

# Owner's Manual

MOON Evolution Series

CP-8

*Reference Surround Preamplifier / Processor*




M O O N



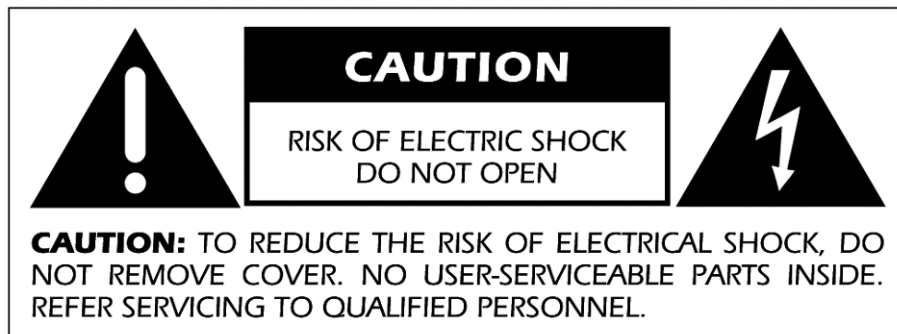
# MOON CP-8 Surround Preamplifier / Processor

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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.
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.
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.



## MOON CP-8 Surround Preamplifier / Processor

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### 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 CP-8 Surround Preamplifier / Processor***

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
  2. The MOON CP-8 must be terminated with a three-conductor AC mains power cord which includes a protective earthing connection. To prevent shock hazard, all three connections must **ALWAYS** be used. Connect the MOON CP-8 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 CP-8 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 CP-8 with any liquid. If a liquid substance does enter your MOON CP-8, immediately disconnect it from the AC mains and take it to your MOON dealer for a complete check-up.
  7. **NEVER** expose the MOON CP-8 to dripping or splashing of liquids and no objects filled with liquids, such as vases, shall be placed on top.
  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 CP-8. If a problem occurs contact your MOON dealer.
  12. **NEVER** expose the MOON CP-8 to extremely high or low temperatures.
  13. **NEVER** operate the MOON CP-8 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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[www.simaudio.com](http://www.simaudio.com)

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

Revision no.: 20100607

# **MOON CP-8 Surround Preamp / Processor**

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## Congratulations!

Thank you for selecting the **MOON CP-8** Surround Preamp / Processor as a part of your Home-theater system. This Surround Preamp / Processor 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 available. 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** components are so musically satisfying.

The performance of your **CP-8** 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 Processor.

Before setting up your new **MOON CP-8**, we encourage you to please read this manual thoroughly to properly acquaint yourself with its features. We hope you enjoy listening to the **MOON CP-8** Surround Preamp / Processor 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.

## Unpacking

The **MOON CP-8** Surround Preamp / Processor is a large and heavy component that should be removed from its box with care.

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

- ✓ *This owner's manual*
- ✓ *AC power cable*
- ✓ **Full-Function Remote Control + batteries**
- ✓ **Secondary WRM-2 Remote Control + batteries**
- ✓ *Indoor FM Antenna*
- ✓ *Indoor AM Loop Antenna*
- ✓ *Microphone for Setup*
- ✓ *Remote Control Preset Codes List*
- ✓ *Warranty and product registration information (USA and Canada only)*

As soon as the component is safely removed from its box and placed down, perform a thorough physical inspection 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 the event that you're required to transport the amplifier. The customized packaging is specially designed to protect the **MOON CP-8** Surround Preamp / Processor from potential damage that may occur during shipping.

Please write the serial number of your new Simaudio **MOON CP-8** in the space provided below for future reference.

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

# **MOON CP-8 Surround Preamplifier / Processor**

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## Introduction

Your **MOON CP-8** Surround Preamplifier / Processor incorporates many significant design features to achieve its "world class" level of performance. This is an abbreviated list of the more important features:

**7.1** Channels with up-to-date **HD audio and video decoding** • **HDMI 1.3a** inputs and output • **Three-zone** multiple source capability • **RS-232C** and **serial IR** ports for full custom external control • Dual assignable **12 Volt trigger** outputs • HD Video Circuitry using **12-bit/216MHz encoders/decoders** with NSV Precision Video that includes Faroudja DCDi • video processing, **1080p video pass-through**, and up to **1080p analog-video-to-HDMI upscaling** • **Full-function programmable** remote-control with touch-screen • An over-sized power supply with 2 transformers including **1 proprietary toroidal** specifically for analog audio circuitry • Power supply voltage regulation includes 20 stages of **i<sup>2</sup>DCf** (Independant Inductive DC Filtering) • 6 assignable **digital audio inputs** • **Secondary remote** control for basic operation • **Hidden control panel** allows for full operation and setup without a remote control • **10 DSP simulation** playback Modes • **Auto Surround** Mode for Digital & Analog inputs • **2 subwoofer** outputs • Three **user-selectable** muting levels • **"Auto Setup Calibration"** (w/ microphone), Auto & Manual room calibration and "Audyssey Mult EQ XT" • **Crossover points** at 40, 60, 80, 100, 120, 150 & 250Hz in either 12 dB or 24dB steps • Built-in **AM/FM Tuner** and **RIAA Phono Section** (MM) • **XM Satellite Radio** ready • Short signal paths for a faster transient response • Designed to remain **powered up at all times** for optimal performance

## Installation & Placement

The **MOON CP-8** Surround Processor / 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. You should never place another component on top of this Surround Processor. 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 **CP-8's** performance and reliability.

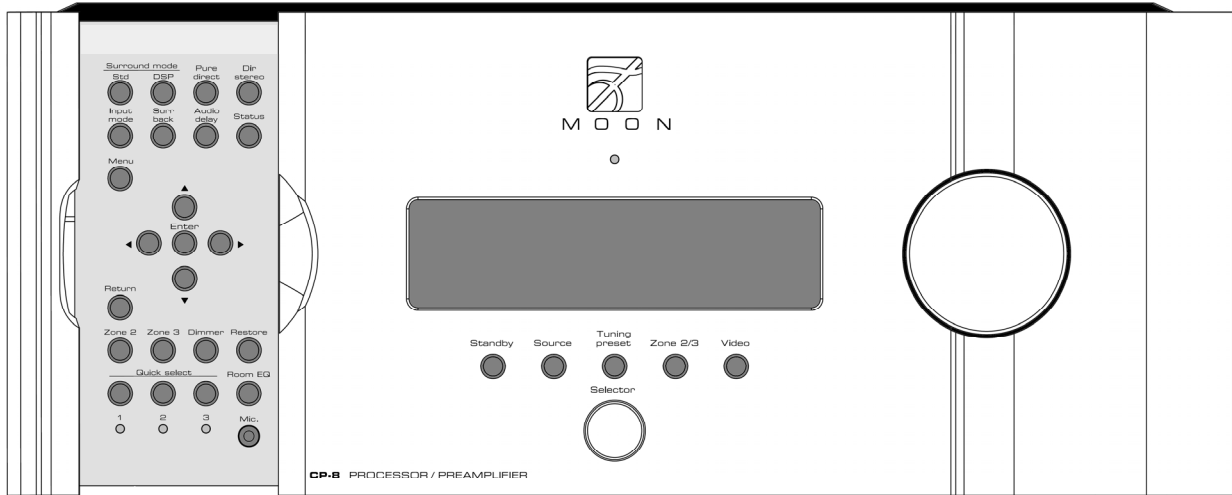
In the event that you intend to place your **CP-8** in a rack mount type installation, Middle Atlantic Products, Inc. offers a rack & enclosure specifically tailored to the **MOON CP-8**. If you choose to use another rack mounting system, please refer to specifications section at the end of this owner's manual for the **CP-8's** exact dimensions

By default, the **MOON CP-8** is configured for 5.1 channel operation. To activate 7.1 channel operation, please refer to the section entitled Manual Setup – "Amp Assign" (page 38).

Finally, you should make all of your audio and video signal connections prior to making the AC connection between the **CP-8** and the AC wall outlet.

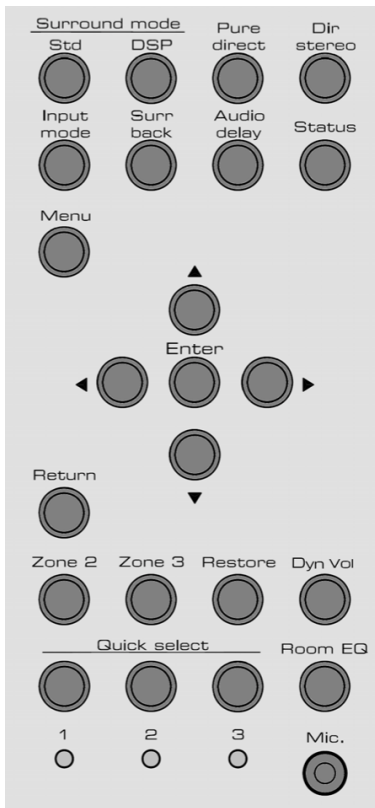
# MOON CP-8 Surround Preampifier / Processor

## Front Panel Layout



### Front Panel Item

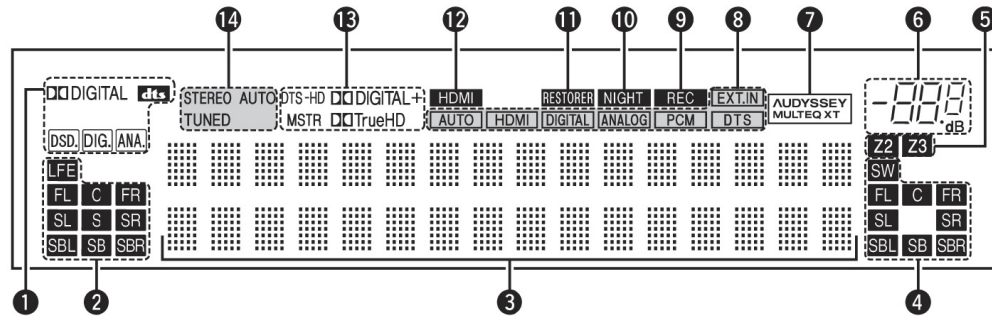
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# MOON CP-8 Surround Preamplifier / Processor

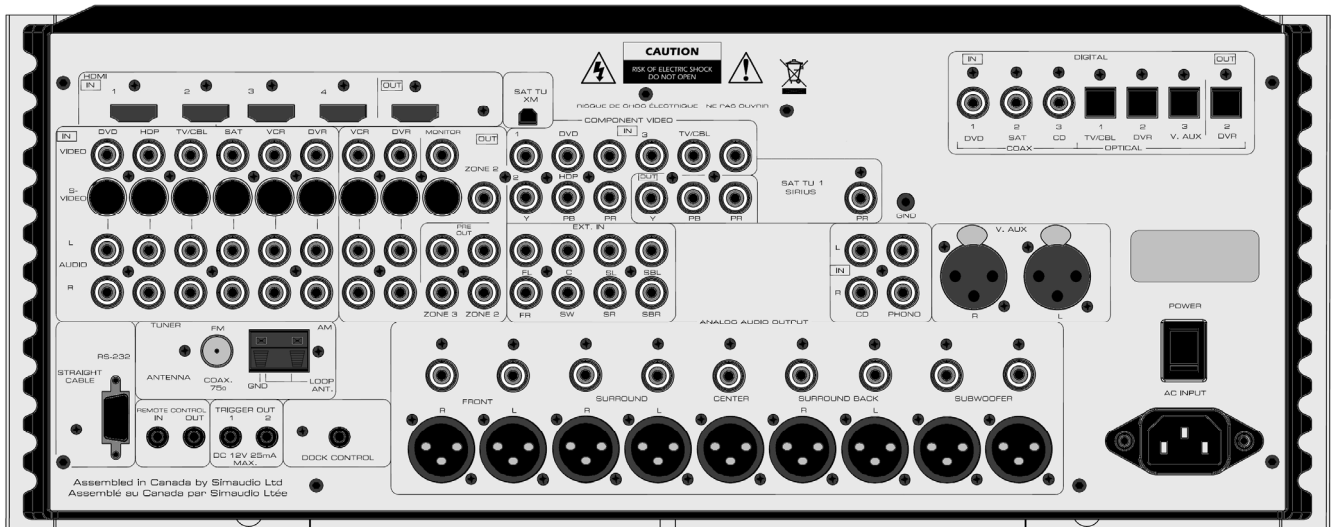
## Front Panel Display Layout



- 1 Input signal indicators**
- 2 Input signal channel indicators**  
These light when digital signals are input.
- 3 Information display**  
The input source name, surround mode, setting values and other information are displayed here.
- 4 Output signal channel indicators**
- 5 Multi-zone indicators**  
These light when the power for the respective zone is turned on.
- 6 Master volume indicator**
- 7 AUDYSSEY MULTEQ XT indicator**  
This lights when MultEQ XT is selected.
- 8 Input mode indicators**
- 9 Recording output source indicator**  
This lights when the REC OUT mode is selected.
- 10 NIGHT indicator**  
This lights when the night mode is selected.
- 11 RESTORER indicator**  
This lights when the RESTORER mode is selected.
- 12 HDMI indicator**  
This lights when playing using HDMI connections.
- 13 Decoder indicators**  
These light when the respective decoders are operating.
- 14 Tuner reception mode indicators**  
This lights according to the reception conditions when the input source is set to "TUNER".
  - **AUTO**  
This lights when in the auto tuning mode.
  - **STEREO**  
In the FM mode, this lights when receiving analog stereo broadcasts.
  - **TUNED**  
This lights when the broadcast is properly tuned in.

# MOON CP-8 Surround Preamplifier / Processor

## Rear Panel Layout



The above image is an exact representation of the **CP-8's** rear panel. Throughout this manual, specific sections of this rear panel will be referenced to describe various methods of connecting other components to the **CP-8**.

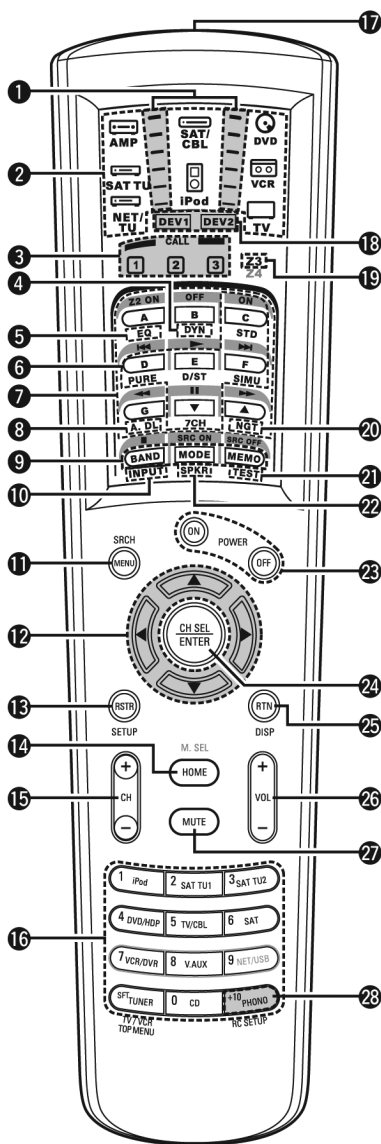
The rear panel is divided into different sections in a logical manner; Moving from left to right and top to bottom, HDMI inputs (4) and output (1); XM Satellite Radio connector (USA & Canada only); Digital audio inputs (3 coaxial, 3 optical) and output (1 optical); standard video inputs (6 with S-Video, CVBS & 2-ch. audio), standard video outputs (2 with S-Video, CVBS & 2-ch. audio and 1 with S-Video & CVBS); Zone-2 output (CVBS & 2-ch. audio); Zone-3 output (2-ch. audio); Component video inputs (3) and outputs (1); Sirius Satellite Radio connector (USA & Canada only); 7.1 analog audio input; audio only 2-ch inputs (CD and Phono); Auxiliary balanced XLR audio 2-ch input (1); Control signal connections (RS-232C, IR input/output and two 12V trigger outputs); AM & FM tuner antenna terminals; analog audio outputs – balanced XLR and single-ended RCA - Front L/R, Surround L/R, Center, Rear Surround L/R and subwoofer (2); the main power switch ("0"=off, "1"=on) and finally the IEC receptacle for the included AC power cord.

