions

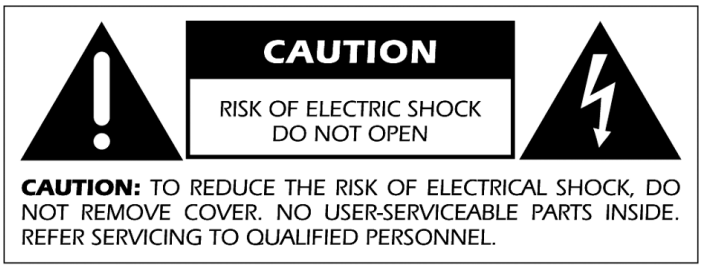
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or another apparatus that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong.
   The wide blade or the third prong is provided for safety.
   If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug mains cord during transportation.
11. Only use attachments and accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No naked flame sources, such as candles, should be placed on the apparatus





The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance



Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

PLEASE READ ALL INSTRUCTIONS AND PRECAUTIONS CAREFULLY AND COMPLETELY BEFORE OPERATING YOUR UNIT

1. ALWAYS disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
2. The unit must be terminated with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must ALWAYS be used. Connect the unit only to an AC source of the proper voltage; Both the shipping box and rear panel serial number label will indicate the correct voltage. Use of any other voltage will likely damage the unit and void the warranty
3. AC extension cords are NOT recommended for use with this product. The mains plug of the power supply cord shall remain readily accessible.
4. NEVER use flammable or combustible chemicals for cleaning audio components.
5. NEVER operate the unit with any covers removed. There are no user-serviceable parts inside. An open unit, especially if it is still connected to an AC source, presents a potentially lethal shock hazard. Refer all questions to authorized service personnel only.
6. NEVER wet the inside of the unit with any liquid. If a liquid substance does enter your unit, immediately disconnect it from the AC mains and take it to your MOON dealer for a complete check-up.
7. NEVER spill or pour liquids directly onto the unit.
8. NEVER block air flow through ventilation slots or heatsinks.
9. NEVER bypass any fuse.
10. NEVER replace any fuse with a value or type other than those specified
11. NEVER attempt to repair the unit. If a problem occurs contact your MOON dealer.
12. NEVER expose the unit to extremely high or low temperatures.
13. NEVER operate the unit in an explosive atmosphere.
14. ALWAYS keep electrical equipment out of reach of children.
15. ALWAYS unplug sensitive electronic equipment during lightning storms.
16. WARNING: Do not expose batteries or battery pack to excessive heat such as sunshine, or fire or the like.

Introduction

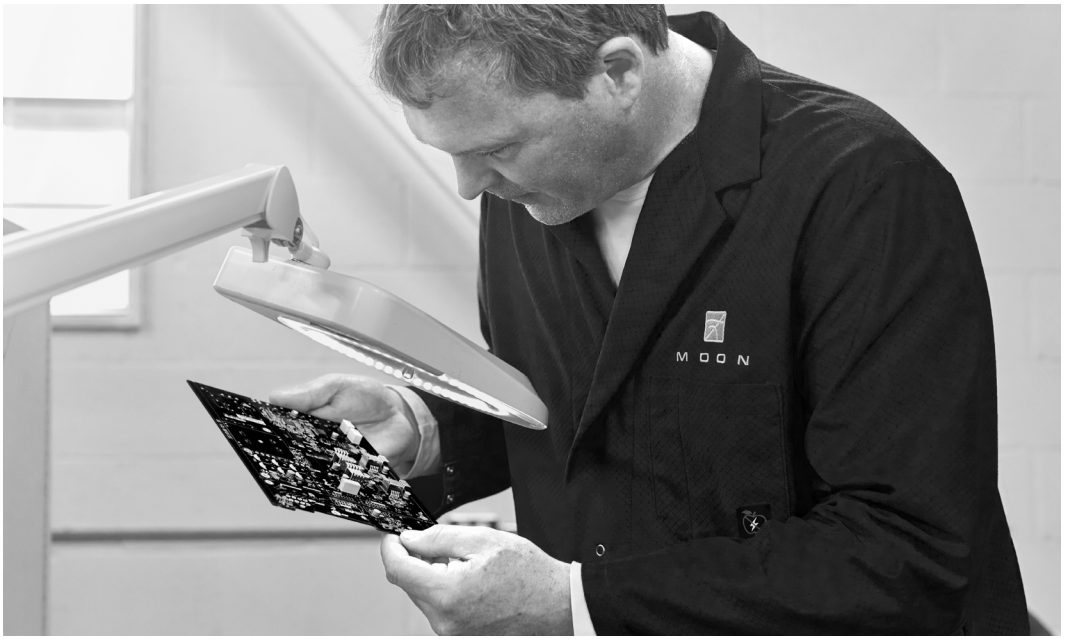
Thank you for selecting the MOON 250i Integrated amplifier as a part of your music system. This component has been designed to offer state-of-the-art high-end performance in an elegant package, hallmarks on which Simaudio has made its reputation. We have been building high-performance audio equipment for over 35 years, and the know how gained through our cumulative experience is an important reason why MOON products are so musically satisfying.

