



M O O N

P-3

Stereo Preamplifier



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**IMPORTANT: Please read this entire manual before using this product.
Installation and operating instructions inside.**

Congratulations!

Thank you for selecting the **MOON P-3 Stereo** preamplifier as a part of your hi-fi reproduction system. This preamplifier has been designed to offer state-of-the-art high-end performance in an elegant package, while retaining all the sonic hallmarks on which Simaudio has made its reputation. We have spared no effort to ensure that it is among the finest two-channel preamplifiers available. We have been building high performance audio equipment for over 20 years, and the know-how gained through our cumulative experience is an important reason why **MOON** preamplifiers are so musically satisfying.

The performance of your **P-3** will continue to improve during the first six weeks of use. This is the result of a “break-in” period required for the numerous high quality electronic parts used throughout this preamplifier.

Please read this manual thoroughly to acquaint yourself with this product’s features prior to using it. We hope you enjoy listening to the **MOON P-3 Stereo** preamplifier 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 reproducing these elusive qualities.

Introduction

Your **MOON P-3 Stereo** preamplifier incorporates many significant design features to achieve its “world class” level of performance. This is an abbreviated list of the more important features:

A custom **proprietary toroidal transformer design** with lower magnetic, electrical and thermal loss, yielding an improved power transfer and lower regulation factor, resulting in increased current speed and better dynamics.

An **oversized** power supply.

An **exceptionally short capacitor-free signal path** measuring only eleven inches in length for a faster transient response.

Class “A” circuit topology.

A gain section that uses a Crystal microprocessor functioning as a **“shunt to ground”** that doesn't degrade sonic performance regardless of the selected setting.

J-FET input devices and **MOSFET** output devices.

One single-ended audio input which functions as a **“pass-through”**, bypassing the gain stage to accommodate a component such as a home-theater processor, whose own volume control is used instead.

Extremely **rigid chassis construction** to minimize the effects of external vibrations.

Accurate matching of the very finest high quality electronic components.

A **symmetrical** circuit design.

Pure copper circuit board tracings with extremely low impedance characteristics.

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

Low operating temperature for a longer than normal life expectancy.


Unpacking and Warning!

The **MOON P-3 Stereo** preamplifier should be removed from its box with care.

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

- ✓ *AC power cable*
- ✓ *'SRM' Full Function remote control with three 'AAA' batteries (USA and Canada only)*
- ✓ *4 Pointed screw-on tips (for the preamplifier's legs)*
- ✓ *This owner's manual*
- ✓ *Warranty card (USA and Canada only)*

As soon as the preamplifier is safely removed from its box and placed down, perform a thorough physical inspection and report any physical damage to your dealer immediately. We suggest that you keep the original packaging, and that it should be stored in a safe, dry place in case you're required to transport the preamplifier. The customized packaging is specially designed to protect the preamplifier from potential damage that can arise when shipping such a product.

WARNING!  To reduce the risk of fire or electric shock, do not expose this product to rain or moisture. Do not attempt to "lift the ground" by removing the ground pin from the AC cable. Make sure that your household electrical wiring supports proper AC grounding techniques before plugging in this product. Keep the heat sinks and top cover free of dust to allow for proper heat dissipation. Never expose this product to extreme temperatures. Always connect the audio signal path cables prior to connecting the AC mains.

CAUTION! No user-serviceable parts inside. Do not remove top cover, as severe electrical shock may result.

IMPORTANT! Make sure that your local AC voltage complies with the unit's label. Damage caused by plugging this amplifier into an AC receptacle of the wrong voltage will not be covered by warranty.

Installation Tips

The **MOON P-3 Stereo** preamplifier should be placed on a rigid surface to prevent any accidents such as falling over. It is highly recommended that it sits on its own dedicated shelf.