# MOON CP-8 Surround Preamp / Processor

## Remote Control Layouts

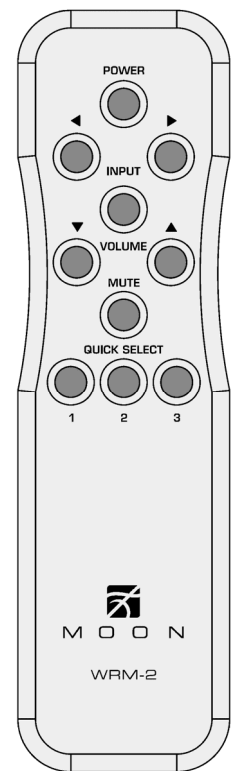
The **MOON CP-8** comes with two (2) remote control units; The full-function (or main) remote control allows for access to all setup menus and normal operation of the **CP-8**. The secondary remote control (or **WRM-2**) allows for basic everyday operation of the **CP-8**. We recommend that, once you have performed the complete setup procedure for the **CP-8**, you should store the full-function remote in a safe and easily accessible place. This remote control unit has a backlight feature for ease-of-use in darkened rooms. Both the amount of time that the backlight stays on and its brightness level can be adjusted. Refer to page 68 for further details. The following buttons cannot be used with the **CP-8**: M.SEL, DTU, NET/USB as well as the Zone4 mode.

### Full-Function Main Remote Control



- 1 Signal transmission indicator ..... 63 - 66
- 2 Mode select buttons ..... 63 - 66
- 3 Quick select / System call buttons ..... 62, 67
- 4 Dynamic Volume button (DYN) ..... 50
- 5 MultEQ XT button ..... 50
- 6 Surround mode buttons' ..... 45 - 46
- 7 System buttons ..... 64 - 66
- 8 Audio delay button (A. DL) ..... 52
- 9 Tuner system buttons ..... 56
- 10 Input mode button (INPUT) ..... 41 - 42
- 11 Menu/Search button (MENU/SRCH) ..... 26
- 12 Cursor buttons ▲▼◀▶ ..... 26
- 13 RESTORER button (RSTR) ..... 52
- 14 HOME button ..... 63
- 15 Channel buttons (CH) ..... 55
- 16 Input source select / Number buttons ..... 55
- 17 Remote control signal transmitter ..... 11
- 18 Device select indicators (DEV1/DEV2) ..... 63 - 66
- 19 ZONE3 select indicators (Z3) ..... 63 - 66
- 20 Night button (NGT) ..... 52
- 21 Test tone button (TEST) ..... 33
- 22 Front speaker select button (SPKR) ..... 55
- 23 POWER buttons ..... 55
- 24 Channel select (CH SEL)/ENTER button ..... 26, 62
- 25 Return button (RTN) ..... 26
- 26 Master volume buttons (VOL) ..... 55
- 27 Muting button (MUTE) ..... 55, 70
- 28 Main remote setup button (RC SETUP) ..... 63 - 66

### WRM-2 Remote Control



- Power ..... 55
- ◀ Input ▶ ..... 41 - 42
- Input ..... HDS-8 input
- Volume ▲▼ ..... 55
- Mute ..... 55, 70
- Quick Sel 1,2,3 ..... 62, 67

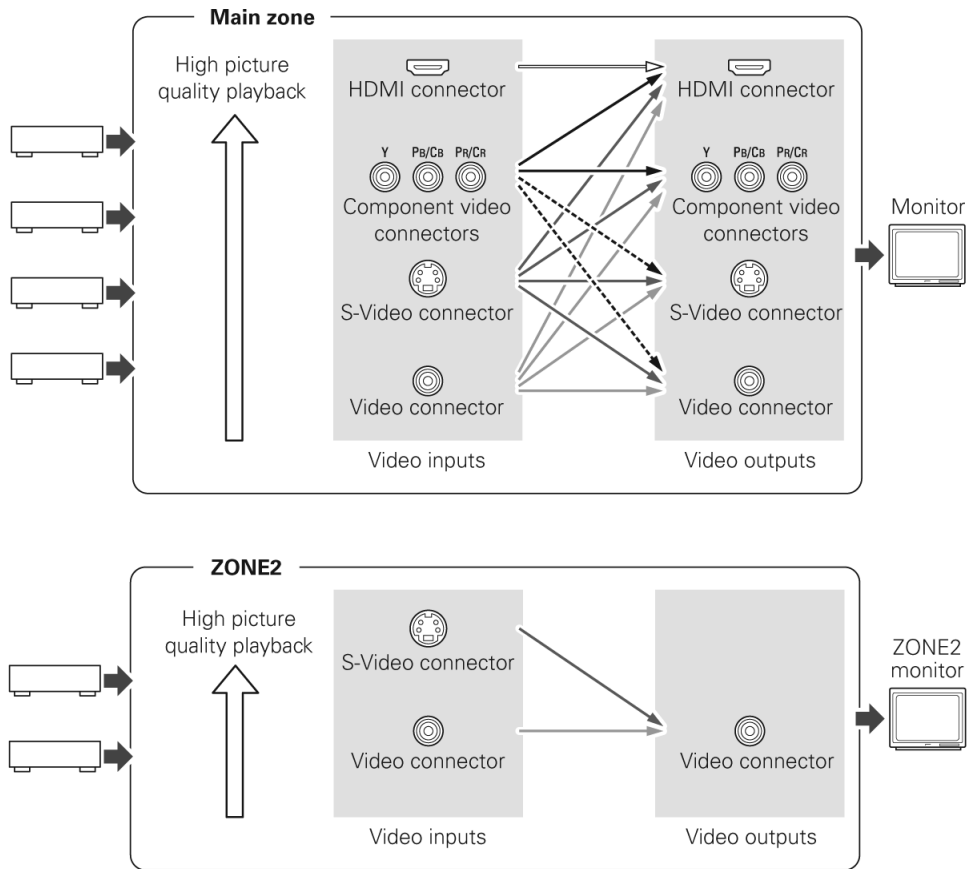
For further details on each of these remote controls' specific functions, please refer to the page numbers shown in parentheses.

# MOON CP-8 Surround Preamplifier / Processor

## Video Conversion Feature

This feature automatically converts various formats of video signals input to the **CP-8** into the format used to output the video signals from the **CP-8** to a monitor. The **CP-8**'s video input/output circuitry is compatible with the following four types of video signals:

Digital video signals: HDMI  
Analog video signals: Component Video, S-Video and Composite Video



When not using this feature, connect a monitor output with the same type of connector as the video input connector. The resolution of the HDMI input-compatible monitor connected to the **CP-8** can be checked at MENU "Information" – "HDMI Signal Information" – "HDMI Monitor Information" (page 53).

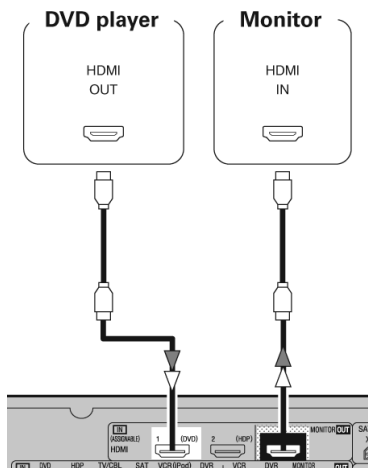
- HDMI signals cannot be converted into analog signals.
- 1080p component input video signals cannot be output to anything other than component video connectors.
- 480p/576p, 720p and 1080i component video input signals can't be converted into S-Video or Composite Video format.

When viewing HDMI or component video signals via the **CP-8**, the on-screen display appears when the **MENU** button or the main remote control unit's **PARA** button is operated. As well, when only HDMI or component video signals are input to the **CP-8**, the characters of the onscreen display are not displayed over the picture.

# MOON CP-8 Surround Preamp / Processor

## HDMI Connections

With HDMI connections, the video and audio signals can be transferred with a single cable. The **CP-8** is equipped for HDMI version 1.3a. This version is backward compatible with previous versions, allowing the connection to all components equipped with an HDMI connector. As well, the **CP-8** is compatible with both 30-bit and 36-bit Deep Color formats.



Compatible audio format	Details	Discs (examples)
2-channel linear PCM	2ch 32-192 kHz 16/20/24 bits	CD, DVD-Video, DVD-Audio
Multi-channel linear PCM	8ch 32-192 kHz 16/20/24 bits	DVD-Audio
Dolby Digital, DTS	Bitstream	DVD-Video
DSD	2/5.1ch 2.8224 MHz 1 bit	SACD
Dolby Digital Plus, Dolby TrueHD, DTS-HD	Bitstream	HD DVD, Blu-ray Disc

By default, the HDMI audio signals are output to the amplifier(s) connected to the **CP-8**. To output the sound from the TV, make the settings at MENU "Manual Setup" – "HDMI Setup" – "HDMI Audio Setup" – "HDMI Audio Out" "TV" (page 34).

- Use a CPPM-compatible DVD player to play DVD-Audio discs that are copyright-protected by CPPM.
- The **CP-8** cannot be controlled from another device via the HDMI cable.
- The audio signals output from the HDMI connector (sampling frequency, bit rate, etc) may be restricted by the connected device.
- Video signals are not output properly when using devices that are not HDCP-compatible.
- Video signals are not output if the input video signals do not match the monitor's resolution. In this case, switch the DVD player's resolution to a resolution with which the monitor is compatible.
- If the MENU "Manual Setup" – "HDMI Setup" – "HDMI Audio Setup" setting (page 34) is set to "AMP", the sound may be interrupted when the monitor's power is turned off.
- Use a cable on which the HDMI logo is indicated (a certified HDMI product) for connection to the HDMI connector. Normal playback may not be possible when using a cable that is non-HDMI-certified.
- If the monitor or DVD player does not support deep color, deep color signal transfer is not possible.
- If the monitor or DVD player does not support xvYCC, xvYCC signal transfer is not possible.
- If the monitor does not support "Auto Lipsync Correction" function, this function will not work.
- When the **CP-8** and DVD player are connected using an HDMI cable, also connect the **CP-8** and monitor using an HDMI cable.
- If the connected monitor or DVD player only has a DVI-D connector, use an HDMI/DVI converter cable.
- When using a DVI cable, no audio signals are transmitted.
- Use a Deep Color compatible cable for connection to Deep Color compatible devices.

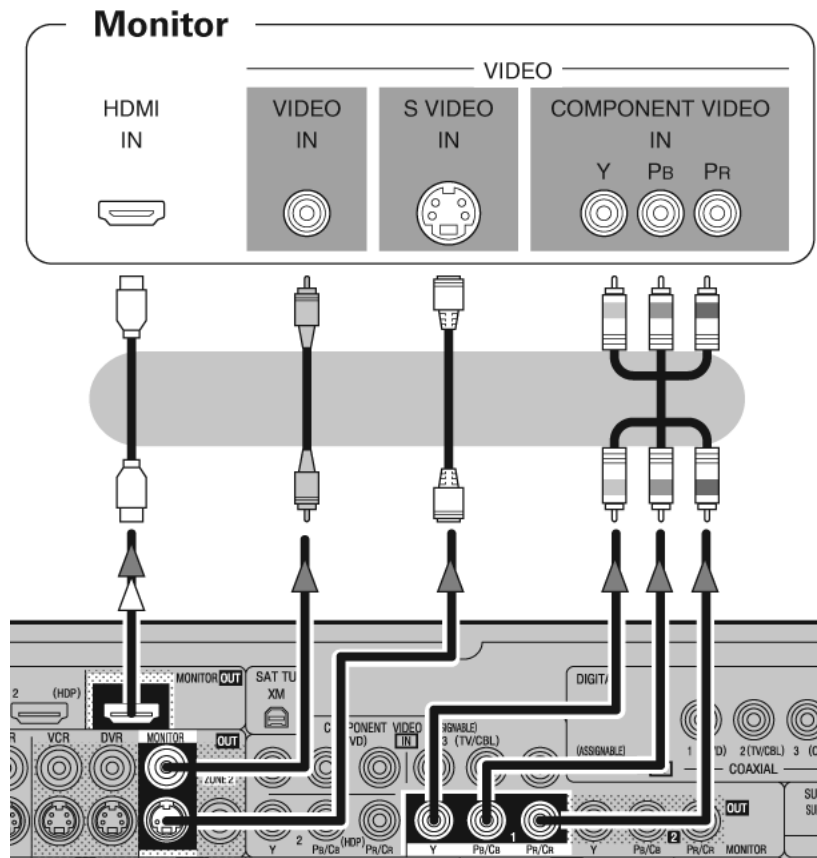
In the event that you are using an HDMI/DVI converter cable (or adapter):

- HDMI video signals are theoretically compatible with the DVI format. When connecting to a monitor, etc., equipped with a DVI-D connector, connection is possible using an HDMI/DVI converter cable, but depending on the combination of components in some cases the video signals will not be output.
- When connecting using an HDMI/DVI converter adapter, the video signals may not be output properly due to poor connections with the connected cable, etc.

# MOON CP-8 Surround Preamplifier / Processor

## Connecting a Monitor

- Connect the video cables to be used (refer to page 12 “Video Conversion Feature”).
- By using the **CP-8’s** HDMI connection, both the video and audio signals can be transferred with a single cable.
- To output the audio signals to the monitor with HDMI connections, set MENU “Manual Setup” – “HDMI Setup” – “HDMI Audio Setup” – “HDMI Audio Out” “TV” (page 34).



- The component video connectors may appear differently on your monitor. For details, refer to the monitor’s owners manual.
- The audio signals output from the HDMI connectors are only from the HDMI input signals. Video-converted HDMI signals are not included in the audio signals. To play the audio signal over your monitor, make the analog or digital audio output connections from the **CP-8** to your monitor’s audio input connectors.

# MOON CP-8 Surround Preamplifier / Processor

## Connecting Playback Components

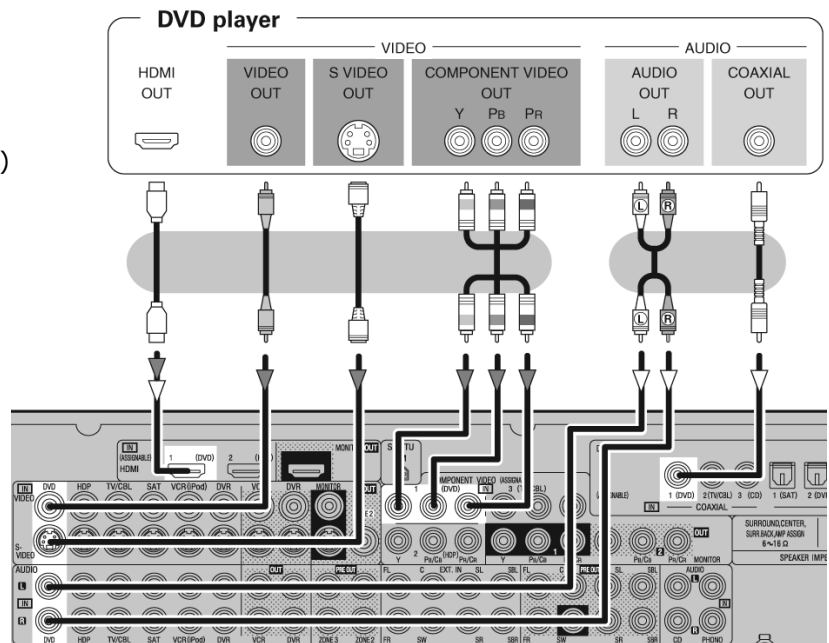
The following subsections explain how to connect various playback components to the **CP-8** such as a DVD player, Turntable, CD Player, TV/Cable tuner and Satellite receiver.

When connecting a playback component to the **CP-8**, always ensure that the left and right channel audio input connections of the **CP-8** are properly matched to the left and right channel audio output connections of the playback component. As well, don't hesitate to use high quality interconnect cables. Poor quality interconnect cables can degrade the overall sonic performance of your system.

All rear panel connectors have been chosen because they provide excellent 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 integrated amplifier and the rest of your components be completely turned off.

### DVD or Blu-ray Player

- With HDMI connections, the video and audio signals can be transferred with a single cable.
- When using the optical digital audio onnection (instead of the coaxial digital audio connection) make the settings at MENU "Input Setup" – "Assign" – "Digital In" (page 43).

