

# Owner's Manual

MOON


230D

*CD Player*



M O O N

### 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.
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.

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



### Important Safety Instructions (cont'd)



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 Simaudio MOON 230D CD Player.***

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. The MOON 230D 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 MOON 230D 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.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate the MOON 230D 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 MOON 230D with any liquid. If a liquid substance does enter your MOON 230D, 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 MOON 230D.
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 MOON 230D. If a problem occurs contact your MOON dealer.
12. **NEVER** expose the MOON 230D to extremely high or low temperatures.
13. **NEVER** operate the MOON 230D in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

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Date Code: 20120402

## MOON 230D CD Player

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### Congratulations!

Thank you for selecting the **MOON 230D 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 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 amongst the finest CD players available in its class. We have been building high-performance audio equipment for over 25 years, and the know-how gained through our cumulative experience is an important reason why **MOON** CD Players are so musically satisfying.

The performance of your **230D** 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 CD Player.

Before setting up your new **MOON 230D**, we encourage you to please read this manual thoroughly to properly acquaint yourself with its features. We hope you enjoy listening to the **MOON 230D 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 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/manuals.htm>*

### Unpacking

The **MOON 230D 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
- ✓ CRM-2 Full-Function remote control with two 'AA' batteries (USA and Canada only)
- ✓ This owner's manual
- ✓ Warranty and product registration information (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 all of the original packaging, storing it in a safe, dry place in the event that you're required to transport the CD Player. The customized packaging is specially designed to protect the **MOON 230D CD Player** from potential damage that may occur during shipping.

Please write the serial number of your new Simaudio **MOON 230D** in the space provided below for future reference.

Serial No.: \_\_\_\_\_

# MOON 230D CD Player

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## Introduction

Your **MOON 230D 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:

**8 stages** of DC voltage regulation.

**Internal upsampling** which uses **24-bit/352.8kHz** processing.

Proprietary **M-ProDrive** transport mechanism with in-house developed hardware & software.

**BurrBrown PCM1793** high-resolution 24-bit/192-kHz Digital-to-Analog Converter and 8X oversampling digital filter.

All digital and analog audio circuitry mounted on a single circuit board, **each with their own respective ground plane**, to minimize signal path lengths and eliminate any potential for interference and signal degradation.

**MOON Alpha Clocking System** for exceptionally low intrinsic jitter levels

Advanced analog signal path using a **DC servo circuit and proprietary analog filter**.

Circuit board with **pure copper tracings and gold plating** that yields low impedance characteristics.

**Optimized selection** of very high quality electronic components.

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

**Low operating temperature** to ensure a longer than normal life expectancy.

## Installation & Placement

The **MOON 230D** requires reasonable ventilation to maintain an optimum and consistent operating temperature. As a result, it should be placed in a location with empty space around it for proper heat dissipation. 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 CD Player's performance and reliability. The **230D** uses a toroidal transformer; even though it is well shielded, you should not place the player too close to source components sensitive to EMI, such as turntables and phono preamplifiers. *You should never place another component directly on top of this CD Player.*

Compact discs are 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.

## MOON 230D CD Player

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### Front Panel Controls

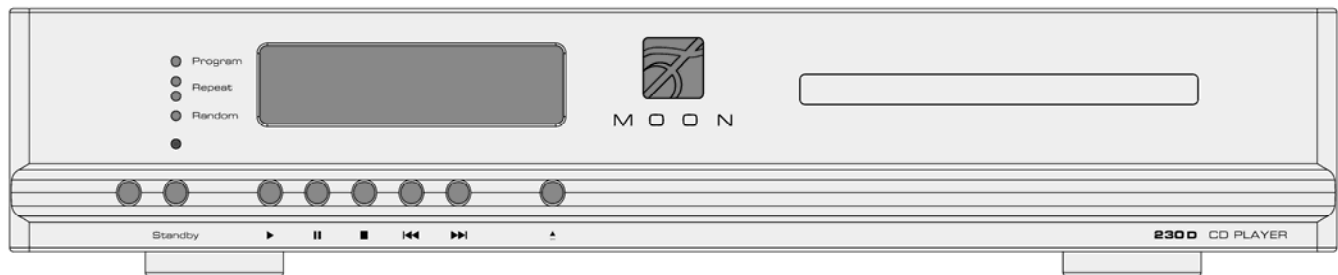


Figure 1: MOON 230D Front panel

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.

