



M O O N

NOVA

CD Player



Owner's Manual

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www.simaudio.com

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

Congratulations!

Thank you for selecting the **MOON Nova** CD Player as a part of your hi-fi reproduction system. This CD Player has been designed to offer state-of-the-art high-end performance in a compact and elegant package, while retaining all the sonic hallmarks on which Simaudio has made its reputation. We designed the **Nova** using the engineering concepts learned while developing the **Moon Eclipse** CD Player.

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** components are so musically satisfying.

The performance of your **Nova** will continue to improve during the first four to six weeks of use. This is the result of a "break-in" period required for the numerous high quality electronic parts used throughout this CD Player.

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 Nova** CD Player 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 Nova** CD Player incorporates many significant design features to achieve its “world class” level of performance. This is an abbreviated list of the more important features:

Separate digital and analog power supplies using two toroidal power transformers.

Seven stages of DC voltage regulation.

Philips based transport mechanism.

BurrBrown DF1704 digital filter with 8X oversampling and two precision matched 24-bit/96kHz **BurrBrown PCM1704-J "Digital To Analog" converters.**

Internal upsampling which achieves a **24-bit/352.8kHz** level of resolution.

A **very accurate 25 PPM digital clocking** system.

A **capacitor-free signal path** using a DC servo circuit and **proprietary 6db/octave analog filter.**

Pure copper circuit board tracings with low impedance characteristics.

Separate digital and analog audio circuitry mounted on a single circuit board, **each with their own respective ground plane**, which minimizes signal path lengths and eliminates any potential for interference and signal degradation.

Full-function Bi-directional RS-232 port control and status for custom integration and automation.

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.

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 Nova** CD Player should be removed from its box with care.

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

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

As soon as the CD Player 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 CD Player. The customized packaging is specially designed to protect the CD Player 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 Nova** CD Player should be placed on rigid surfaces to prevent any accidents such as falling over. It is highly recommended that the unit sit on its own dedicated shelf. 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 this unit. As well, you should avoid placing it near a heat source. This could compromise the CD Player's performance and reliability.

Once you have decided on a location for the **Nova**, you should install the 4 pointed screw-on tips onto the legs of the CD Player. These tips will easily scratch most surfaces, therefore it's advisable to follow these instructions:

- 1) Place your Nova 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 cylindrical legs.
- 3) Carefully move the chassis 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.

You should make all of your audio signal connections prior to making the AC connection between the **Nova** and the AC wall outlet.

Finally, if you have not used a CD Player before, you may be unaware that compact discs are very easily damaged, and must be kept very clean. Always store them in their jewel cases. Dirty or finger-marked discs will reproduce music poorly. Moreover, the player may even mute parts of a track, or be unable to find some tracks. If you need to clean a CD remember to use a soft lint-free cloth, using a radial action (i.e. starting from the center and aiming towards the edges). Do not attempt to clean a compact disc using a rotating motion.

Front Panel Controls

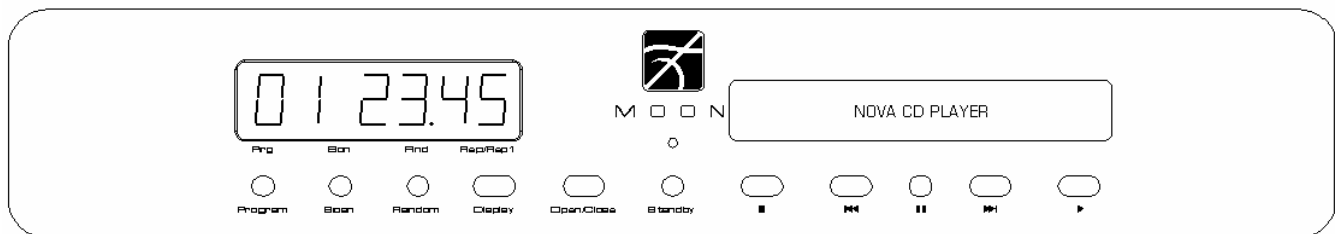


Figure 1: Front panel of Nova CD Player

The front panel will look similar to Figure 1 (above). The large digital display window indicates the track number of the compact disc currently playing (or the total number of tracks in stop mode) and time information. There are four (4) different display modes for time information; the one engaged is dependant on the "Display" button which is described in detail on the next page of this section. On the bottom of the display window, from left to right, are five (5) indicator LED's that will illuminate as follows:

- 'Prg' - when Program mode is engaged
- 'Scn' - when Scan mode is engaged
- 'Ran' - when "Random" play mode is engaged
- 'Rep' - when repeat mode is engaged for the entire compact disc
- 'Rep1' - when repeat mode is engaged for one (1) specific track

Each of these functions is described in detail on page 9

The "Standby" button disengages the transport mechanism from the rest of the **Nova's** circuitry and turns off the digital display. However, when in "Standby" mode, all digital and analog audio circuitry remains powered up to help maintain optimal performance. The blue LED on the **Nova** will no longer be illuminated when the player is in "Standby" mode.

To load a compact disc into the **Nova**, press "Open/Close", put the CD in the drawer with the label side facing up and press "Open/Close" again. When a CD is first loaded into the **Nova**, the total number of tracks, and total playing time will appear in the display. In the event that you load a CD that contains no musical tracks (i.e. data only), the word 'DATA' will appear in the large digital display window and the drawer will automatically open to eject this unplayable CD.

Front Panel Controls (continued)

Press ► to begin playing a compact disc. Pressing ► while a track is already playing will result in the current track immediately playing again, starting from the beginning.

Press ◀ to search backward or ▶ to search forward through the compact disc's tracks. When you've located the track number, press ► to begin playing that track. In the event that you initiate a forward or backward track change while a disc is already playing, it will automatically start playing the track you select; you need not press ►.

Press || to pause the compact disc currently playing. The disc will continue spinning and the laser will be suspended in its current position. Press || a second time or ► to resume playing the disc.

Press ■ to stop the compact disc from playing. The laser will return to the start position of the disc.

The "Display" button allows you to scroll through the four (4) different display modes for time information, as well as turn the digital display on and off. Each time you press the "display" button, the system scrolls to the next time information mode. By default, the Nova will display the elapsed time of the track currently playing. The scrolling order is as follows:

1. Elapsed time of the current track
2. Remaining time of the current track
3. Elapsed time of the entire compact disc (or programmed tracks)
4. Remaining time of the entire compact disc (or programmed tracks)

If you want to turn the display off, press and hold the "Display" button for 2 seconds. When the display is off, it will still come back on for a short period of time whenever you press any of the buttons located on the front panel or the remote control; when you are done, the display will automatically turn off again. To turn the display back on again, press the "Display" button again. The sonic performance of the **MOON Nova** CD Player could improve slightly when the display is turned off.

Front Panel Controls (continued)

The "Scan" button forces the **Nova** to play the first ten (10) seconds of each track on the compact disc currently loaded into the player. When a track is playing in "scan" mode, you can press the ► button to continue listening to the remainder of the current track; doing this automatically terminates the "Scan" mode.

The "Prog" button allows you to program a selection of tracks in the order that you wish to listen them. After loading a compact disc into the **Nova**, select the first track you wish to listen to, using the ◀◀ or ▶▶ buttons and then press "Prog". To program a second track, select it the same way you did for the first one and press "Prog" again. Repeat this operation as many times as you want to program tracks. Once you've completed programming your track selection(s), the digital display window will show the number of tracks that have been programmed and their total time. To begin playing your programmed selections, simply press the ► button. Pressing ■ will only suspend the playing of the programmed selection. Pressing ■ a second time will clear your program selection from the **Nova's** memory. As well, opening the top drawer at any time will also clear your program.

The "Random" button, when pressed, will play each of the tracks on a compact disc in a completely random order, as opposed to the sequential order as they appear on the disc. If you have already created a program of selected tracks, it will play these programmed tracks in a random order.

The "Repeat" button (Remote control operation ONLY) performs three (3) functions: Pressing "Repeat" once will result in the entire disc being played again once it has reached the end of the final track. Pressing "Repeat" a second time will result in the track currently playing being repeated again once it has ended. To cancel this mode, simply press the "Repeat" button a third time.