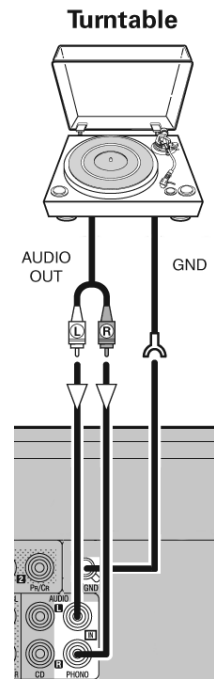


# MOON CP-8 Surround Preamp / Processor

## Turntable

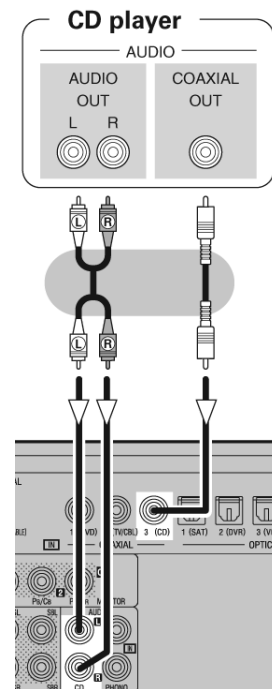
- When connecting a record player with an MC cartridge, use a commercially available MC head amplifier or a step-up transformer.
- Induction humming (a booming sound) may be produced from the speakers if the volume is raised with no record player connected.
- With some record players, noise may be generated when the ground wire is connected. If so, disconnect the ground wire.

Note: The **CP-8's** SIGNAL GND terminal is meant to reduce noise when a record player is connected. This is not a safety ground terminal.



## CD Player

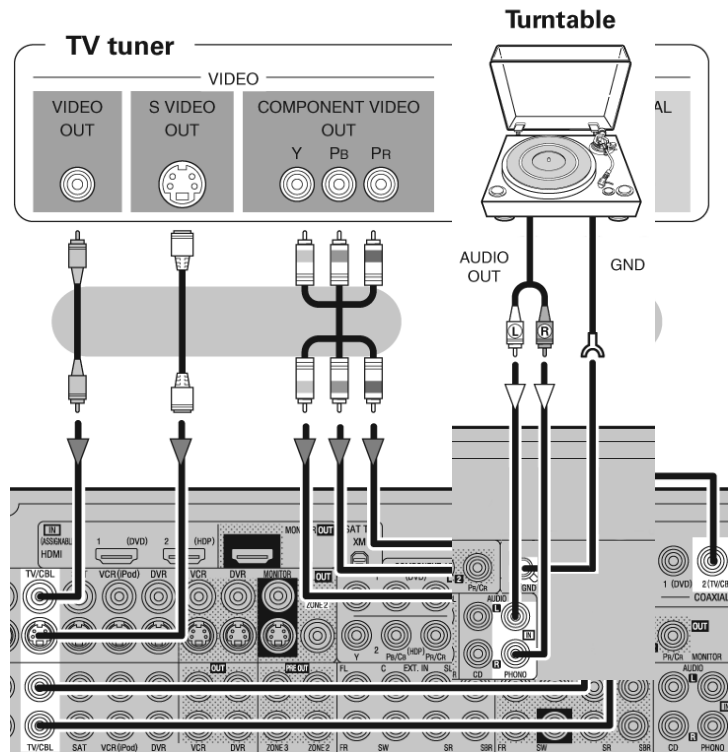
- When using the optical digital audio connection (instead of the coaxial digital audio connection), make the settings at MENU "Input Setup" – "Assign" – "Digital In" (page 43).



# MOON CP-8 Surround Preamp / Processor

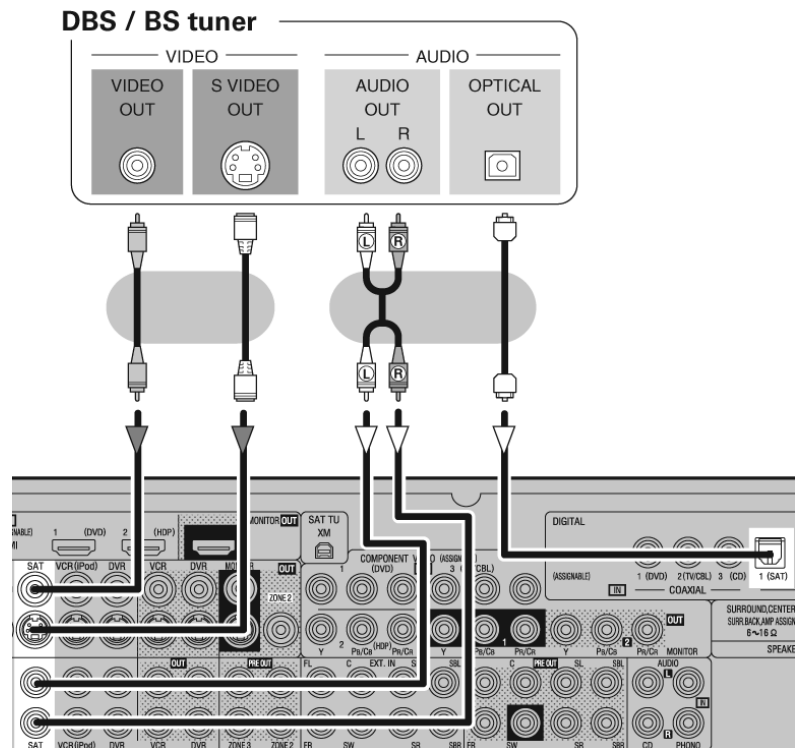
## TV/Cable Tuner

- When using an optical digital cable for the digital audio connection (instead of the coaxial digital audio connection) make the settings at MENU "Input Setup" – "Assign" – "Digital In" (page 43).
- When using a component video cable for the video connection, make the settings at MENU "Input Setup" – "Assign" – "Component In" (page 43).



## Satellite Receiver

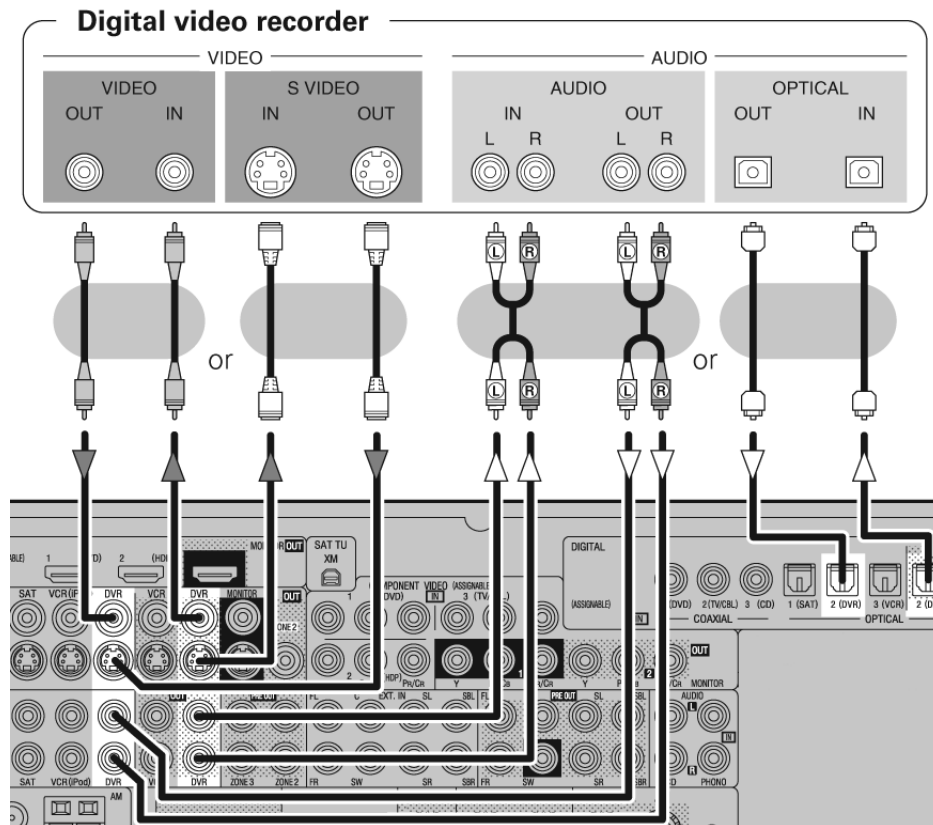
- When using a coaxial digital cable for the digital audio connection (instead of the coaxial digital audio connection), make the settings at MENU "Input Setup" – "Assign" – "Digital In" (page 43).
- When using a component video cable for the video connection, make the settings at MENU "Input Setup" – "Assign" – "Component In" (page 43).



# MOON CP-8 Surround Preamp / Processor

## Connecting Recording Components

### Digital Video Recorder (DVR)



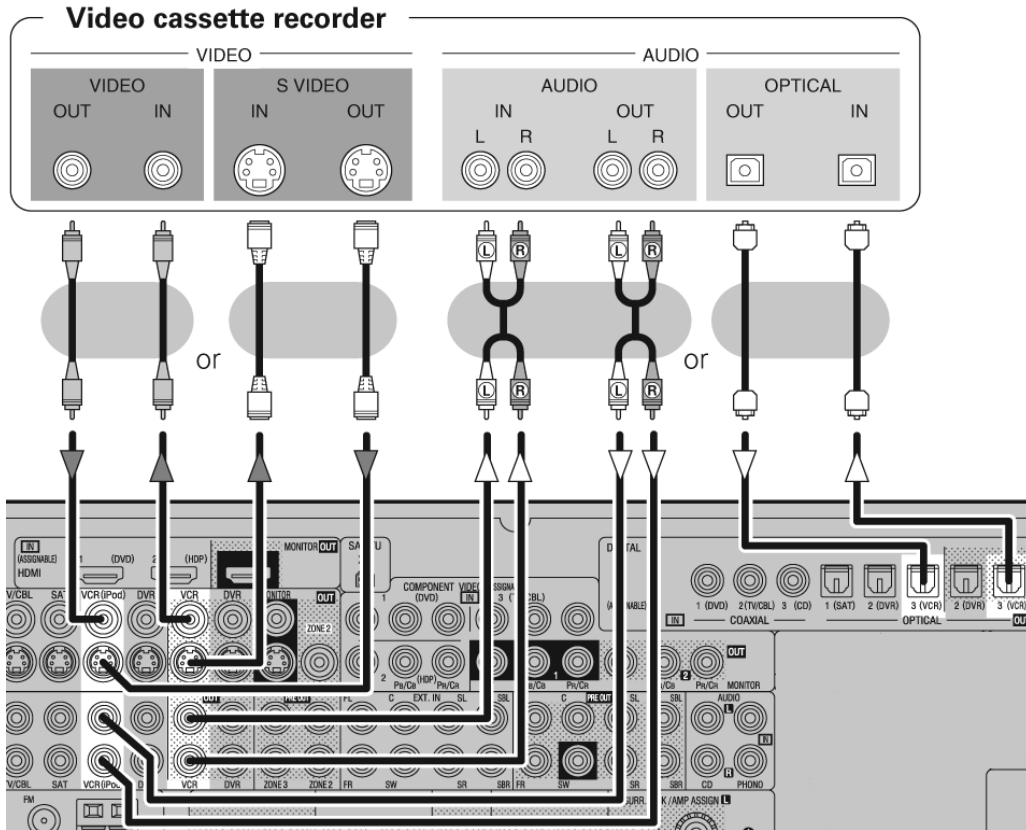
- Make analog connections if you want to record analog audio signals.
- When recording via the **CP-8**, the playback device's cable must be the same type as the cable used to connect the **CP-8**'s DVR OUT connector:

TV IN → S-Video cable                      and            DVR OUT → S-Video cable  
or  
TV IN → Composite Video cable            and            DVR OUT → Composite Video cable

- When using a component video cable for the video connection, make the settings at MENU "Input Setup" – "Assign" – "Component In" (page 43).
- If you are using the optical digital audio connection, you must use the DVR-2 input and DVR-2 output between the **CP-8** and your DVR device.

# MOON CP-8 Surround Preamp / Processor

## Video Cassette Recorder (VCR)



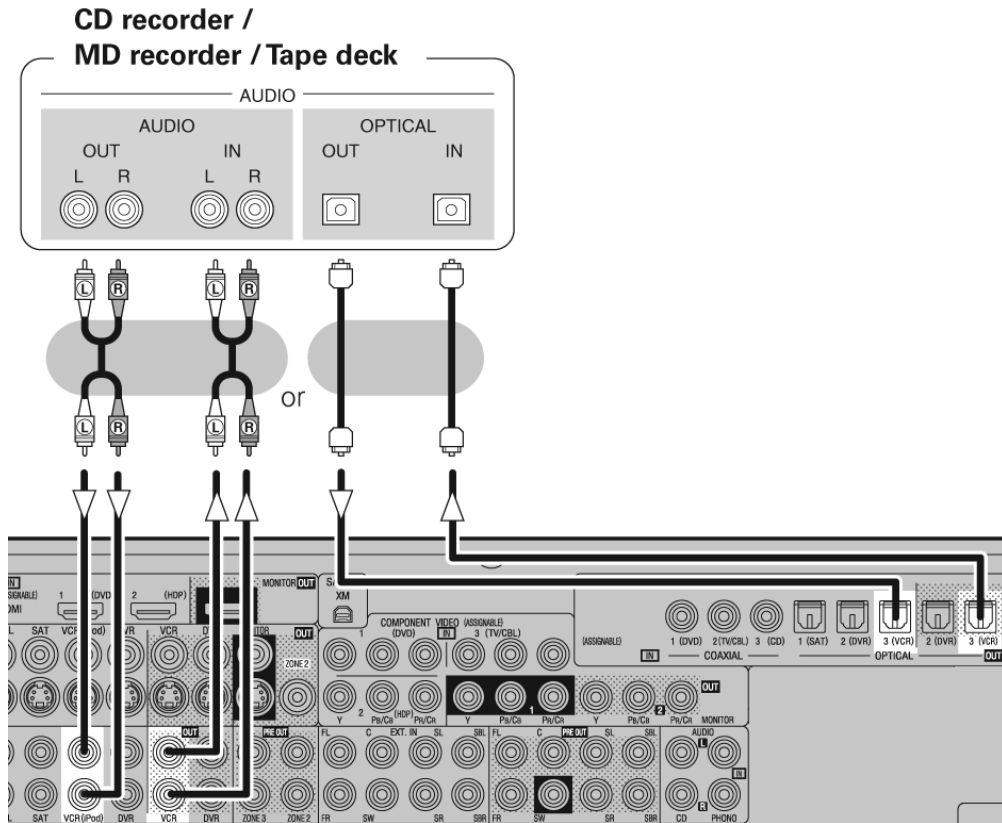
- Connect the cables to be used.
- When recording via the **CP-8**, the playback device's cable must be the same type as the cable used to connect the **CP-8's** VCR OUT connector:

TV IN → S-Video cable	and	DVR OUT → S-Video cable
		or
TV IN → Composite Video cable	and	DVR OUT → Composite Video cable

- When using a component video cable for the video connection, make the settings at MENU "Input Setup" – "Assign" – "Component In" (page 43).
- If you are using the optical digital audio connection, you must use the VCR-3 input and VCR-3 output between the **CP-8** and your VCR.

# MOON CP-8 Surround Preamplifier / Processor

## CD Recorder / MD Recorder / Cassette Deck



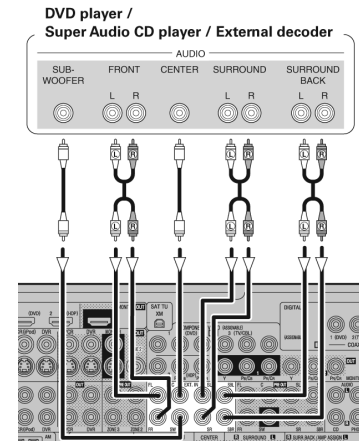
- Make analog connections if you wish to record analog audio signals, or digital connections if you wish to record digital audio signals, depending on the types of connectors on the components being used.
- If you are using the optical digital audio connection, you must use the VCR-3 input and VCR-3 output between the **CP-8** and your VCR.

# MOON CP-8 Surround Preamplifier / Processor

## Connecting to Other Devices

### Components with multi-channel outputs

- To play the analog input signals input to the EXT. IN connectors, press the **INPUT MODE** button on the main unit or **INPUT** button on the main emote control and select "EXT. IN" or make the settings at MENU "Input Setup" – "Input Mode" – "Input Mode" – "EXT. IN" (page 41).
- The video signal can be connected in the same way as a DVD player (page 43).
- To play copyright-protected discs, connect the **CP-8's** EXT. IN connector with the DVD player's analog multi-channel output connector.