The "Standby" button disengages the transport mechanism from the rest of the **230D'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 **230D** will no longer be illuminated when the player is in "Standby" mode.

On the left side of the display window, from top to bottom, are four (4) red indicator LED's that will illuminate as follows (each of these functions is described in detail in "Remote Control Operation" section beginning on page 10):

- |             |   |
|-------------|---|
| 'Program' - | when Program mode is engaged  |
| 'Repeat' -  | Both LED's - when Repeat mode is engaged for the entire compact disc<br>Lower LED only - when Repeat mode is engaged for one (1) specific track |
| 'Random' -  | when "Random" play mode is engaged  |

To load a compact disc into the **230D**, press ▲, put the CD in the drawer with the label side facing up and press ▲ again to close the drawer. When a CD is first loaded into the **230D**, 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 display window. As well, if you load a disc that is not compatible with the **230D** (i.e. SACD, DVD-A, etc), the phrase 'NO DISC' will appear in the display window.

Press ► to begin playing a compact disc. Pressing || while a disc is already playing results in the current track being paused; Press either ► or || again to resume playing the disc.

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 and hold ◀ to search backward through the current track; Press and hold ▶ to search forward through current track.

Press ■ to stop the compact disc from playing. The laser will return to the start position of the disc. To open the drawer and remove the compact disc, press ▲.

## MOON 230D CD Player

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### Rear Panel Connections

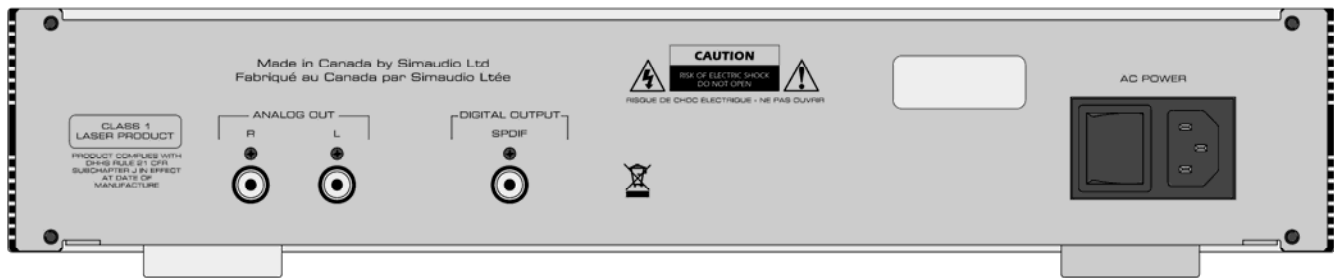


Figure 2: MOON 230D Rear panel

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 labeled “ANALOG OUT” that you should connect to a stereo analog input on your preamplifier or integrated amplifier.

There is one (1) digital audio output labeled “DIGITAL OUTPUT” located directly to the right of the “ANALOG OUT”. An RCA connector labeled “S/PDIF” allows you to use the **230D** as a CD transport whereby, digital signal processing will be handled externally by another DAC or surround processor. You should use a 75Ω digital audio cable terminated with RCA connectors.

Finally on the right side is the “AC Power” section with a main power switch (“0”=off, “1”=on) and IEC receptacle for the included AC power cord.

All 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.



## MOON 230D CD Player

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### Operating the 230D

We recommend that you leave your **MOON 230D** 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 **230D** will require several hours of playing time before it reaches its peak performance after you've powered it up again.