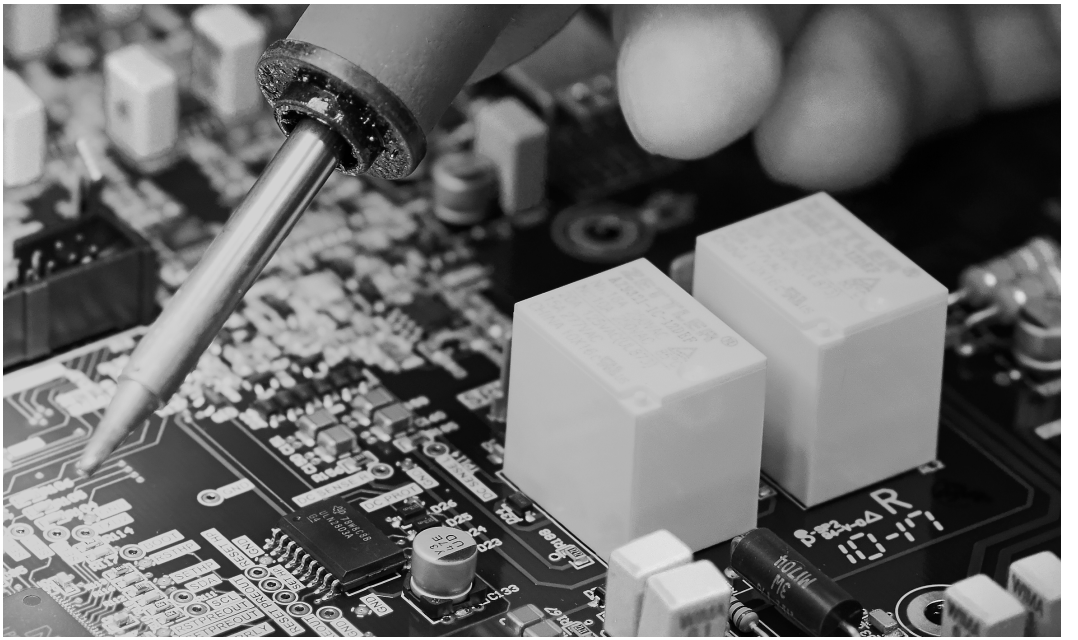
The performance of your 250i will continue to improve during the first 400 hours of listening. This is the result of a "break-in" period required for the numerous high quality electronic parts used throughout this integrated amplifier.

Before setting up your new MOON 250i, we encourage you to please read this manual thoroughly to properly acquaint yourself with its features. We hope you enjoy listening to the MOON 250i integrated amplifier as much as the pride we have taken in creating this fine audio product. We understand the power and emotion of music and build our products with the goal of faithfully capturing these elusive qualities.

The information contained in this manual is subject to change without notice. The most current version of this manual is available on our official website at

http://www.simaudio.com


MOON



Design Features

Your **MOON 250i** integrated amplifier incorporates many significant design features to achieve its "world class" level of performance. This is an abbreviated list of the more important features:

Six line-level inputs including one front-mounted 1/8" mini-jack for personal media players.

Headphone output on ¼" TRS jack located on the front panel.

RS-232 port for i) full unsolicited bidirectional feedback in custom installation setups and ii) firmware updates.

IR input for external control.

Proprietary MOON Bipolar Output transistors with unprecedented gain linearity resulting in improved bass response and even more accurate sonic reproduction.

Class A output to 5 watts for greater efficiency.

SimLink™ controller port allows for 2-way communications between other compatible MOON components

Rigid chassis construction to minimize the effects of External vibrations

Designed to be **powered up at all times** for optimal performance

Low operating temperature for an ultra-long life expectancy.


LUXE
THE CITIES BOOK

Unpacking

The **MOON 250i** should be removed from its box with care.