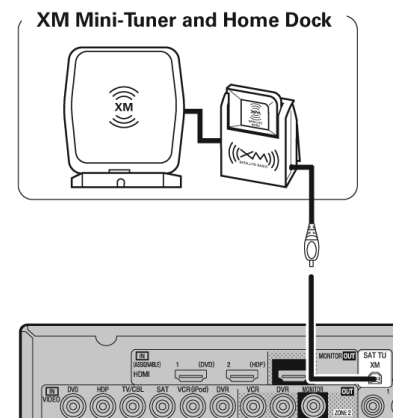


### XM Satellite Radio Connector

- The **CP-8** is an XM Ready® receiver. You can receive XM® Satellite Radio by connecting to the XM Mini-Tuner and Home Dock (includes home antenna, sold separately) and subscribing to the XM service.
- Plug the XM Mini-Tuner and Home Dock into the XM connector on the rear panel.
- Position the Home Dock antenna near a south-facing window to receive the best signal. For details, see "Listening to XM Satellite Radio Programs" (page 56).

**Note:** Keep the power cord unplugged until the XM Mini-Tuner and Home Dock connection have been completed.

- The XM name and related logo are registered trademarks of XM Satellite Radio Inc. All rights reserved.
- XM Ready is a registered trademark of XM Satellite Radio Inc. All rights reserved.

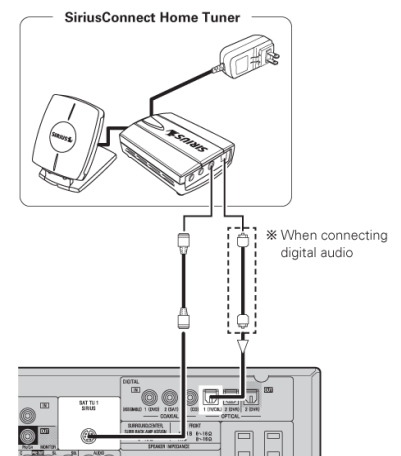


### SIRIUS Satellite Radio Connector

- The **CP-8** is a SIRIUS Satellite Radio Ready® receiver. You can receive SIRIUS® Satellite Radio by connecting to the SiriusConnect Home Tuner and subscribing to the SIRIUS service.
- Plug the SIRIUS connector on the rear panel.
- Position the Home Tuner antenna near a south-facing window to receive the best signal. For details, see "Listening to SIRIUS Satellite Radio Programs" (page 58).

**Note:** Keep the power cord unplugged until the XM Mini-Tuner and Home Dock connection have been completed.

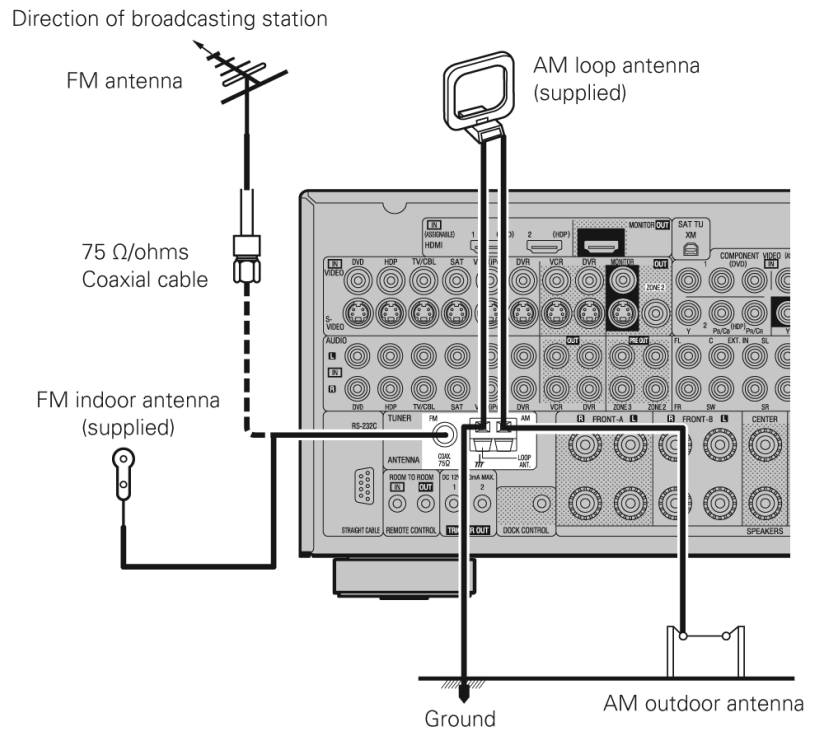
- ©2006 SIRIUS Satellite Radio Inc. "SIRIUS", the SIRIUS dog logo, and channel names and logos are trademarks of SIRIUS Satellite Radio Inc.



# MOON CP-8 Surround Preamplifier / Processor

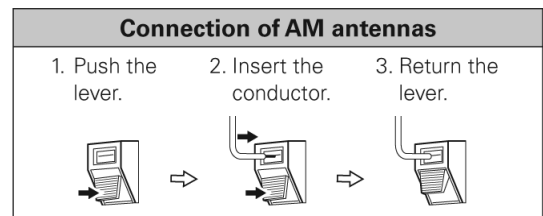
## AM / FM Tuner Antenna Terminals

- An F-type FM antenna cable plug can be connected directly to the **CP-8**.
- Never connect 2 FM antennas simultaneously.



### AM loop antenna assembly

- Remove the vinyl tie and take out the connection line.
- Connect to the AM antenna terminals.
- Bend in the reverse direction.
- Mount
  - Installation hole Mount on wall, etc.

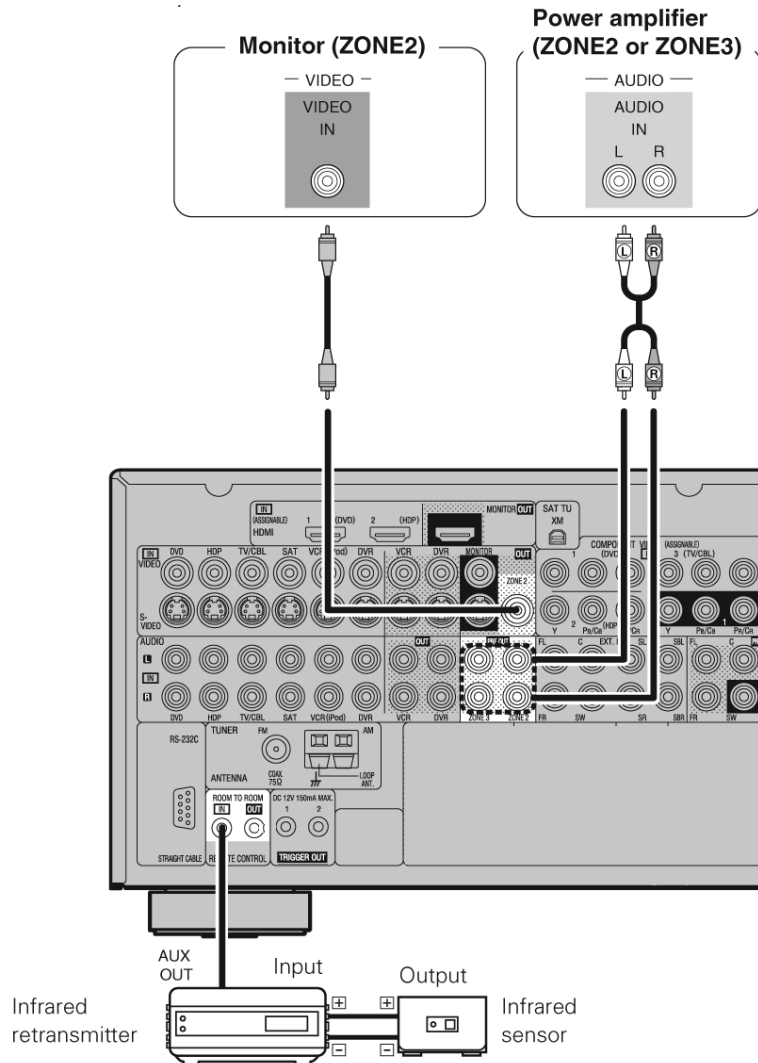


- Even if an external AM antenna is used, do not disconnect the AM loop antenna.
- Make sure the AM loop antenna lead terminals do not touch metal parts of the rear panel.

# MOON CP-8 Surround Preamplifier / Processor

## Zone2 or Zone3 Pre-out Connections

- If another power amplifier or integrated amplifier is connected to the **CP-8**, the ZONE2 or ZONE3 pre-out (variable or fixed level) connectors can be used to play a different program source in ZONE2 or ZONE3 at the same time (page 69-70).
- When using an S-Video cable or a composite video cable for connection between the **CP-8** and an input device, connect to the video connectors.
- The ZONE2 video out is only for ZONE2.



- For instructions on installing and operating separately sold devices, refer to the respective devices' operating instructions.
- To conduct multi-zone playback, see "Amp Assign / Multi-zone Connections and Operations" (page 38).

# MOON CP-8 Surround Preamplifier / Processor

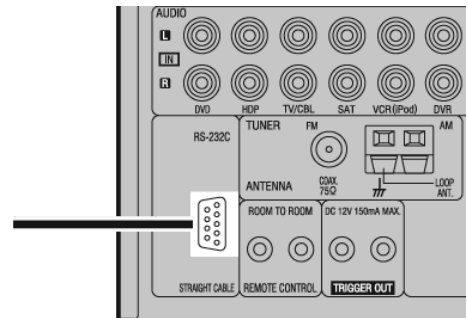
## External Controllers

### RS-232C Connector

This connector is used for an external controller.

If you wish to control the **CP-8** from an external controller using the RS-232C connector, perform the following beforehand:

1. Turn on the **CP-8's** power.
2. Turn off the **CP-8's** power from the external controller.
3. Check that the **CP-8** is in the standby mode.



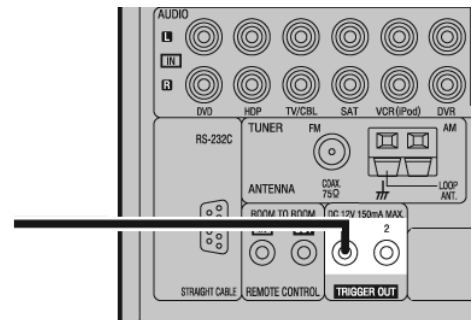
- When using in combination with an RF Remote Controller (sold separately) or RF Remote Receiver (also sold separately) two-way communication with an RF Remote Controller is possible. The **CP-8's** status information can be browsed watching the RF Remote Controller's display. For details, refer to the operating instructions of the respective devices.
- When used in combination with an RF Remote Controller or RF Remote Receiver, make the settings at MENU "Manual Setup" – "Option Setup" – "2Way Remote" – "Used" (page 40).

### 12 Volt Trigger Outputs

The power of an external device equipped with a 12V trigger input can be turned on and off in conjunction with the **CP-8**.

For further details, refer to:  
MENU "Manual Setup" – "Option Setup" – "Trigger Out" (page 40).

- Trigger outputs are rated at 12VDC and 150mA maximum.
- Check the trigger input specifications of the device connected to the **CP-8**.



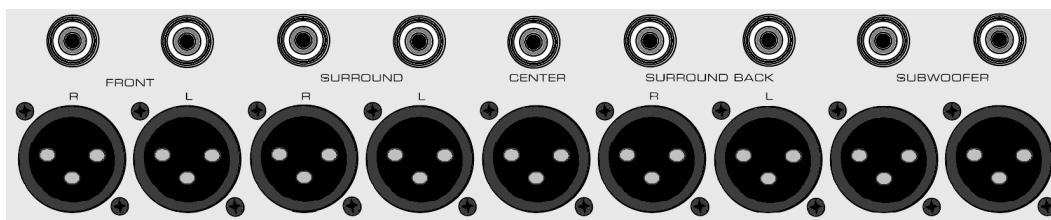
# MOON CP-8 Surround Preamp / Processor

## Connecting the AC power cord

Only after all other connections have been completed should you connect the included power cord.

## Connecting to a Power Amplifier

There are nine analog preamplifier outputs – each on a single-ended RCA connector and balanced XLR connector. If your amplifier(s) has balanced inputs, we strongly encourage you to use the **CP-8's** XLR outputs (see "Balanced Operation" below for more details). Make sure to connect each **CP-8** output to the amplifier input for the associated speaker, otherwise you will not experience proper surround sound playback. Don't hesitate to use high quality interconnect cables. Poor quality interconnect cables can degrade the overall sonic performance of your system.



By default, the **CP-8's** "Amp Assign" setting is set to "ZONE2". To use as the surround back speaker(s) for the main zone, change the "Amp Assign" setting (page 38). When using just one surround back speaker, use the "surround back left" channel output.

The chart below shows the various output configurations which is dependant on how you manage the **CP-8's** setup (page 29) as well as on the number of amplifier channels and the corresponding speakers that you will be using:

	FRONT		CENTER	SURROUND		SURROUND BACK			SUBWOOFER
	L	R		L	R	L	R	1 only	
7.1-channels	○	○	○	○	○	○	○	○	○
6.1-channels	○	○	○	○	○	-	-	○	○
5.1-channels	○	○	○	○	○	-	-	-	○
3.1-channels	○	○	○	-	-	-	-	-	○
2.1-channels	○	○	-	-	-	-	-	-	○
2-channels	○	○	-	-	-	-	-	-	-

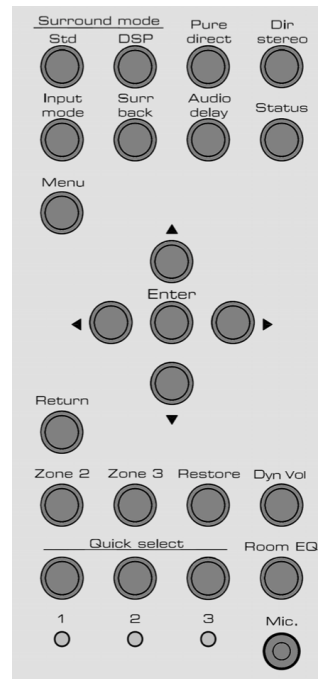
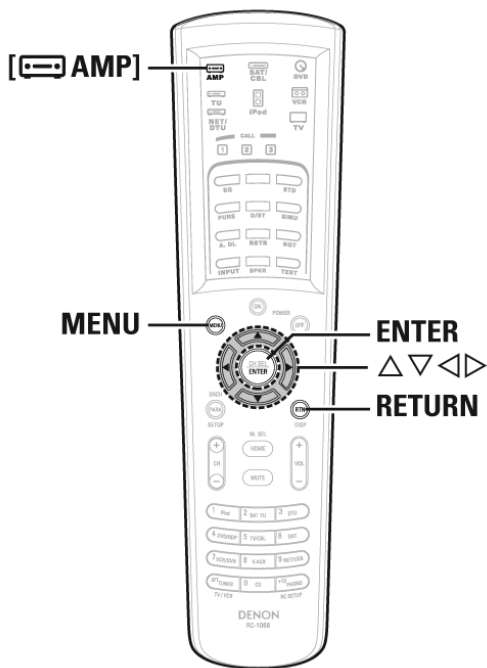
## Balanced Operation

When using an unbalanced interconnect, the audio signal runs through both the center wire and the shield/ground wire. Any noise picked up by this interconnect (ie. nearby magnetic fields such as an AC power cord) will be reproduced by both the preamplifier and amplifier, then heard through the loudspeakers. Conversely, a balanced interconnect has three separate conductors; one for the ground and two for the actual signal. These two signals are identical except that one is 180 degrees out of phase with the other. For example, when one conductor is carrying a signal of +5 Volts, the other will be carrying a signal of -5 Volts. When these two inverted signals on a balanced line are output from the **MOON CP-8**, any noise picked up by the interconnect will be eliminated since a differential circuit amplifies only the difference between these two signals: Noise on a balanced interconnect will be equal on both conductors and therefore not be processed.