#### **Making the AC Connection**

Connect the supplied AC power cable to the IEC receptacle, located on the rear panel of the integrated amplifier's chassis. 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 230D** directly into a dedicated AC outlet and avoid using an extension cord. 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 and speaker cables running to and from your **230D**. In the event that this can't be avoided, you should ensure that any cables coming into contact with each other are crossed at a ninety degree angle to minimize the contact area.

#### **Turning on your MOON 230D 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 **230D**, 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 **230D** on or off, you should

- 1) Always power up your **230D** CD Player before powering up your preamplifier and/or integrated amplifier.
- 2) Always power down your **230D** CD Player after powering down your preamplifier and/or integrated amplifier.

## MOON 230D CD Player

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### Remote Control Operation



Figure 3: CRM-2 Remote Control

The **MOON 230D** CD Player uses the '**CRM-2**' full-function remote control (figure 3). It operates on the Philips RC-5 communication protocol and is can be used with other Simaudio MOON components.

The '**CRM-2**' remote uses two AA batteries (included). To install them, simply slide the back plate off in the direction of the arrow; insert the batteries in the correct direction and then replace the back plate.

To engage the '**CRM-2**' remote for use with the **MOON 230D** CD Player, you must first press the button labeled **CD**.

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

Certain buttons found on this remote control perform identical functions to their corresponding button located on the **230D's** front panel. Please refer to page 7 for a more detailed description:

<b>0 thru 9</b>	Direct access track number selection
<b>OPEN/CLOSE</b>	Open/Close the Compact Disc drawer
<b>DISPLAY</b>	Turns the front panel display on and off
<b>TIME</b>	Changes the time display mode on front panel (refer to TIME button on page 11 for more details)
■	Stop playing the CD's current track
II	Pauses the player
▶	Play the compact disc loaded into the player
⏮	<u>Press Once:</u> Go back to the previous track on the disc
⏮	<u>Press and hold:</u> Scan backward through current track
⏭	<u>Press Once:</u> Skip to the next track on the disc
⏭	<u>Press and hold:</u> Scan forward through current track

### Remote Control Operation (continued)

The **TIME** 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 **230D** 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 wish to turn the display off, press the **"DISPLAY"** button. 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 for 2 seconds.

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 **MOON 230D**, 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 **230D's** memory. As well, opening the drawer at any time will also clear your program.

The **"REPEAT"** button 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.

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.

## MOON 230D CD Player

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### Specifications

Configuration .....	Single-ended
Transport Mechanism .....	Proprietary Design
Digital Filter / Digital-to-Analog Converter .....	BurrBrown PCM1793
Frequency Response (audible) .....	20Hz - 20kHz +0/-0.2dB
Frequency Response (full range) .....	2Hz - 72kHz +0/-3dB
THD @1kHz, 0dBFS (A-weighted) .....	< 0.004%
Intermodulation Distortion .....	< 0.007%
Dynamic Range .....	> 108dB
Signal-to-noise Ratio .....	> 108dB @ full output
Channel Separation .....	> 103db
Low Level Linearity .....	±1.0dB to below 120dbFS
Intrinsic Jitter .....	< 325 picoseconds RMS
Analog Output .....	1 pair Single-ended RCA's
Analog Output Impedance .....	100Ω
Max. Analog Output @ 0dBFS .....	2.0 Volts RMS
Digital Output .....	S/PDIF RCA
Digital Output Impedance - S/PDIF .....	75Ω (0.5 Volts)
Standard Remote Control .....	Full-Function (CRM-2)
Power Consumption @ idle .....	15 Watts
AC Power Requirements .....	120V / 60Hz or 240V / 50Hz
Shipping Weight .....	14 lbs / 6.25 Kgs
Dimensions (W x H x D, inches) .....	16.9 x 3.5 x 13.1



Fuse Replacement:

For the 120V version use a 0.2A slow blow (5 x 20mm size).

For the 230V version use a 0.1A slow blow (5 x 20mm size).