The following accessories should be included inside the box with your unit:

- AC power cable
- ''CRM-3' remote control with two 'CR-2032' batteries
- 'SimLink™' cable with 1/8" mini plug terminations on each end
- Warranty and product registration information (USA and Canada only)

Once the unit is unpacked, inspect it thoroughly and report any damage to your dealer immediately. We suggest that you keep all of the original packaging, storing it in a safe, dry place in case you're required to transport this product. The customized packaging is specially designed to protect the unit from any potential damage during transit.

Please write the serial number of your unit in the space provided below for future reference.

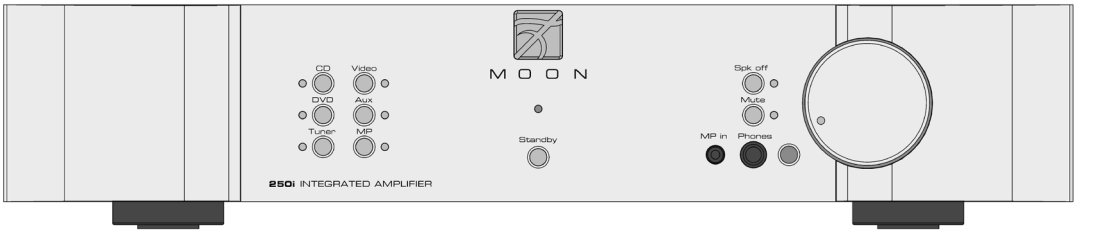
Serial Number

Installation & Placement

The MOON 250i Integrated Amplifier requires reasonable ventilation to maintain an optimum and consistent operating temperature, especially since it will radiate heat when driven hard. Consequently, it should be placed in a location with empty space around it for proper heat dissipation. You should never place another component on top of this integrated amplifier. As well, it should be placed on a solid level surface. You should avoid placing it near a heat source or inside a closed cabinet that is not well ventilated as this could compromise the amplifier's performance and reliability. The 250i uses a large toroidal transformer in its power supply; even though it is well shielded, you should not place this integrated amplifier too close to source components sensitive to EMI, such as turntables, phono preamplifiers and CD Players. Finally, you should never place another component directly on top of this integrated amplifier.

Front Panel Controls

Figure 1: 250i Front panel



The front panel will look similar to Figure 1 (above). The remote control sensor is located directly to the right of the "Phones" output jack and it should never be blocked, otherwise remote control operation may be compromised.

The "Standby" button disengages the input section from the rest of the MOON 250i's circuitry. When in "Standby" mode all audio circuitry remains powered up to help maintain optimal performance. When switching back from "Standby" to the "on" mode, both the 'input' and volume level settings will be memorized from the previous listening session. The blue indicator LED turns off when the 250i is in "Standby" mode.

The MOON 250i integrated amplifier has six (6) inputs labeled CD, Video, DVD, Aux, Tuner, and MP. Each of the first five (5) inputs has a corresponding pair of input connections located on the unit's rear panel (refer to the section entitled "Rear Panel Connections" for futher details). The sixth input, labelled "MP" (Media Player) has its corresponding input connection located on the right side of the front panel for easy access. The "MP" input uses a 1/8" mini-jack connector which is the most common type of connection found on portable media players. Select any one of these six (6) inputs by simply pressing the associated button. When selected, the corresponding red indicator LED, located directly beside the button will illuminate.

The "Spk off" button turns off the output signal only to the loudspeakers connected to the MOON 250i. This feature is very useful when using headphones. When this function is engaged, the red LED located to the right will illuminate.

The "Mute" button mutes the output signal to the loudspeaker terminals, headphone jack, as well as both the fixed and variable line output connectors (refer to the section entitled "Rear Panel Connections" for further details). Pressing the "Mute" button a second time will reinstate the volume back to its previous level. When the output signal is muted, the red LED to the right will repeatedly flash on and off.

The "Phones" jack is used for connecting a pair of stereo headphones to the MOON 250i. The input connector is a standard ¼" stereo TRS jack. When a pair of headphones are used with the 250i, the loudspeakers will still receive an output signal. However, you should use the "Spk off" button for private listening.

The rotary "Volume" control determines the output level and has an embedded red LED to indicate its actual position.

Rear Panel Layout

Figure 2: 250i Backpanel



The rear panel will look similar to Figure 2 (above). There are five (5) pairs of single-ended inputs on RCA connectors labeled CD, DVD, TUNER. VIDEO and AUX. The RCA input connectors on the rear panel have been color coded: 'white' for the left channel and 'red' for the right channel.