# MOON CP-8 Surround Preamplifier / Processor

## Menu Operations

Most of the following settings and operations for the **CP-8** can be performed via the On Screen Display (OSD) menus appearing on your monitor's screen. Each of these can be performed either with the full-function remote control or from the **CP-8's** hidden front control panel. In the event that you're using the remote control, you must set the remote control into AMP mode:



Press MENU

Press ▲ or ▼ to select the item you want to set, then press ENTER to select

Press ▲ or ▼ again to select the item you want to set, then press ENTER to select

To change a setting, press ▲ or ▼ to select the item you want to change, then press ◀ or ▶ to change the setting

To return to the previous item in the menu, press RETURN

To revert back to the default setting, select "Default Yes" then press ◀

Press ENTER to save the setting

Press MENU to finish (when MENU is pressed, all settings made to that point are saved and the menu is cleared)

Throughout the menu system you will often see one of the selectable items in a list that is surrounded by a border – this is the default value for that option.

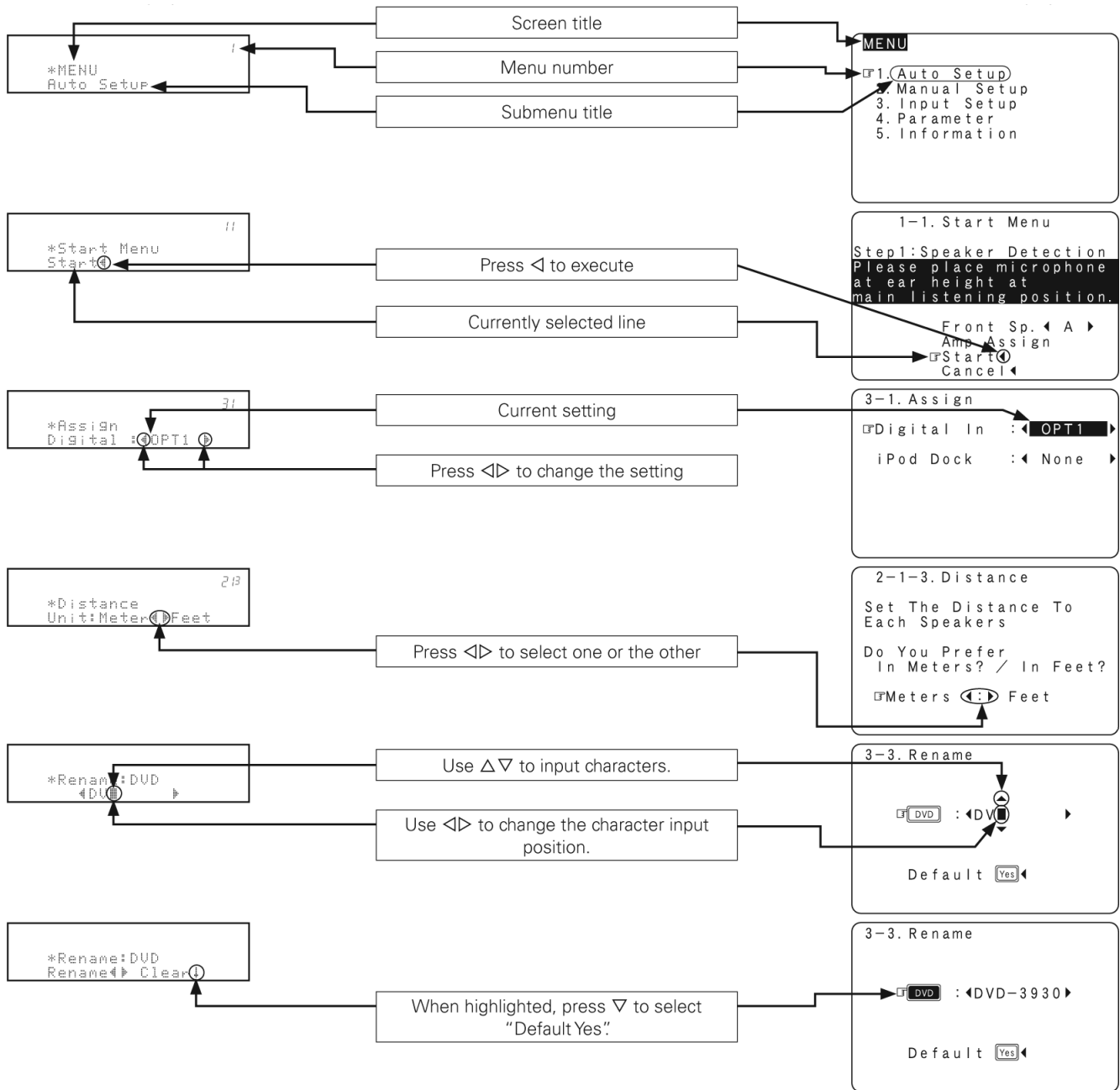
When navigating the menus with the OSD, if "Screensaver" is set to "ON", the screensaver is activated when no operation is performed after approximately 3 minutes. When the ▲ ▶ ▼ ◀, **ENTER** or **MENU** button is pressed, the screensaver is cancelled and the corresponding operation is performed.

# MOON CP-8 Surround Preamplifier / Processor

## Front Panel Display / On Screen Display - Examples

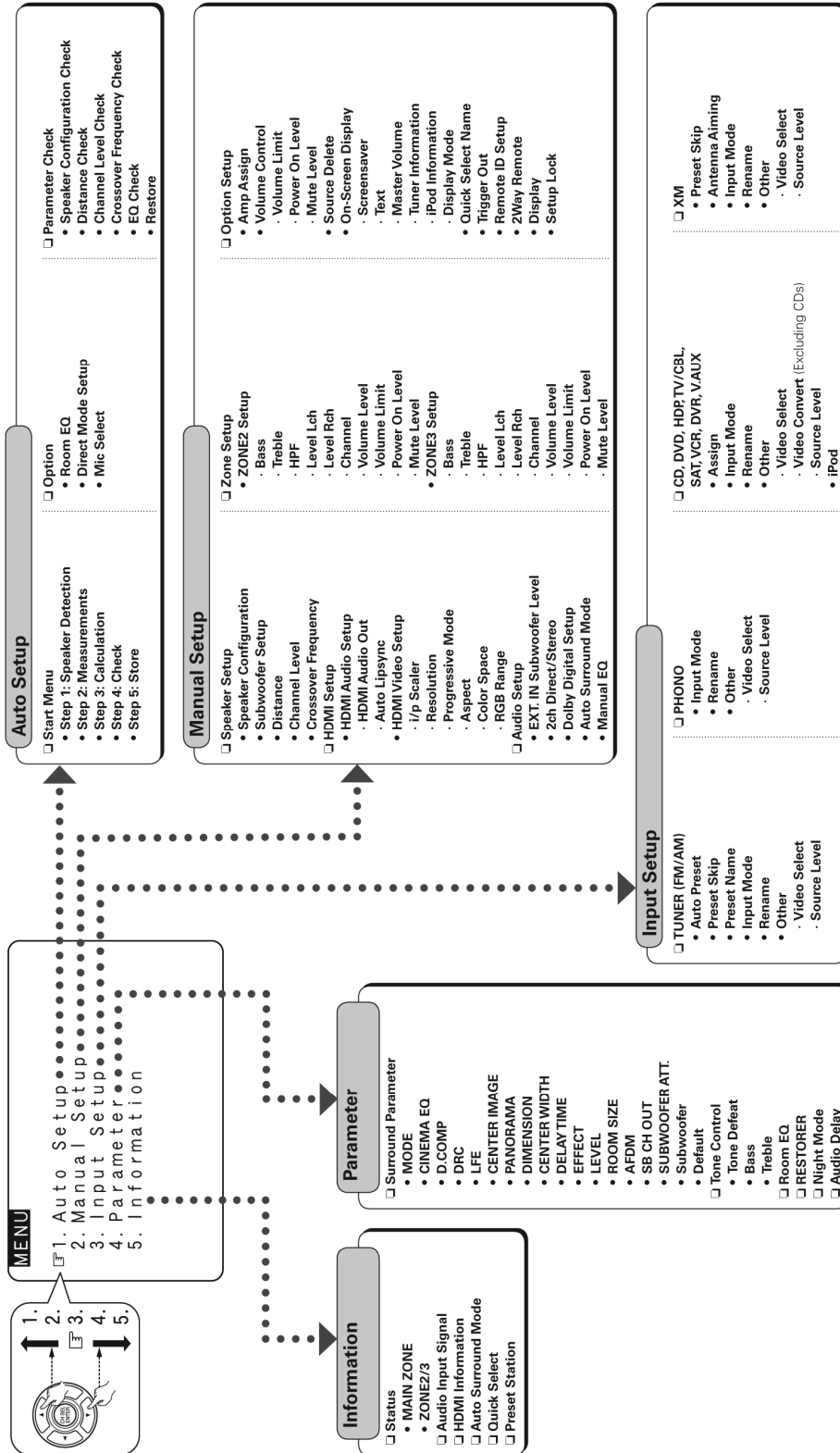
### Front Panel Display

### On-Screen Display



# MOON CP-8 Surround Preamplifier / Processor

## Menu Map

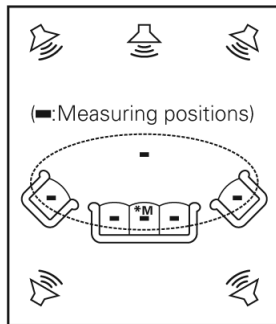


# MOON CP-8 Surround Preamplifier / Processor

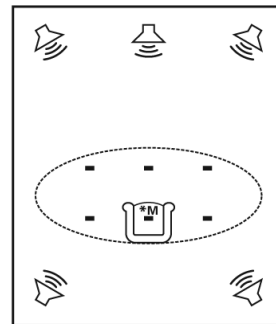
## Auto Setup

This procedure lets you measure the acoustic properties of your speakers and listening room and make the optimum settings automatically. It provides the optimum listening environment for all listening positions in a home theater where several people view or listen to the video or audio source simultaneously.

The measurements are performed by moving the setup microphone successively to the different positions where the family members sit within the listening area surrounded by the speakers, as shown in Example 1 (below). For better results, we recommend making measurements in 6 or more listening positions. Even if the home theater is only used by a small number of persons as shown in Example 2 (below), measuring at points around the listening position results in more effective results.



Example 1

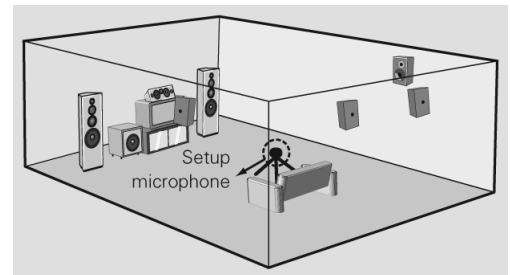


Example 2

**Note:** The main listening (\*M) position refers to the center of the listening position, or the place where you would sit to watch or listen when alone. This position is used as the basis when measuring the distance of the speakers. To set the listening environment manually to suit your tastes, please refer to the next section Manual Setup.

### Preparation

Connect the included setup microphone to the MIC jack located inside the **CP-8's** hidden control panel. The auto setup screen will appear automatically. Then mount the setup microphone on a camera tripod, etc., and set it at the main listening position, with the sound receptor pointing towards the ceiling. Adjust the height of the setup microphone's sound receptor so that it is at the height of the ears when listening:



When using a subwoofer with its own settings, make the following adjustments to it before starting the auto setup procedure:

- Volume: "Center"
- Crossover frequency: "Maximum"
- Low pass filter: "Off"
- Standby mode: "Off"

**Note:** Do not disconnect the setup microphone until the auto setup procedure is completed. When using headphones, unplug the headphones before starting the auto setup procedure.

# MOON CP-8 Surround Preamplifier / Processor

**1) Start Menu** These settings are performed automatically.

The following 5 steps are required for optimizing your speakers.

**Start:** Start auto setup and output the test tone. If an error message appears during the measurements, check "Error Messages" (page 31), take the necessary corrective action, and then redo the measurements.



## Step 1: Speaker Detection

The speaker connection status and the speaker polarities are detected at the main listening position. At this time, the listening environment with respect to the main listening position ("Speaker size check", "Distance correction", "Channel level adjustment", "Crossover frequency check" and "Room EQ correction") is measured automatically at the main listening position. Once the measurements are completed, the results of the speaker connection are displayed.

- Do not stand between the speakers and setup microphone or allow obstacles between them while the measurements are being made. Obstacles will make it impossible to measure correctly.
- Keep as quiet as possible during measurements. Loud sounds in the area will make it impossible to measure correctly.
- Operating the **MASTER VOLUME** knob on the main unit or the **VOL +/-** buttons on the remote control unit during the measurements will cancel the measurements.
- Do not change the speaker connections or subwoofer volume after "Step 1".

## Step 2: Measurements

The listening environment with respect to the listening position ("Speaker size check", "Crossover Frequency check" and "Room EQ correction") is measured automatically at positions 2 to 8. Once a measurement is made, move the setup microphone to the next position. Measure a total of at least 6 positions (main listening position and at least 5 other surrounding positions). Measurements can be completed even if only taken in 5 positions, but for better results we recommend taking them in **6 or more positions**. (Measurements can be taken in a maximum of 8 positions.)

## Step 3: Calculation

When "Calculate" is selected at "Step 2", the speaker system is analyzed automatically. The time required for this analysis depends on the number of speakers connected. The more the number of speakers, the longer the time required for analysis.

## Step 4: Check

Once the auto setup procedure is completed, a measuring result checking screen appears. Select any item whose measuring results you want to check and check the results. Values that are different from the actual distance may be set for speakers with built-in filters (subwoofers, etc.).

## Step 5: Store

The auto setup measurement results are stored. Do not turn the power off while the settings are being stored in the memory.

**2) Option** allows you to select settings for Room EQ and setup microphone type.

**Room EQ:** Select the room EQ setting method.

- |                                 |  |
|---------------------------------|--|
| <input type="checkbox"/> All    | Apply settings to all surround modes (Default).  |
| <input type="checkbox"/> Assign | Make settings for each surround mode separately. |

Note: In lists of selectable items or adjustable ranges, the item surrounded by a border is the default value.

# MOON CP-8 Surround Preamplifier / Processor

**Direct Mode Setup:** Select room EQ use for DIRECT or PURE DIRECT mode.

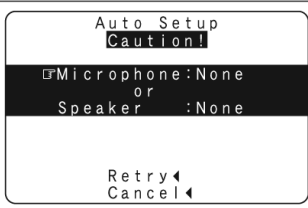

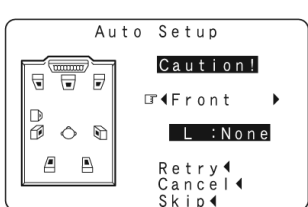
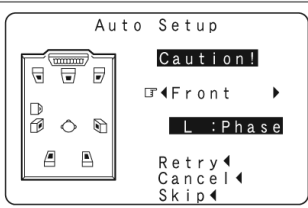
- ON** Use room EQ.
- OFF** Do not use room EQ (Default).

**Mic Select:** Select the microphone type if not using supplied mic. The microphone connected to V.AUX Lch is used.

- Mic** Supplied mic is being used (Default).
- V.AUX L** Other mic connected to V.AUX is used.

**3) Parameter Check** Check auto setup measurement results. This is displayed after the auto setup procedure is done. Items to be checked are Speaker Configuration, Distance, Channel Level, Crossover Frequency and EQ. The auto setup results can be set again when "Restore" is selected.

**Error Messages** If the auto setup procedure could not be completed due to speaker installation, the measuring environment, etc., an error message is displayed. If this happens, check the relevant items, be sure to take the necessary measures, then perform the auto setup procedure over again.