This preamplifier has side-mounted heat sinks; Consequently, it should both be placed in a location with empty space around it for proper heat dissipation. You should never place another component on top of the preamplifier. As well, you should avoid placing it near a heat source or inside a closed cabinet that is not well ventilated. This could compromise the preamplifier's performance and reliability.

Once you have decided on a location for your **P-3**, you should install the four (4) pointed screw-on tips onto the cones of the chassis. These tips will easily scratch most surfaces, therefore it's advisable to follow these instructions:

- 1) Place your **P-3** on a soft surface (i.e. carpet) and carefully turn it so that it rests on its side.
- 2) Screw one tip onto each of the four cones.
- 3) Carefully move your **P-3** to it's pre-determined location.

Included with these tips is a small metal rod, intended for final adjustments (if necessary) by simply threading it through the tiny hole of each of these tips and then gently turning. These adjustable screw-on tips serve two purposes: Mechanical grounding of the chassis and compensation for surfaces that aren't perfectly level.

Since household dust is an excellent insulator of heat, we suggest that you clean both of the curved side-mounted heat sinks on a regular basis. A smooth nylon brush with long bristles (i.e. paint brush) is recommended for this task.

Finally, you should make all of your audio signal connections prior to making the AC connection between the **P-3** and the AC wall outlet.

Front Panel Controls

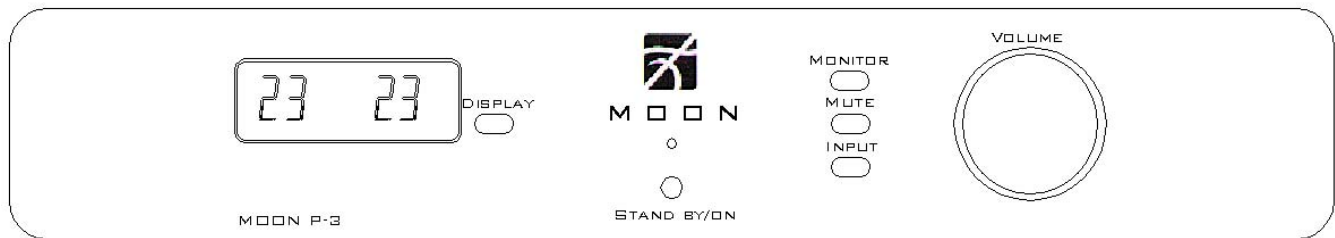


Figure 1: Front panel of Moon P-3 Stereo Preamp

The front panel will look similar to Figure 1 (above). The large digital display window indicates the relative gain setting (from '0' to '50') for both the left and right channels. As well, whenever you change the selected input source, it's number will appear in the window for 3 seconds before reverting back to the gain setting. Directly to the right of the digital display window is a button labeled "Display" which allows you to turn the digital display on and off. The sonic performance of the **MOON P-3 Stereo** preamplifier may improve slightly when the display is turned off simply because the power supply has one less task to perform.

The "Stand by/On" button disengages the input section from the rest of the **P-3's** circuitry and turns off the digital display. However, when in "Stand by" mode all audio circuitry remains powered up to help maintain optimal performance. When switching back from "Stand by" to the "on" mode, both the 'input' and gain level settings will be memorized from the previous listening session. The blue pilot LED will not be illuminated when the **P-3** is in "Stand by" mode.

The "Monitor" button activates the tape monitor loop. The A3 input has been reserved for this feature; Pressing the "Monitor" button automatically switches the selected input to A3. To properly function, you must make the two following connections between your tape deck (or other recording device) and the **P-3**: 1) connect your tape deck's output to the A3 input and 2) connect your tape deck's input to the 'Tape Output' connectors on the **P-3**. This creates a 'loop connection' between your tape deck and the preamplifier. A small round LED will illuminate in the lower right corner of the display window when the "Monitor" function is activated.