If you have created a program of selected tracks, pressing "Repeat" once will result in your entire program repeating itself once it has completed its cycle; Pressing "Repeat" a second time will result in the current track from your program being played again once it has ended; Pressing "Repeat" a third time will terminate the "Repeat" mode.

Rear Panel Connections

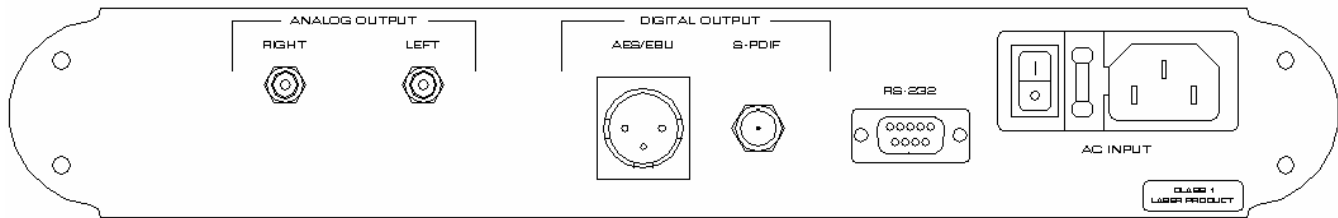


Figure 2: Rear panel of Moon Nova CD Player

The rear panel will look similar to Figure 2 (above). On the left side is the analog audio output. There is one pair of RCA analog audio output connectors that you should connect to a stereo analog input on your preamplifier or integrated amplifier. Don't hesitate to use good quality interconnect cable.

There are two (2) digital audio outputs located on the center of the rear panel. One is a BNC connector labeled "S/PDIF" which allows you to use the **Nova** as a CD transport whereby, digital signal processing will be handled externally by another DAC or surround processor such as the **MOON Attraction**. You should use a 75Ω digital audio cable with BNC connectors. In the event that this isn't available, you may use a digital audio cable terminated with RCA connectors and RCA-to-BNC adaptors. It is better to use a BNC-to-BNC connection, but it should not be of a concern if you need to use adaptors. A second digital audio output uses an AES/EBU connector which is intended for use with DACs and surround processors that have this type of input. Use a dedicated AES/EBU digital audio cable for this output.

The **MOON Nova** is equipped with full-function bi-directional RS-232 port control and status for custom integration or automation. This is located to the right of the digital audio outputs and uses a DB9 connector. All information about the RS-232 codes are available upon request or in PDF file format on our website: www.simaudio.com.

Finally on the far right side is the AC connector to plug the unit into a wall outlet. Use the included AC power cord. Alternatively, if you wish, you may use a dedicated high-performance AC cable designed for CD Players.

These rear panel connectors have been chosen because they provide the best possible connections for your unit. A poor contact will degrade the signal substantially, and plugs and sockets should all look clean and free of dirt and corrosion. The easiest way to clean them is to remove the cables from their sockets and push them back in again. This procedure requires that your CD Player and the rest of your components be completely turned off. Not heeding this warning may result in serious damage to your equipment. Special contact cleaning fluids and enhancers should not be used, as they deposit a difficult to remove residue which degrades the performance of your components.

Operating the Nova

Turning on your MOON Nova for the first time

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

- 1) Flick the main rocker switch labeled "POWER" to the '1' (on) position on the rear panel.
- 2) Press the push button labeled "Standby" on the **Nova**, the blue led will confirm operation and the digital display will show 'no disc'. You are now ready to load a compact disc and begin listening to music.