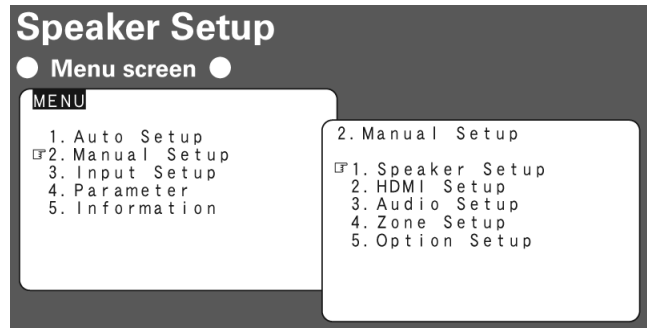
Error messages (examples)	Cause	Measures
	<ul style="list-style-type: none"> <li>• Included setup microphone is not connected.</li> <li>• Not all speakers could be detected.</li> </ul>	<ul style="list-style-type: none"> <li>• Connect the included setup microphone to the <b>SETUP MIC</b> jack on the main unit.</li> <li>• Check the speaker connections.</li> </ul>
	<ul style="list-style-type: none"> <li>• Too much noise in the room for accurate measurements to be made.</li> <li>• Speaker or subwoofer sound is too low for accurate measurements to be made.</li> </ul>	<ul style="list-style-type: none"> <li>• Either turn off any device generating noise or move it away.</li> <li>• Try again when the surroundings are quiet.</li> <li>• Check the speaker installation and the direction in which the speakers are facing.</li> <li>• Adjust the subwoofer's volume.</li> </ul>
	<ul style="list-style-type: none"> <li>• Displayed speaker could not be detected.                             <ul style="list-style-type: none"> <li>· The front L and front R speakers were not properly detected.</li> <li>· Only one channel of the surround speakers was detected.</li> <li>· Sound was output from the R channel when only one surround back speaker was connected.</li> <li>· The surround back, but the surround speaker was not detected.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Check the connections of the displayed speaker.</li> </ul>
	<ul style="list-style-type: none"> <li>• Displayed speaker connected with the polarities reversed.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the polarities of the displayed speaker.</li> <li>• For some speakers, this error message may be displayed even if the speaker is properly connected. In this case, select "Skip".</li> </ul>

# MOON CP-8 Surround Preamplifier / Processor

## Manual Setup

### Speaker Setup

This procedure explains how to manually optimize your speakers, or if you would like to change the settings previously made in "Auto Setup".



**Speaker Configuration:** Select speaker configuration and speaker size.

Front Speaker:

Center Speaker:

Subwoofer:

Surround Speaker:

Surround Back Speaker:

**Note:** By default, the CP-8's "Amp Assign" setting is set to "ZONE2". To use as the surround back speaker for the main zone, change the "Amp Assign" setting (page 38).

- Large:** Select this when using large speakers with ample low frequency reproduction capabilities.
- Small:** Select this when using small speakers without ample low frequency reproduction capabilities.
- None:** Select this when no speaker is connected.
- Yes:** Select this when a subwoofer is connected.
- No:** Select this when no subwoofer is connected.
- 2 spkrs:** Select for 2 of surround back speakers.
- 1 spkr:** Select for 1 of surround back speaker.

- Select "Large" or "Small" not according to the physical size of the speaker but according to the low frequency reproduction capabilities based on the frequency set at "Crossover Frequency" (page 33).
- When "Front Speaker" is set to "Small", "Subwoofer" is automatically set to "Yes".
- If "Subwoofer" is set to "No", "Front Speaker" is automatically set to "Large".
- If "Surround Speaker" is set to "None", "Surround Back Speaker" are automatically set to "None".
- When using just one surround back speaker, connect it to the Surround Back Left channel output.

**Subwoofer Setup:** Select the low range signal to be reproduced by the subwoofer(s).

Play low range and LFE signal of channels set to "Small".

Play low range and LFE signal of all channels.

- This can be only set when menu "Speaker Configuration" – "Subwoofer" is set to "Yes".
- Play music or a movie source and select the mode offering the strongest bass.
- Select "LFE+Main" if you want the bass signals to always be produced from the subwoofer.

## MOON CP-8 Surround Preamplifier / Processor

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**Distance:** Set the distance from listening position to speakers. Before making the settings, measure the distance from the listening position to each of different speakers. The distance between the listening position and the various speakers should not exceed 20.0 ft (6.0m).

Feet / Meters: Select the unit of measure for distance settings

Step:   Set the adjustable increments to 1foot or 0.1 of a foot  
  Set the adjustable increments to 0.1 of a meter or 0.01 of a meter

Default: Resets the settings to the default values.

Distance Measurement: Select the speaker you want to set, then set the distance. Set the value closest to the actual measured distance.

Display when "Feet" is the set unit.  
 Display when "Meters" is the set unit.

**Channel Level:** Adjust channel levels to obtain equal volume from all speakers.

Test Tone: Select the test tone playback method.

Automatically switch the speaker from which test tone is output.  
 Manually switch the speaker from which test tone is output.

Test Tone Start:  ~  ~  Variable range to output the test tone

Default: Resets the settings to the default values.

Adjusting with the main remote control using the test tones is only possible in the "Auto" mode and only effective in the STANDARD mode. The adjusted levels for the different modes are automatically stored in the memory. To adjust the levels using test tones press the **TEST** button. Test tones are output from the various speakers. Use the ◀ and ▶ buttons to adjust so that the volume is equal for all speakers. When the adjustments are completed, press the **TEST** button again.

- When the menu "Speaker Configuration" – "Surround Back Speaker" setting is set to "1spkr", the surround back speaker display is set to "Surround Back Sp."
- Speakers set to "None" in the "Speaker Configuration" settings are not displayed.
- When "Channel Level" is adjusted, the adjusted values are set for all the surround modes. To adjust the channel level separately for the different surround modes, use the operation (page 62).

**Crossover Frequency:** Select crossover frequency from which subwoofer handles the low range signal.

Low frequency information from the recording/soundtrack below the frequency selected here is output to the subwoofer. Adjust this setting according to the low frequency reproduction capabilities of the speakers you are using. The "Crossover Frequency" can be set when there are speakers that have been set to "Small" at menu "Speaker Configuration" or when "Subwoofer" is set to "Yes". If menu "Subwoofer Setup" is set to "LFE", speakers set to "Small" at "Speaker Configuration" can be set. If set to "LFE+Main", this can be set regardless of the size of the speaker. For speakers set to "Small", sound below the crossover frequency is cut from the sound output. The cut bass sound is output from the subwoofer or front speakers. Always set the crossover frequency to "80 Hz". When using small speakers, however, we recommend setting the crossover frequency to a higher frequency.

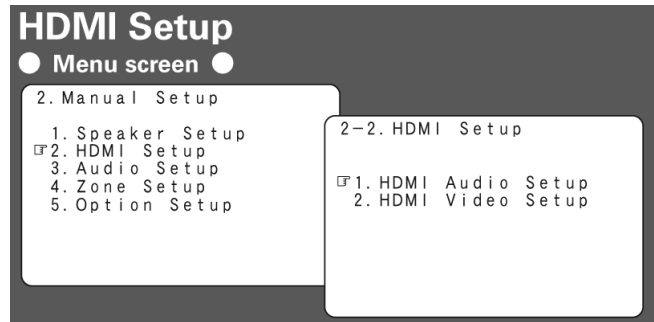
# MOON CP-8 Surround Preamp / Processor

## HDMI Setup

**HDMI Audio Setup:** Select HDMI audio output device.

HDMI Audio Out: Select test tone playback method

- AMP** Use speakers audio playback.
- TV** Use monitor for audio playback.



Auto Lipsync: Automatic compensation for timing shift in audio and video output.

- ON** Use automatic compensation.
- OFF** Do not use automatic compensation.

**HDMI Video Setup:** Select HDMI video output device.

i/p Scaler: Make settings for i/p scaler function.

- A to H** Use i/p scaler function for analog video signal.
- OFF** Do not use i/p scaler function.

Resolution: Make settings for resolution of HDMI video output signal. This can be set whenever "i/p Scaler" is set to anything other than "OFF". It is not possible to convert "1080i" signals into "720p" format or to convert "720p" signals into "1080i" format.

- Auto** Detect monitor panel resolution and automatically set output resolution (Default).
- 480p/576p** Output at 480p/576p resolution.
- 1080i** Output at 1080i resolution.
- 720p** Output at 720p resolution.
- 1080p** Output at 1080p resolution.

Progressive Mode: Select optimum progressive mode for video material. This can be set whenever "i/p Scaler" is set to anything other than "OFF".

- Auto** Automatically detect video material type (Default).
- Video1** Select mode suitable for video playback.
- Video2** Select mode suitable for video and 30-frame film material playback.

Aspect: Sets the aspect ratio when outputting 480i/576i or 480p/576p input signals from HDMI output connector.

- FULL** Output at 16:9 aspect ratio.
- NORMAL** Output at 4:3 aspect ratio.

# MOON CP-8 Surround Preamp / Processor

Color Space: Make settings for output color space.

- YCbCr** Output using YCbCr format.
- RGB** Output using RGB format.

RGB Range: Make settings for RGB output range.

- Normal** Use video range from 16 (black) to 235 (white).
- Enhanced** Video range from 0 (black) to 255 (white). Use this setting to avoid black washout.

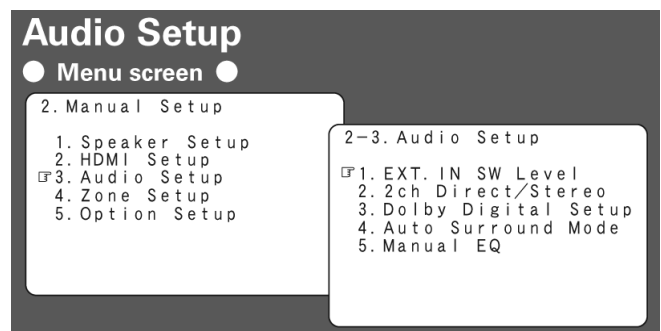
## Audio Setup

Manage audio playback settings manually.

**EXT. IN Subwoofer Level** Set the subwoofer level for playback according to the player in use:

- 0dB**
- +5dB**
- +10dB**
- +15dB**

The default of +15dB is the recommended level.



**2ch Direct/Stereo** Make speaker settings for 2-channel mode playback.

- Setting:
- Basic** Uses the same settings as in "Speaker Setup".
  - Custom** Make separate settings for 2-channel mode.

Front: **Large** **Small** Select front speaker size.

Subwoofer: **Yes** **No** Select subwoofer use.

Subwoofer Mode: **LFE** **LFE+Main** Select low range signal to be reproduced by subwoofer.

Crossover: **40Hz** **60Hz** **80Hz** **90Hz** **100Hz** **110Hz** **120Hz** **150Hz** **200Hz** **250Hz**  
Select crossover frequency from which subwoofer handles low range signal.

Distance FL: **0.0ft ~ 60.0ft** / **0.00m ~ 18.00m** Set distance from listening position to front left speaker.

Distance FR: **0.0ft ~ 60.0ft** / **0.00m ~ 18.00m** Set distance from listening position to front right speaker.

# MOON CP-8 Surround Preamplifier / Processor

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**Dolby Digital Setup** Set dynamic range for downmix playback of Dolby Digital sources.

- ON** Compression is used. Select this if sound from front speakers is distorted.
- OFF** Do not use compression. This is the recommended setting.

When not using the center speaker or surround speakers, playback sound is down-mixed and output from the front speakers.

**Auto Surround Mode** Make setting for memorizing surround mode setting for each input signal type.

- ON** Memorize settings. Most recently stored surround mode is automatically selected.
- OFF** Do not memorize settings. Surround mode does not change according to input signal.

When playing in the PURE DIRECT mode, the surround mode does not change even when the input signal is changed. The auto surround mode function lets you store in memory the surround mode last used for playing these types of input signals:

- Analog and PCM 2-channel signals
- Dolby Digital and DTS 2-channel signals
- Dolby Digital and DTS multi-channel signals
- Multi-channel signals other than Dolby Digital and DTS (PCM, DSD, etc.)

**Manual EQ** Adjust tonal quality for each speaker using graphic equalizer.

Base Curve Copy: Copy the ROOM EQ's "Flat" correction curve and adjust manually.

- Yes** Adjust manually.
- No** Do not adjust manually.

"Base Curve Copy" is displayed after the auto setup procedure has been performed.

Adjust CH: Select speaker adjustment method.

- Each CH** Adjust tonal quality for each speaker separately.
- L/R CH** Adjust tonal quality for each L/R speaker pair (Default).
- ALL CH** Adjust tonal quality for all speakers together.

Manual EQ: Select the speaker, the frequency band and adjust the level.

**63Hz**  **125Hz**  **250Hz**  **500Hz**  **1kHz**  **2kHz**  **4kHz**  **8kHz**  **16kHz** Selectable frequencies

**-20dB ~ +6dB** Variable range

Default: Resets the settings to the default values.

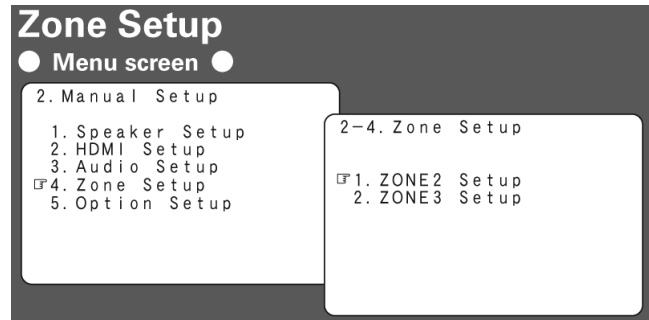
# MOON CP-8 Surround Preamp / Processor

## Zone Setup

Manage settings for audio playback in a multi-zone system.

### Zone2 and Zone3 Setup

Make settings for audio playback in a ZONE2 system.  
Make settings for audio playback in a ZONE3 system.



Bass:  ~  ~  Adjust low frequency range (bass).

Treble:  ~  ~  Adjust high frequency range (treble).

HPF: When using speakers that cannot satisfactorily play low frequencies, distortion of the bass sound can be reduced by setting "HPF" to "ON"

- The low range is not attenuated.
- The low range is attenuated.

Lch Level:  ~  ~  Adjust the left channel output level.

Rch Level:  ~  ~  Adjust the right channel output level.

Channel: Switch between stereo and mono output. When MENU "Manual Setup" – "Option Setup" – "Amp Assign" (page 38) is set to ZONE2/3-MONO, the "Channel" setting is automatically set to "Mono"

- Select stereo output.
- Select monaural output.

Volume Level: Adjust the main volume level. "VAR" is displayed when a power amplifier is assigned to the ZONE2 output channel at MENU "Manual Setup" – "Option Setup" – "Amp Assign" (page 38).

- Allow volume adjustment by remote control (Default).
- Fix the volume to -40 dB.
- Fix the volume to 0 dB.

Volume Limit: Make a setting for maximum volume.

- Do not set a maximum volume (Default).
- Set the maximum volume to -20 dB.
- Set the maximum volume to -10 dB.
- Set the maximum volume to 0 dB.

# MOON CP-8 Surround Preamp / Processor

Power On Level: Define the volume setting that is active when the power is turned on.

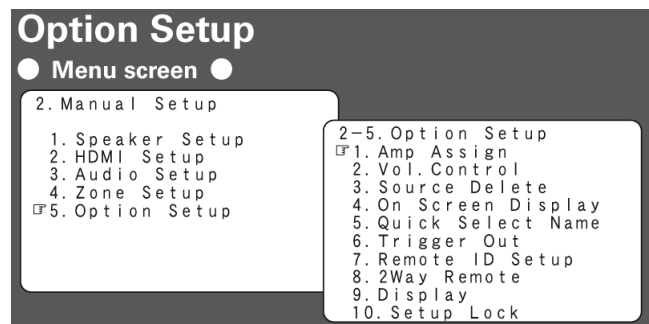
- Last** Use the memorized setting from the last session (Default).
- Always use the muting on condition when power is turned on.
- 70dB ~ +18dB** Set the volume level when the power is turned on in units of 1 dB.

Mute Level: Set the amount of attenuation when muting is on.

- Full** The sound is cut off entirely (Default).
- 40dB** The sound is attenuated by 40 dB.
- 20dB** The sound is attenuated by 20 dB.

## Option Setup

**Amp Assign** Define how the CP-8 is used for the rear surround channels. The places where the surround back outputs are used can be set freely according to the usage environment. This makes it possible to output sound to rooms other than the room (the main zone) where surround playback is performed (multi-zone playback) or play the sound with high quality using the front speakers (bi-amp connections). Zone2 is the default setting.



- 7.1ch
- ZONE2**
- ZONE3
- ZONE2/3-MONO
- FrontA Bi-Amp
- FrontB Bi-Amp
- 2ch

**Volume Control** Set the main zone volume settings.

Volume Limit: Make a setting for maximum volume.

- OFF** Do not set a maximum volume (Default).
- 20dB** Set the maximum volume to -20 dB.
- 10dB** Set the maximum volume to -10 dB.
- 0dB** Set the maximum volume to 0 dB.

Power On Level: Sets the volume for when the main zone's power is turned on.