Front Panel Controls (continued)

The "Mute" button triggers a decrease in the output gain setting to a factor of 10% of the current setting. For example, if your current setting was '30' and you pressed the "Mute" button, the gain setting will drop to '3'. Pressing the "Mute" button a second time will reinstate the output gain level back to '30'. By holding down the "Mute" button for two seconds you will activate or de-activate the 'headphone output' located on the rear panel.

The "Input" selector button allows you to choose which input source you wish to listen to. The **MOON P-3** Stereo preamplifier has eight (8) inputs. The A3 input is reserved for use as the 'tape monitor' input. The A4 input is a 'pass-through' which bypasses the **P-3's** gain section, allowing you to control the gain setting via the source component's own volume control – a home theater processor for example. Adjusting the volume on the **P-3** will have no effect whatsoever when the A4 input is selected.

Pressing the "Input" selector button allows you to sequentially cascade through each of the possible inputs in the following order: CD, A1, A2, A3, A4, A5, A6 and A7. Holding down the "Input" will allow only a single change of the selected input. You must press the button again to select the next input.

The rotary "Volume" control determines the gain setting, which ranges from '0' (no output) to '50' (full output). This control doesn't function like a typical volume: When you rotate the dial, either clockwise for more gain or counter-clockwise for less gain, you are actually engaging a high quality optical encoder which selects a specific gain setting on a shunt-to-ground based microprocessor circuit. This gain circuit, known as **RGB-Cs**, doesn't degrade the audio signal regardless of the setting, unlike all potentiometer based circuits. Since there are no actual moving parts, this proprietary gain technology has a minimum life expectancy of one million rotations.

The range of fifty (50) unique gain settings is based on neither a linear nor logarithmic scale. Instead, we decided on relatively small variations for each of the lower position settings from '1' to '20'. The variations are somewhat larger from positions '21' through '50'. For the best possible performance, it is recommended that you don't turn the rotary control too quickly as some gain settings will be skipped, simply not registering, and extra rotations will be required to reach position '50'.

Between the left and right channel gain settings indicators appearing in the display window, is a red LED which functions as a status indicator. If a problem is ever detected with the **P-3's** internal circuitry, this LED will illuminate, even if the problem originates from the source component currently in use. In the event that the LED remains on, you should immediately power down your **P-3** using the main power switch located on the rear panel, then contact your dealer for service. Don't confuse this with a smaller red LED, located directly to the bottom right of the left channel's gain setting indicator which will faintly illuminate whenever the **P-3** receives an infra-red (IR) signal from a remote control; This simply confirms the successful reception of the IR remote signal.

Rear Panel Connections

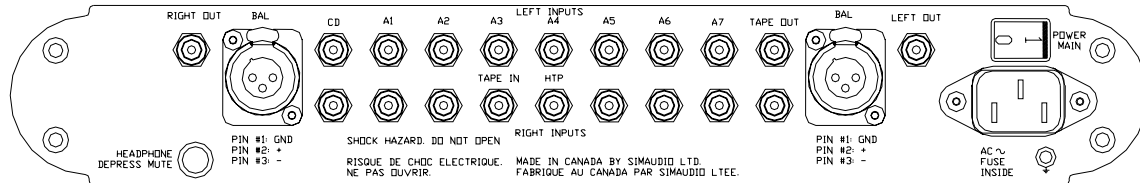


Figure 2: Rear panel of Moon P-3 Stereo Preamplifier

The rear panel will look similar to Figure 2 (above). There are eight (8) pairs of single-ended (unbalanced) inputs on RCA connectors labeled CD, A1, A2, A3, A4, A5, A6 and A7. The left channel inputs are located on top and the corresponding right channel inputs are located directly below. The A4 input, as previously mentioned, bypasses the gain stage and is intended to be used with a component, such as a home theater processor, that has its own volume/gain control.