The MOON 250i integrated amplifier also has one pair of non-amplified outputs labeled 'PRE OUT', located next to the AUX input, and is designated for output to a power amplifier with single-ended RCA inputs in the event that you wish to use your 250i as a preamplifier only. The output level on the 'PRE OUT' is variable and is adjusted by volume control.

Don't hesitate to use high quality interconnect cables*. Poor quality interconnect cables can degrade the overall sonic performance of your system.

To the right of the input and "PRE OUT" section are a series of input/ouput connectors for external communication. From left to right there are two (2) "SimLink™" connectors labeled "in" and "out" on 1/8" mini jacks. Please refer to the next section entitled SimLink™ for more details. Next, there's a 1/8" mini-jack input for use with aftermarket infrared remote control receivers. Finally, there's a full-function bi-directional RS-232 port control and status for custom integration or automation on a DB9 connector.

The MOON 250i is equipped with a pair of gold-plated binding posts. Connect your speakers, with the cables of your choice, to the 250i's speaker binding posts. Take care to respect the polarity ("+" , "-") of the outputs. Once again, don't hesitate to use high quality speaker cables*. Poor quality speaker cables can degrade the overall sonic performance of your system.

Finally on the far right side is the main power switch ("0"=off, "1"=on), the IEC receptacle, labeled "AC Input" for the included AC power cord, and the "AC Fuse" socket cover. Connect the supplied AC power cable to the IEC receptacle. Ensure that the AC wall outlet you use has a functioning ground. For the best sonic performance, it is preferable that you plug your 250i directly into a dedicated AC outlet and avoid using an extension cord. If you have the time and willingness, consider installing a superior quality AC wall outlet such as a hospital grade Hubbell*.

*** Please speak with your MOON Authorized Retailer about the benefits of high quality cables for your system, and superior quality AC wall outlet.**

SimLink™

The SimLink™ provides communication features between various MOON components. For example, if you were to connect the 260D to the 250i via the SimLink™, pressing the (play) button on the 260D will cause the 250i to automatically switch to the input labelled 'CD'.

A second feature of SimLink™ involves the "Standby" function. By pressing down and holding the "Standby" button for 2 seconds on the either the 260D or 250i, both units will go into "Standby" mode. The same logic applies when switching from "Standby" to active mode.

If you are using the "MiND" Music Streamer and an external digital-to-analog converter (DAC), you must make a SimLink™ connection between the "MiND"s SimLink™ out and the 250i's SimLink™ in. The 'Aux' input is the default input for the "MiND" Music Streamer; When you press the (play) button on the "MiND" App, the 250i will automatically switch to the input labeled 'Aux'. You can change these default settings for the "MiND" as follows: Select the input that you want as the new default for "MiND", then press and hold the "MP" button until the front panel display begins to flash on and off.

The connection rules for the SimLink™ are very basic. You must always connect the supplied cable between one component's SimLink™ Out jack and another component's SimLink™ In jack. If you inadvertently connect the cable between either two SimLink™ In or two SimLink™ Out jacks, the SimLink™ communication feature may not function. Also, there is no master component in a SimLink™ chain; no one particular component operates as the main communications controller.

Operating the Unit

We recommend leaving your MOON 250i powered up at all times to maintain optimal performance. When you plan on being away for a few days, it may not be a bad idea to power off your amplifier. Please keep in mind that once fully "broken-in", your 250i requires several hours of operation before reaching optimal performance after powering it up again.

TURNING ON YOUR MOON 250I FOR THE FIRST TIME

Prior to turning the amplifier on for the first time, make sure that every cable is properly connected to avoid any problems. Flick the main rocker switch, located on the rear panel, labeled "POWER" to the '1' (on) position. The blue LED on the front panel will blink for up to 10 seconds while it achieves standby mode. When it stops blinking and is not illuminated, your 250i is in standby mode. Next, briefly press the push button labeled "Standby" located on the front panel. You will hear a very faint click sound confirming that everything is in order. The blue LED on the front panel will illuminate, indicating that the 250i is now powered up and ready for use.

ON AND OFF SEQUENCE

To avoid having any annoying noises (ie. "thumps" and "pops") emanate from your speakers when powering your 250i on or off, you should always power up any source components prior to powering up your 250i. As well, always power down your 250i prior to powering down any source components.