- Last** Use the memorized setting from the last session (Default).
- Always use the muting on condition when power is turned on.
- 80dB ~ +18dB** Set the volume level when the power is turned on in units of 1 dB.

Mute Level: Sets the amount of volume attenuation when the mute mode is set in the main zone.

- Full** The sound is cut off entirely (Default).
- 40dB** The sound is attenuated by 40 dB.
- 20dB** The sound is attenuated by 20 dB.

## MOON CP-8 Surround Preamp / Processor

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**Source Delete** Remove input sources that are not used from the display. Input sources being used in the various zones cannot be deleted. Input sources set to "Delete" cannot be selected using the "SELECTOR" knob on the main unit or "SOURCE SELECT" button on the remote control unit.

- ON** Use this source.
- Delete** Do not use this source.

**On-Screen Display** Make on-screen display (OSD) related settings.

**Screensaver:** Make screensaver settings. Use the screensaver to prevent burn-in on the monitor screen. When set to "ON", the screensaver is activated if there is no activity for about 3 minutes.

- ON** Activate the screensaver if there is no activity for about 3 minutes.
- OFF** Turn the screensaver function off.

**Text:** Input source and mode display.

- ON** Turn display on.
- OFF** Turn display off.

**Master Volume:** Master volume display during adjustment.

- ON** Turn display on.
- OFF** Turn display off.

**Timer Information:** This sets the duration that the on-screen display appears when an operation is performed.

- Always** Show display continuously.
- 30sec** Show display for 30 seconds after operation (Default).
- 10sec** Show display for 10 seconds after operation.
- OFF** Turn display off.

**Display Mode:** Select the OSD's display mode.

- Mode1** If there is no video signal, flickering of the on-screen display is not prevented.
- Mode2** Prevents flickering of the OSD when there is no video signal. Use this mode if the screen display does not appear in the Mode 1, as may occur depending on the monitor being used.

**Quick Select Name** Change the Quick Select name. Up to 16 characters can be input for the name.

**A ~ Z** **a ~ z** **0 ~ 9** **! " # % & ' ( ) \* + , - . / : ; = (space)**

# MOON CP-8 Surround Preamp / Processor

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**Trigger Out** Select the conditions to turn on the trigger out with respect to the zone, input source, surround mode. For details about the trigger out function, see (page 24). Select "Trigger Out 1" or "Trigger Out 2" and make the settings below respectively.

- ON** Activate trigger on this mode.
- Do not activate trigger on this mode.

Setting with Respect to Zone:

- When the power of the zone turned on/off, the trigger out turns on.
- Associated with the power supply of zones set to "ON"

Setting with Respect to Input Source:

- When the input source set to on is selected, the trigger out turns on.
- Associated with respect to the input source for zones set to "ON" at "Setting with Respect to the Zone"

Setting with Respect to Surround Mode:

- When the surround mode set to on is selected, the trigger out turns on.
- Associated with respect to surround modes that are set to "ON".
- This can be set if the "MAIN ZONE" setting at "Setting with Respect to the Zone" is set to "ON".
- Associated when an input source for which "Setting with Respect to the Input Source" is set to "ON" is selected.

**2-Way Remote** If you are using an aftermarket 2-way remote control unit, set this to "Used".

- Used** Use 2-way remote control.
- Not Used** Do not use 2-way remote control.

**Display** Adjust brightness of the CP-8's front panel display.

- Bright** Normal display brightness (Default).
- Dim** Reduced display brightness.
- Dark** Very low display brightness.
- OFF** Display is off unless controls are operated.

**Setup Lock** Protect system settings from any accidental or inadvertent changes.

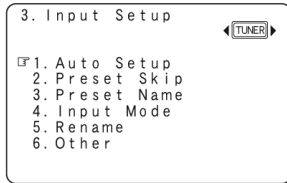
- ON** Turn protection on.
- OFF** Turn protection off.

When "Setup Lock" is set to "ON", these settings - Menu Operations, RESTORER, Night Mode, Parameter, Room EQ, Channel Level & Audio Delay - can no longer be changed. "SETUP LOCKED!" is displayed if you attempt to operate related buttons. To cancel the setting, press the **MENU** button to re-display the "Setup Lock" screen, then change the setting to "OFF".

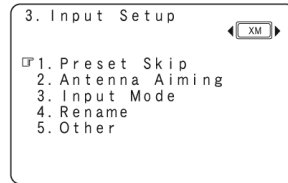
# MOON CP-8 Surround Preamplifier / Processor

## Input Setup

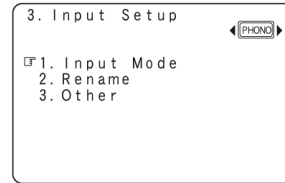
Use this procedure to select the input source and make settings related to playing input sources.



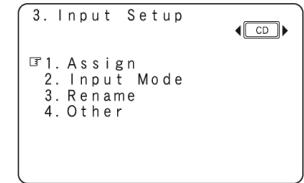
AM/FM Tuner Setup menu



XM Satellite Radio Setup Menu



Phono Setup Setup Menu



CD, DVD, HDP, TV/CBL, SAT, VCR, DVR, & V.AUX. Setup menu

## Setting related to playing input sources

**Auto Preset** Use the auto preset function to program radio stations. If an FM station cannot be preset automatically, select the desired station by tuning it in manually, then preset it manually.

Input source: **TUNER**

**ON**  
**Skip**

Start the auto preset process.

**Preset Skip** Make settings to skip preset memory numbers during auto preset.

A ~ G: Select the preset channel(s) you do not want to display.

Input sources: **TUNER** **XM**

**ON**

Display this station number.

**Skip**

Skip this station number.

**Preset Name** Assign a name to a memory preset. Names containing up to 8 characters can be input.

A1 ~ G8: Select the preset memory number.

Input source: **TUNER**

**A ~ Z** **a ~ z** **0 ~ 9** **! " # % & ' ( ) \* + , - . / : ; = (space)** Characters that can be input

**Input Mode** Make input mode and decode mode settings for this source. The selectable input modes depend on the input source and "Assign" setting (page 43).

Input Mode: Set the input mode for this source.

Input sources: **TUNER** **PHONO**

**Analog**

Play only signals from analog input.

**EXT. IN**

Play only signals from EXT. IN input.

# MOON CP-8 Surround Preamplifier / Processor

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Input source:

- Automatically detect input signal and perform playback.
- Play only signals from EXT. IN input.

Input sources:

- Automatically detect input signal and perform playback (Default).
- Play only signals from HDMI input.
- Play only signals from digital input.
- Play only signals from analog input.
- Play only signals from EXT. IN input.

When a digital signal is properly input, the "DIGITAL" or "HDMI" indicator lights on the display. If the "DIGITAL" indicator does not light, check the digital input connector assignment and the connections. The surround mode cannot be set if the input mode is set to "EXT.IN".

Press the "INPUT MODE" button on the **CP-8** or the "INPUT" button on the main remote control:



\*1: This can be selected for input sources when the menu "Assign" setting is set to "HDMI" (page 43).

\*2: This can be selected for input sources when the menu "Assign" setting is set to "Digital In" (page 43).

**Decode Mode:** Set the decode mode for this source. This can be selected for input sources for which the menu "Assign" setting is set to "HDMI" or "Digital In" (page 43). Only set "PCM" and "DTS" when playing the respective signals.

Input sources:

- Detect type of digital input signal and decode and play automatically.
- Decode and play only PCM input signals.
- Decode and play only DTS input signals.

## **Rename**

Change the display name for this source. Names containing up to 8 characters can be input.

Characters that can be input

# MOON CP-8 Surround Preamplifier / Processor

## Assign

Allows you to assign input sources to input connectors.

HDMI:

Select HDMI connector to assign to this source: **DVD** **HDP** **TV/CBL** **SAT** **VCR** **DVR** **V.AUX**

- HDMI1** Assign HDMI 1 input connector.
- HDMI2** Assign HDMI 2 input connector.
- HDMI3** Assign HDMI 3 input connector.
- HDMI4** Assign HDMI 4 input connector.
- None** No HDMI input connector assigned.

<b>Input source</b>	DVD	HDP	TV/CBL	SAT	VCR	DVR	V.AUX
<b>Default setting</b>	<b>HDMI1</b>	<b>HDMI2</b>	None	<b>HDMI3</b>	None	<b>HDMI4</b>	None

With HDMI, the video and audio signals are transferred simultaneously. When HDMI is assigned to an input source, the audio signal switches to HDMI along with the video signal. To use with the digital audio input connectors assigned, set menu "Input Mode" to "Digital" (page 42). When the **CP-8** is connected to a monitor with an HDMI cable, if the monitor is not compatible with HDMI audio signal playback, only the video signals are output to the monitor. The audio signals input from the analog, digital and EXT. IN connectors are not output to the monitor.

Digital In:

Select digital input connector to assign to this source:

**CD** **DVD** **HDP** **TV/CBL** **SAT** **VCR** **DVR** **V.AUX** **SIRIUS**

- COAX1** Assign COAXIAL 1 input connector.
- COAX2** Assign COAXIAL 2 input connector.
- COAX3** Assign COAXIAL 3 input connector.
- OPT1** Assign OPTICAL 1 input connector.
- OPT2** Assign OPTICAL 2 input connector.
- OPT3** Assign OPTICAL 3 input connector.
- None** No digital input connector assigned.

<b>Input source</b>	CD	DVD	HDP	TV/CBL	SAT	VCR	DVR	V.AUX	SIRIUS
<b>Default setting</b>	<b>COAX3</b>	<b>COAX1</b>	None	<b>OPT1</b>	<b>COAX2</b>	None	<b>OPT2</b>	<b>OPT3</b>	None

Component In: Select component video input to assign to this source:

- 1** Assign component video 1 input connector.
- 2** Assign component video 2 input connector.
- 3** Assign component video 3 input connector.
- None** No component video input connector assigned.

<b>Input source</b>	DVD	HDP	TV/CBL	SAT	VCR	DVR	V.AUX
<b>Default setting</b>	<b>Component 1</b>	<b>Component 2</b>	<b>Component 3</b>	None	None	None	None

# MOON CP-8 Surround Preamplifier / Processor

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**Other** Make various other settings.

Video Select: Switch video input source while listening to audio signal:

Select video input source to view.

The video and audio for the same input source are played.

Press the "VIDEO" button on the **CP-8's** front panel , then turn the "SELECTOR" knob until the desired picture appears. To cancel, press the **CP-8's** "VIDEO" button again, then turn the "SELECTOR" knob and select "Source". It is not possible to select HDMI input signals. When playing HDMI video input signals, the analog video signal of another input source cannot be selected for the HDMI video output.

Video Convert: Automatically convert video input signal to monitor output format:

Input sources:

Enable conversion.  
 Disable conversion.

Source Level: Corrects the playback level of the selected input source's audio input:

~  ~

For input sources for which "HDMI" and "Digital" are set at the MENU "Assign" setting, the analog input level and digital input level can be set separately.

**Antenna Aiming** Check the XM and SIRIUS radio reception sensitivity.

Input source:

Satellite Indicate satellite signal strength.

Terrestrial Indicate terrestrial signal strength.

### XM Antenna Aiming

Display	Condition
▬ ▬ ▬ ▬ ▬	Signal strength is strong
▬ ▬ ▬ ▬	Signal strength is good
▬ ▬ ▬	Signal strength is marginal
▬ ▬	Signal strength is weak
▬	No signal

### SIRIUS Antenna Aiming

Display	Condition
▬ ▬ ▬ ▬ ▬	Signal strength is excellent
▬ ▬ ▬ ▬	Signal strength is good
▬ ▬ ▬	Signal strength is weak
▬	No signal

# MOON CP-8 Surround Preamplifier / Processor

## Surround Modes

**Standard Playback** This is the standard mode for listening to surround-sound according to the program source

**Surround Playback of 2-channel Sources** To select these surround modes using either the main remote control, press the "STD" button or press the "Surround Mode Std" button located on **CP-8's** hidden front control panel. The mode switches each time the button is pressed. Select the "Cinema", "Music", "Game" and "Pro Logic" modes at MENU "Parameter" – "Surround Parameter" – "MODE" (page 47).

- DOLBY PLIIx** **DTS NEO:6** **neural** When using a surround back speaker
- DOLBY PLII** **DTS NEO:6** **neural** When not using a surround back speaker

**DOLBY PLIIx**  
or **DOLBY PLII** The signals are decoded in DOLBY PLIIx or DOLBY PLII for playback.

- Cinema** This mode is suited for movie sources.
- Music** This mode is suited for music sources.
- Game** This mode is suited for games.
- Pro Logic** This can be selected when playing with a DOLBY PLII decoder. When this mode is selected, "DOLBY PL" is displayed.

**DTS NEO:6** The signals are decoded in DTS NEO:6 for playback.

- Cinema** This mode is suited for movie sources.
- Music** This mode is suited for music sources.

**neural** It is possible to play analog input signals and PCM (2-ch., 44.1kHz) in surround mode. This is the optimum mode for playing sources recorded in XM HD Surround.

## Surround Playback of Multi-channel Sources (Dolby Digital, DTS, etc.)

Standard:

	Input signal	Display
Dolby Digital Source	DOLBY DIGITAL (other than 2ch) / DOLBY DIGITAL EX	DOLBY DIGITAL DOLBY DIGITAL EX DOLBY DIGITAL+PLIIx CINEMA DOLBY DIGITAL+PLIIx MUSIC
	DOLBY DIGITAL Plus	DOLBY DIGITAL +
	DOLBY TrueHD	DOLBY TrueHD
	DTS (5.1ch) / DTS-ES Discrete 6.1 / DTS-ES Matrix 6.1 / DTS 96/24	DTS SURROUND DTS+PLIIx CINEMA DTS+PLIIx MUSIC DTS+NEO:6 DTS ES MTRX6.1 (*1) DTS ES DSCRT6.1 (*2) DTS 96/24 (*3)
DTS Surround Source	DTS-HD High Resolution Audio	DTS-HD
	DTS-HD Master Audio	DTS-HD MSTR
DVD-Audio, SACD	PCM (multi ch) / DSD (multi ch)	MULTI CH IN MULTI IN+PLIIx CINEMA MULTI IN+PLIIx MUSIC MULTI CH IN 7.1

This mode is for decoding the input signals according to their format and playing surround sound. The display when the STANDARD mode is selected depends on the input signal and surround back output playback mode.

- \*1: This is displayed when the input signal is "DTS-ES Matrix 6.1" and the **CP-8's** "Auto Flag Detect Mode" (AFDM) is set to "ON".
- \*2: This is displayed when the input signal is "DTS-ES Discrete 6.1".
- \*3: This is displayed when the input signal is "DTS 96/24"

For further details, refer to page 72–73.

# MOON CP-8 Surround Preamplifier / Processor

DSP Simulation Playback: The desired mode according to the program source and viewing situation can be selected from among 10 of the **CP-8's** unique surround modes. These surround parameters can be adjusted to achieve an even more realistic, powerful sound field. Refer the included document "Surround Modes & Parameters" for details.

<b>7CH STEREO</b>	For enjoying stereo sound from all speakers.
<b>WIDE SCREEN</b>	For enjoying the atmosphere of viewing a movie on a large screen.
<b>SUPER STADIUM</b>	For viewing sports programs.
<b>ROCK ARENA</b>	For enjoying the atmosphere of a live concert in an arena.
<b>JAZZ CLUB</b>	For enjoying the atmosphere of a live concert in a jazz club.
<b>CLASSIC CONCERT</b>	For appreciating classical concert programs.
<b>MONO MOVIE</b> *	For playing monaural movie sources with surround sound.
<b>VIDEO GAME</b>	For achieving surround sound with video games.
<b>MATRIX</b>	Lets you add a sense of expansion to stereo music sources.
<b>VIRTUAL</b>	For enjoying surround effects using only the front speakers or headphones.

\* When playing sources recorded in monaural in the "MONO MOVIE" mode, the sound will be off balance with a single channel (left or right) input to both channels.

To select these surround modes using the buttons on the main remote control, press the **SIMU** button or press the "DSP" button located on **CP-8's** hidden front control panel. The mode switches each time the button is pressed. Depending on the program source being played, it may not be possible to achieve a satisfactory surround effect. In this case, try other modes to achieve a sound field suited to your tastes.

Stereo Playback: This is the mode for playing in stereo. The tone can be adjusted. Sound is output from the front left and right speakers and subwoofer. Press the "Dir Stereo" button located on **CP-8's** hidden front control panel.