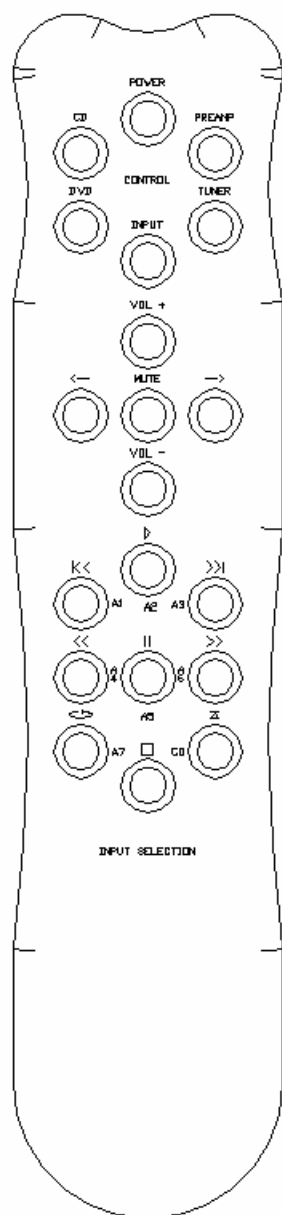
On and Off Sequence

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

- 1) Always power up your **Nova** CD Player before powering up your preamplifier and/or amplifier.
- 2) Always power down your **Nova** after powering down your preamplifier and/or amplifier.

We recommend that you leave your **MOON Nova** CD Player 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 CD Player may not be a bad idea. Once fully "broken-in", please keep in mind that your **Nova** 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 Nova** CD Player uses the '**FRM**' full 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 P-5 and P-3 Preamplifiers, AIR FM Tuner and both the i-5 and i-3 integrated amplifiers.

The '**FRM**' remote uses two 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.

To operate the **Nova** with this remote control, you must first press the button labeled 'CD' on the top left corner.

The lower section of the '**FRM**' has nine (9) buttons which operate the **Nova**. All of these functions are available on either the top panel or front panel of the CD Player. Please refer to these aforementioned sections for a more detailed description of each of these buttons:

- ▶ Play the compact disc loaded into the player
- ⏮ Skip to the previous track on the disc
- ⏭ Skip to the next track on the disc
- ⏪ Scan backwards through the current track of the disc
- ⏸ Pauses the player
- ⏩ Scan forward through the current track of the disc
- 🔄 Repeat the entire disc or the current track
- Stop playing the current track
- ▲ Open/Close the CD drawer

Figure 3: FRM Remote Control

Specifications

Configuration	Single-ended
Digital Power Supply Transformer	25VA
Analog Power Supply Transformer	10VA
Digital Power Supply Capacitance	4,400 μ F
Analog Power Supply Capacitance	8,800 μ F
Transport Mechanism	Philips Short Loader MkIII
Digital Filter	BurrBrown DF1704
Digital-to-Analog Converters	BurrBrown PCM1704-j x 2
Frequency Response (audible)	20Hz - 20kHz +0/-0.2dB
Frequency Response (full range)	5Hz - 56kHz +0/-3dB
THD @1kHz, 0dBFS (A-weighted)	< 0.003%
Intermodulation Distortion	< 0.005%
Dynamic Range	> 110dB
Signal-to-noise Ratio	> 109dB @ full output
Slew Rate	50V/ μ s
Channel Separation	> 110db
Low Level Linearity	< 1.6dB to below 108dbFS
Intrinsic Jitter	< 25 picoseconds RMS
Analog Outputs.....	1 pair RCA
Digital Output 1	S/PDIF BNC
Digital Output 2	AES/EBU XLR
Maximum Analog Output @ 0dBFS	2.0 Volts RMS
Analog Output Impedance	50 Ω
Digital Output Impedance - S/PDIF	75 Ω (0.5 Volts)
Digital Output Impedance - AES/EBU	110 Ω (3.7 Volts p-p)
Remote Control	All Aluminum Full-Function
Power Consumption @ idle	10 Watts
AC Power Requirements	120V / 60Hz or 240V / 50Hz
Fuse Replacement - 120V	0.5A short slow blow
Fuse Replacement - 230V	0.25A short slow blow
Shipping Weight	24 lbs / 11 Kgs
Dimensions (W x H x D, inches)	17 x 4 x 15

Service and Warranty

(U.S.A and Canada only)

Please take the time to complete and mail the warranty card supplied with your **MOON Nova** CD Player. 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 **Nova**, 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 **Nova** must be packed with all of its original internal materials and shipped in the original box. **Please keep your box and shipping materials.**

MOON Nova CD Players are guaranteed against defective materials and workmanship for a period TWO (2) years, parts and labor, to the original owner, with the exception of the CD drive mechanism. The Philips CD drive is guaranteed for ONE (1) year, 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, with the exception of the Philips CD drive which is guaranteed for THREE (3) years, parts and labor. Additionally, your **Nova** 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 Nova** CD Player. **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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