The **MOON P-3 Stereo** preamplifier has three (3) pairs of outputs; One single-ended pair labeled 'Tape Out', located next to the A7 input, that is intended as an input to a recording device such as a cassette tape deck or CD-Recordable Player. Keep in mind that the output level on the 'tape out' is fixed and cannot be adjusted by the **P-3's** volume control. A second single-ended pair of RCA connectors labeled 'Left Out' and 'Right Out', located on opposite sides of the rear panel, is designated for output to a power amplifier with single-ended RCA inputs. The third pair of outputs are balanced XLR connectors intended for use with an amplifier using balanced XLR input connectors. We strongly recommend that you use the balanced output connectors on your **P-3** to maximize its level of performance. As well, don't hesitate to use high quality interconnect cables. Poor quality interconnect cables can degrade the overall sonic performance of your system.

The **P-3** has a headphone jack located on the lower left side of the rear panel. The audio signal for this output can be turned on or off by using the "Mute" button located on the front panel. By holding down the "Mute" button for two seconds you will activate or de-activate the 'headphone output' located on the rear panel.

You will notice that all RCA input and output connectors on the rear panel have been color coded: 'white' for the left channel and 'red' for the right channel.

Operating the P-3

Making the AC Connection

1. Connect the supplied AC power cable to the IEC receptacle, located on the rear panel of the preamplifier's chassis. Alternatively, if you wish, you may use a dedicated high-performance AC cable designed for preamplifiers. Ensure that the AC wall outlet you use has a functioning ground. For the best sonic performance, it is preferable that you plug your **MOON P-3 Stereo** preamplifier directly into a dedicated AC outlet and avoid using an extension cord.
2. In order to obtain the maximum performance from your audio system, we strongly recommend that the detachable power cord not come into physical contact with any of the interconnect cables running to and from your **P-3**. In the event that this can't be avoided, you should ensure that any cables coming into contact with each other are crossed at ninety degree angles to minimize the contact area.

Turning on your MOON P-3 for the first time

Prior to turning the preamplifier on for the first time, make sure that every cable is properly connected to avoid any problems. Then turn on your preamplifier in the following manner:

- 1) Flick the main rocker switch labeled "POWER" to the '1' (on) position on the rear of the P-3.
- 2) Press the push button labeled "Stand by/On" on the P-3. The blue LED will illuminate and the digital display will indicate a gain setting of '0' and the 'CD' as the default input.

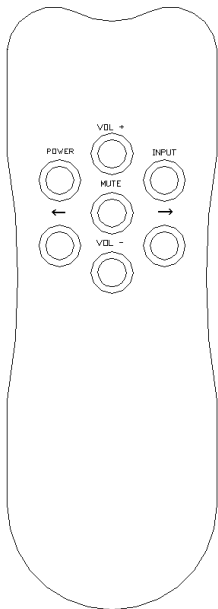
On and Off Sequence

To avoid having any annoying noises (i.e. "thumps" and "pops") eliminate from your speakers when powering your **P-3** on or off, you should

- 1) Always power up your **P-3** preamplifier before powering up your amplifier.
- 2) Always power down your **P-3** after powering down your amplifier.

We recommend that you leave your **MOON P-3 Stereo** preamplifier powered up at all times to maintain optimal performance. In the event that you plan to be away from your home for a few days, powering off the amplifier may not be a bad idea. Once fully "broken-in", please keep in mind that your **P-3** will require several hours of playing time before it reaches its peak performance after you've powered it up again.

Remote Control Operation



The **MOON P-3 Stereo** preamplifier uses the '**SRM**' simple function, all aluminum remote control (figure 3). It operates on the Philips RC-5 communication protocol and is can be used with other Simaudio MOON components such as the i-5 and i-5080 integrated amplifiers.

The '**SRM**' remote uses three AAA batteries (included). To install them, use the supplied Allen key to remove the three screws located on the back plate; insert the batteries in the correct direction and then screw the back plate back into place.

The **POWER** button located on the upper left will switch the preamplifier to either 'Stand by' or 'On' mode.