Remote Control

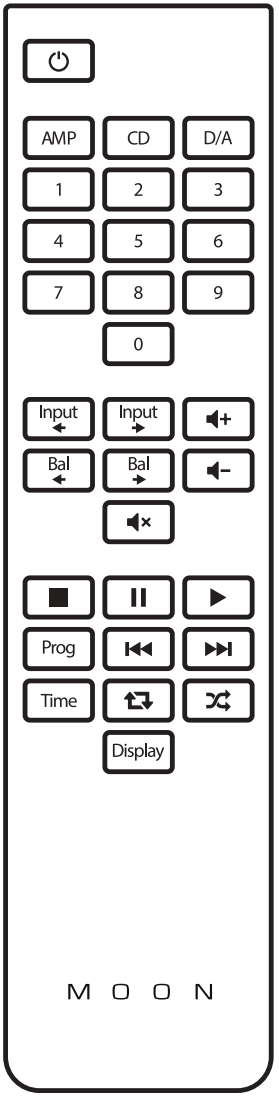


Figure 3: CRM-3 Remote Control

The MOON 250i uses the 'CRM-3' full-function remote control (figure 3). It operates on the Philips RC-5 communication protocol and can be used with other MOON components. The 'CRM-3' remote uses two CR-2032 batteries (included). To install them, simply remove the two screws from the slidable lower section of the back plate.

To engage the 'CRM-3' remote for use with the MOON 250i, you must first press the button labeled **AMP**.

The ⏻ (Power) button, at the top left switches the unit to either 'Standby' or 'On' mode.

The 2 buttons labelled ← **INPUT** → allow you to sequentially scroll, through all available inputs.

The 2 buttons labelled **- VOL +** allow you to control the volume level.

The 2 buttons labelled ← **BAL** → control channel balance;

The 🔇 button mutes the sound. Pressing again will reinstate the output .

When your selected input is "MiND" and the QUEUE contains at least one track, you can use the remote control to play music from the MiND's QUEUE. You can use the ⏸ (pause), ▶ (play), ⏮ (backward) and ⏭ (forward) buttons. Pressing 🔁 once will repeat the QUEUE's current track; pressing 🔁 a second time will repeat the entire contents of the QUEUE; pressing 🔁 a third time will cancel the repeat mode. Pressing 🔀 will randomly play the entire contents of the QUEUE. Pressing 🔀 a second time will cancel the random mode.

When in repeat mode the 🔁 icon will appear in the screen display; when in random mode the 🔀 icon will appear in the screen display.

When your selected input is "BLUETOOTH" and you have a paired smart device (iPhone, iPad, Android, etc.) that is playing music, you may be able to use the pause, play, backward and forward buttons on the CRM-3 remote control to navigate the music stored on your smart device. This is dependant on both the App and the smart device compatibility and both needs to be compatible for this functionality to work.

Remote Operation

Figure 4: Remote Operation with SimLink™



In figure 4 we have a 180 MiND Music Streamer and a MOON 250i Integrated Amplifier connected together via their respective SimLink™ ports. The SimLink™ output on the 180 MiND is connected to the SimLink™ input on the 250i using a 1/8" mini-jack cable. When you launch the MiND App on your Apple smart device (full list on the MiND page of our website) and select this system's ZONE, both the 180 MiND and the 250i will turn on. To shut down the system, press "Off" for this ZONE in the MiND app.

Specifications

Configuration	Stereo
Power Supply Transformer	320VA
Power Supply Capacitance	20,000µF
Class Of Operation – Amplifier	Class A/B
Single-ended inputs	5 (RCA)
Mini-jack input	1 (1/8")
Input Sensitivity	370mV – 3.0V RMS
Input Impedance	11,000Ω
Preamplifier output	1 (RCA)
Headphone output	1 (1/4" Strereo TRS)
Output Device Type – Amplifier	MOON Bipolar
Output Power @ 8Ω	50 W per channel
Output Power @ 4Ω	100 W per channel
Gain	37dB
Signal-to-noise Ratio	101dB @ full power
Frequency Response	10Hz - 100kHz +0/-3.0dB
Crosstalk@ 1kHz	-78dB
Intermodulation Distortion	0.05%
Total Harmonic Distorition (20Hz-20kHz @ 1W)	0.015%
Total Harmonic Distorition (20Hz-20kHz @ 50W)	0.02%
Remote Control	Full-Function (CRM-3)
AC Power Requirements	120V / 60Hz ou 240V / 50Hz
Shipping Weight	22 lb / 10 kg
Dimensions (W x H x D, inches / cm)	16.9 x 3.5 x 14.4 / 42.9 x 8.9 x 36.6



Fuse replacement: **120V version uses a 4A fast blow (3AG)**
230V version uses a 2A fast blow (3AG)

If you require the IR or RS-232 codes for the MOON 250i, please visit the "Contact Us" section in the support page on our website at www.simaudio.com.

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