The **INPUT** button performs in exactly the same way as the 'Input' button located on the P-3's front panel, sequentially cascading through each of the preamplifier's inputs.

Figure 3: SRM Remote Control

The **VOL+** and **VOL-** buttons increase and decrease, respectively, the volume level.

The **←** and **→** buttons control channel balance; Pressing the left arrow button causes a decrease in the volume level of the right channel; pressing the right arrow button causes a decrease in the volume level of the right channel.

The **MUTE** button, located in the middle of the volume and balance buttons, performs the identical function as the 'Mute' button located on the **P-3's** front panel.

Specifications

Configuration	Stereo
Power Supply Transformer	0.2kVA
Power Supply Capacitance	12,000 μ F
Class Of Operation	Class "A"
Design	Feedback Differential
Single-ended inputs (RCA)	8
Input Device Type	J-FETs
Input Impedance	13,500 Ω
Input Sensitivity	200mV – 3.0V RMS
Tape Output	1
Tape Monitor Loop	1
Output Device Type	MOSFET
Balanced outputs (XLR)	1
Single-ended outputs (RCA)	1
Headphone output	1 located on rear panel
Output Impedance (Balanced)	50 Ω
Output Impedance (Single-ended)	100 Ω
Gain Control	RGB cs – "Shunt-To-Ground"
Gain (Balanced)	9.5dB
Gain (Single-Ended)	6.5dB
Signal-to-noise Ratio	85dB @ full output
Maximum Output Voltage (Balanced)	8 Volts
Maximum Output Voltage (Single-Ended) ...	4 Volts
Frequency Response	20Hz - 20kHz + 0/-0.1dB
Crosstalk @ 1kHz	-56dB
Intermodulation Distortion	Unmeasurable
THD (20Hz - 20kHz)	< 0.03%
Remote Control	All Aluminum Simple-Function (SRM)
Optional Phono Section	MOON IPS - external
AC Power Requirements	120V / 60Hz or 240V / 50Hz
Fuse Replacement - 120V / 230V	1A long slow blow
Shipping Weight	22 lb / 10 Kg
Dimensions (W x H x D, inches)	17 x 4 x 15
Balanced Output Pin Assignment:	
Pin 1	Ground
Pin 2	Positive
Pin 3	Negative

Service and Warranty

(U.S.A and Canada only)

Please take the time to complete and mail the warranty card supplied with your **MOON P-3 Stereo** preamplifier. This card is necessary to activate your full warranty, as well as allowing you to receive information on new products and services. Alternatively, you may visit our website www.simaudio.com and go to the "warranty registration" section where you can register on-line.

If you experience a problem with your **P-3**, contact your dealer first. Most often, problems are merely minor oversights that are easily solved, and this will save you both the time and the cost of shipping the amplifier back to us. If your dealer is not able to diagnose the problem, please feel free to contact our service department. If required, service must be performed by a **Simaudio Ltd.** authorized center such as your national distributor. In order to prevent any damage during transport, the **P-3** must be packed with all of its original internal materials and shipped in the original box. **Please keep your box and shipping materials.**

MOON P-3 Stereo preamplifiers are guaranteed against defective materials and workmanship for a period of THREE (3) years, parts and labor, to the original owner. Upon receiving your registration card (either by mail or via our on-line warranty registration), this warranty is immediately upgraded to TEN (10) years, parts and labor to the original owner only. Additionally, your **P-3** must be purchased from an authorized **MOON** dealer to qualify for warranties. These warranties are voided in the case of accident, or if the unit was tampered with, somewhere other than at an authorized Simaudio service center. This warranty is valid only in Canada and USA. In other countries, the warranty conditions are defined and limited only by the local distributor.

Simaudio Ltd. limits its liability to the repair or replacement of the **MOON P-3 Stereo** preamplifier. **Simaudio Ltd.** cannot be held responsible for any damages caused to any other equipment, whatever the circumstances and/or causes arising thereof.

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