**STEREO**

Direct Playback: In this mode the signals bypass the tone adjustment circuitry for high quality sound. The sound is output to the same channels as the input signal. The display, when the DIRECT mode is selected depends on the input signal. Press the "Dir Stereo" button located on **CP-8's** hidden front control panel.

**DIRECT**

Input signal	Display
Analog signal / PCM (2ch) / Dolby Digital source / DTS source / Other 2-channel digital signals	DIRECT
DSD (2ch)	DSD DIRECT (*)
PCM (multi ch)	MULTI CH DIRECT
	M DIRECT + PLIIx CINEMA
	M DIRECT + PLIIx MUSIC
DSD (multi ch)	M DIRECT 7.1
	DSD MULTI DIRECT (*)

\* When DSD signals are converted to PCM signals as set by the audio parameters and speaker settings, "DIRECT" or "MULTI CH DIRECT" is displayed. For further details, refer to the included document "Surround Modes & Parameters".

**Playback in Pure Direct Mode** This is the mode that recreates the original sound most faithfully, providing extremely high quality sound. To activate this mode, press the "PURE DIRECT" button located on **CP-8's** hidden front control panel.

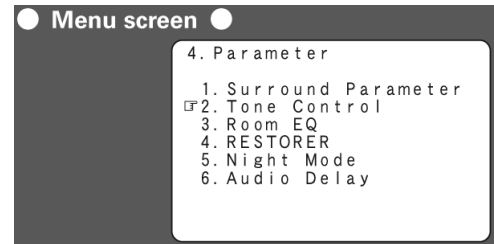
- In the "PURE DIRECT" mode, the menu screen is not displayed and the display on the main unit is turned off.
- If the HDMI input connector is selected, video outputs are output in the "PURE DIRECT" mode.
- The channel level and surround parameters in the "PURE DIRECT" mode are the same as in the "DIRECT" mode.

# MOON CP-8 Surround Preamplifier / Processor

## Parameters

Parameters can be accessed by pressing the **PARA** button on the main remote control.

**1. Surround Parameter** Adjust surround sound parameters. The adjustable parameters differ for the different surround modes (page 72 - 73).



**MODE:** Select the mode according to the playback source.

- CINEMA** Surround sound mode optimized for movie sources.
- MUSIC** Surround sound mode optimized for music sources.
- GAME** Surround sound mode optimized for games.
- PL** Dolby Pro Logic playback mode.

- In Dolby PLII and PLIIx, all 4 modes are available.
- In DTS Neo:6, "CINEMA" and "MUSIC" modes are available
- "MUSIC" mode is recommended for movies that contain substantial stereo music.

**CINEMA EQ:** Soften the treble range of movie soundtracks for cleaner sound.

- ON** CINEMA EQ is used.
- OFF** CINEMA EQ is not used.

**D.COMP:** Compress dynamic range (difference between loud and soft sounds). When playing DTS sources, this is only displayed for compatible software.

- OFF** Turn dynamic range compression off (Default).
- LOW** Low setting.
- MID** Middle setting.
- HIGH** High setting.

**DRC:** Compress dynamic range. This can be set in the Dolby TrueHD mode.

- AUTO** Automatic dynamic range compression on/off control according to the source.
- LOW** Low setting.
- MID** Middle setting.
- HIGH** High setting.
- OFF** Dynamic range compression always off.

**LFE:** Adjust the low-frequency effects level (LFE).

- 10dB** ~ **0dB** Variable Range

For proper playback of the different program sources, we recommend these settings:

- Dolby Digital sources: "0 dB"
- DTS movie sources: "0 dB"
- DTS music sources: "-10 dB"

# MOON CP-8 Surround Preamplifier / Processor

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CENTER IMAGE: Assign center channel signal to front left and right channels for wider sound.

~  ~  Variable Range

PANORAMA: Assign the front L/R signal to the surround channels for a wider sound field. If the surround effect seems weak, set "PANORAMA" to "ON".

DIMENSION: Shift sound image center to front or rear, to adjust the playback balance.

~  ~  Variable Range

CENTER WIDTH: Assign center channel signal to front left and right channels for wider sound.

~  ~  Variable Range

DELAY TIME: Adjust delay time to control sound stage size.

~  ~  Variable Range


EFFECT: Switch effect signal for multi-surround speakers on and off. When "EFFECT" is set to "ON", a surround effect with a strong sense of expansion is achieved.

LEVEL: Adjust the effect signal level. Set it to a lower level if the positioning and sense of phase of the surround signals seems unnatural.

~  ~  Variable Range

ROOM SIZE: Determine physical size of acoustic environment.

Simulate acoustics of a small room.  
  
  
  
 Simulate acoustics of a large room.



AFDM: **Auto Flag Detect Mode** allows for auto-select surround mode by source. This function only works for software containing a special identification signal. If the software being played is recorded in Dolby Digital EX or DTS-ES, it is played in 6.1-channels. If not, it is played in 5.1-channels.

- When "AFDM" is set to "ON", the surround mode is automatically set to the DOLBY + PLIIx CINEMA mode.
- To play in the Dolby Digital EX mode, set "AFDM" to "OFF" and "SB CH OUT" to "MTRX ON".
- Some Dolby Digital EX sources do not include EX flags. If the playback mode does not switch automatically even when "AFDM" is set to "ON", set "SB CH OUT" to "MTRX ON" or "PLIIx CINEMA".

# MOON CP-8 Surround Preamplifier / Processor

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SB CH OUT (for Multi-channel sources): Select playback mode for surround back channels.

<b>OFF</b>	No signal is played from the surround back channels.
<b>NON MTRX</b>	The surround channels signal is also output to the surround back channels.
<b>MTRX ON</b>	The surround signal undergoes digital matrix processing and is output to back channels.
<b>PLIIx CINEMA</b>	*1 Decoded in Dolby Pro Logic Iix Cinema mode, surround back signal played.
<b>PLIIx MUSIC</b>	*2 Decoded in Dolby Pro Logic Iix Music mode, surround back signal played.
<b>ES MTRX</b>	*3 DTS signal played with digital matrix processing.
<b>ES DSCRT</b>	*4 Signal included in DTS-ES Discrete 6.1-channel sources played.

\*1: This can be selected when "Surround Back" is set to "2spkrs" at MENU "Manual Setup" – "Speaker Setup" – "Speaker Configuration" setting (page 32).

\*2: This can be selected when "Surround Back" is set to "2spkrs" or "1spkr" at MENU "Manual Setup" – "Speaker Setup" – "Speaker Configuration" setting.

\*3: This can be selected when playing DTS sources.

\*4: This can be selected when playing DTS sources including a discrete 6.1-channel signal identification signal.

SB CH OUT (for 2-channel sources): Determine whether to use surround back speakers. This operation can be performed directly pressing the "SURR BACK" button located on **CP-8's** hidden front control panel.

<b>ON</b>	The surround channel signal is played.
<b>OFF</b>	The surround channel signal is not played.

SUBWOOFER ATT.: Attenuate subwoofer level when using EXT. IN mode. Set this to "ON" if the subwoofer channel level seems too high when playing Super Audio CDs.

<b>ON</b>	The input from the subwoofer channel is attenuated.
<b>OFF</b>	The input from the subwoofer channel is not attenuated. Usually use in this mode.

Subwoofer: Turn the subwoofer output signal on and off.

<b>ON</b>	The subwoofer is used.
<b>OFF</b>	The subwoofer is used.

Default: Resets all of the above surround parameter settings to their default values.

## 2. Tone Control Adjust the tonal quality of the sound.

Tone Defeat: Turn tone adjustments off.

<b>ON</b>	Playback without tone adjustment.
<b>OFF</b>	Allow tone adjustment (treble, bass).

Bass: Adjust low frequency range (bass).

**-6dB ~ 6dB** Variable Range

Treble: Adjust high frequency range (treble).

**-6dB ~ 6dB** Variable Range

# MOON CP-8 Surround Preamplifier / Processor

### 3. MultEQ XT Select room equalizer for current environment.

<b>Audyssey</b>	Optimize frequency response of all speakers to match room acoustics.
<b>Audyssey Flat</b>	Optimize freq. resp. of all speakers to flat response.
<b>Audyssey Byp. L/R</b>	Optimize freq. resp of speakers except front speakers to match room acoustics.
<b>Manual</b>	Apply frequency response set with "Manual EQ".
<b>OFF</b>	Turn equalizer off.

Press the "ROOM EQ" button located on **CP-8's** hidden front control panel. or the "EQ" button on the main remote control:



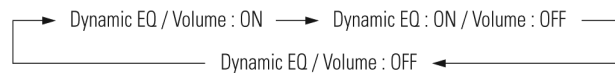
- When "Audyssey", "Audyssey Flat" or "Audyssey Byp. L/R" is selected, or the auto setup measuring results change, the **AUDYSSEY MULTIEQ XT** indicator lights up on the front panel display.
- "Audyssey", "Audyssey Byp. L/R" and "Audyssey Flat" can be set after the auto setup procedure has been performed.
- If the settings of speakers for which "None" has been determined at "Auto Setup" are changed, "Audyssey", "Audyssey Byp. L/R" and "Audyssey Flat" cannot be selected.
- When using headphones, "Room EQ" is set to "OFF"

### 4. Dynamic EQ Activate Audyssey Dynamic EQ in conjunction with MultEQ XT

Audyssey Dynamic EQ™ solves the problem of deteriorating sound quality as volume is decreased by taking into account human perception and room acoustics. Dynamic EQ selects the correct frequency response and surround levels moment-by-moment at any user-selected volume setting. Dynamic EQ combines information from incoming source levels with actual output sound levels in the room, a prerequisite for delivering a loudness correction solution. Audyssey Dynamic EQ works in tandem with Audyssey MultEQ XT to provide well-balanced sound for every listener at any volume level.

<b>ON</b>	Use Dynamic EQ function.
<b>OFF</b>	Do not use Dynamic EQ function.

Press the "DYN VOL" button located on **CP-8's** hidden front control panel. or the "DYN" button on the main remote control:



- "Dynamic EQ" can only be set when auto setup has been performed.
- After performing "Auto Setup", the "Dynamic EQ" setting automatically becomes "ON".
- "Dynamic EQ" cannot be set in the following situations. · If "Auto Setup" fails to be completed. or when the number of used speakers has increased from the number of measured speakers after running Auto Setup,.
- "Dynamic EQ" is automatically set to "OFF" when "MultEQ XT" is set to "OFF" or "Manual".
- Before running Auto Setup and after running Auto Setup, if the number of speakers has increased or you pressed **DYN VOL**, "Run Audyssey" is displayed. In this case, either perform Auto Setup, or return to the setting after running Auto Setup with "Auto Setup" – "Parameter Check" – "Restore".
- When you set "Dynamic EQ" to "ON", "Tone Control" and "Night Mode" are automatically switched "OFF".

# MOON CP-8 Surround Preamplifier / Processor

## 5. Dynamic Volume Activate Audyssey Dynamic Volume in conjunction with MultEQ XT and Dynamic EQ

Audyssey Dynamic Volume™ solves the problem of large variations in volume level between television programs, commercials, and between the soft and loud passages of movies. Dynamic Volume looks at the preferred volume setting by the user and then monitors how the volume of program material is being perceived by listeners in real time to decide whether an adjustment is needed. Whenever necessary, Dynamic Volume makes the necessary rapid or gradual adjustments to maintain the desired playback volume level while optimizing the dynamic range. Audyssey Dynamic EQ is integrated into Dynamic Volume so that as the playback volume is adjusted automatically, the perceived bass response, tonal balance, surround impression, and dialog clarity remain the same whether watching movies, flipping between television channels, or changing from stereo to surround sound content.

- ON** Use Dynamic EQ function.
- OFF** Do not use Dynamic EQ function.

Press the "DYN VOL" button located on **CP-8's** hidden front control panel. or the "DYN" button on the main remote control:



- "Dynamic Volume" can only be set when auto setup has been performed.
- "Dynamic Volume" cannot be set in the following situations. · If "Auto Setup" fails to be completed. · After running Auto Setup, when the number of used speakers has increased from the number of measured speakers.
- "Dynamic Volume" is automatically set to "OFF". when "MultEQ XT" is set to "OFF" or "Manual".
- Before running Auto Setup and after running Auto Setup, if the number of speakers has increased or you pressed **DYNAMIC VOLUME**, "Run Audyssey" is displayed. In this case, either perform Auto Setup, or return to the setting after running Auto Setup with "Auto Setup" – "Parameter Check" – "Restore".
- "Dynamic Volume" and "Night Mode" cannot be used jointly.

## 6. Setting Set the Dynamic Volume effect when the "Dynamic Volume" is set to "ON"

- Midnight** High setting affects volume the most, causing all sounds to be of equal loudness.
- Evening** Middle setting prevents loud and soft sounds from being much louder and softer respectively than average sounds.
- Day** Low setting provides the least adjustments to the loudest and softest of sounds.

- "Setting" can only be set when auto setup has been performed.
- "Setting" cannot be set in the following situations:
  - If "Auto Setup" fails to be completed.
  - After running Auto Setup, when the number of used speakers has increased from the number of measured speakers.
  - If "Dynamic Volume" setting is "OFF".

# MOON CP-8 Surround Preamplifier / Processor

**7. RESTORER** This function restores compressed audio signals to how they were before compression and corrects the sense of volume of the bass to obtain richer playback sound.

- OFF** Do not use RESTORER.
- Mode1** RESTORER 64 - Optimized mode for compressed sources with very weak highs.
- Mode2** RESTORER 96 - Apply suitable bass and treble boost for all compressed sources.
- Mode3** RESTORER HQ - Optimized mode for compressed sources with normal highs.

During playback, press the "RESTORE" button located on **CP-8's** hidden front control panel or the "RSTR" button on the main remote control. When set to something other than "OFF", the **RESTORER** indicator lights up on the front panel display.

***In the event that the RESTORER function cannot be applied to the audio signal for reasons of incompatibility, then no audio signal will be output from the CP-8.***

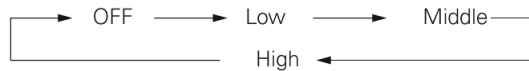


- Audio formats MP3, WMA and MPEG-4 AAC reduce the amount of data by eliminating signal components that are hard for the human ear to hear. The RESTORER function generates the signals eliminated upon compression, restoring the sound to conditions near those of the original sound before compression. It also adjusts bass frequencies to obtain a richer sound with compressed audio signals.
- This is displayed on the menu and can be set when the input source is selected to "XM", or analog signals (including AM/FM signals) or digital PCM signals are input.

**8. Night Mode** Optimized setting for late-night listening.

- OFF** Turn night mode off.
- LOW** Turn late night mode on (Low setting).
- MID** Turn late night mode on (Mid setting).
- HIGH** Turn late night mode on (Hi setting).

Press the "NGT" button on the main remote control.. The **NIGHT** indicator lights up on the front panel display when "Low", "Middle" or "High" is selected.



**9. Audio Delay** Compensate for mismatched timing between video and audio. This sets the delay time for audio signals.

- 0 ms** ~ **200 ms** Variable Range

If you wish to adjust the "Audio Delay" while playing HDMI or component video signals, press **▲** to set "on-screen display" (OSD) to "OFF". This way the audio delay can be adjusted while watching the picture. (Press **▲** again to switch to the OSD).

With the following procedure, the OSD is not displayed. Simply make the adjust while watching the display: Press the "AUDIO DELAY" button located on **CP-8's** hidden front control panel or the "A. DL" button on the main remote control. The use the **◀** and **▶** buttons to set the "Audio Delay".

- This cannot be adjusted when playing in the EXT. IN, DIRECT or STEREO mode with "Front Speaker" set to "Large", "Tone Defeat" to "ON" and "Room EQ" to "OFF".
- The adjustment range is 0 to 100 ms when the Auto Lipsync Correction function is activated.

# MOON CP-8 Surround Preamplifier / Processor

## Information

### Status

Shows information about the current settings.

**Main Zone** Shows information about settings for the main zone. The items displayed differ according to the input source. Items to be checked include:

Select Source	Name	Surround Mode	Input Mode	Rec Select
Video Select	Source Level	Room EQ	Night Mode	RESTORER

**Zone2 / Zone 3** Shows information about settings for multi-zone. Items to be checked:

Power	Select Source	Volume Level
-------	---------------	--------------

### Audio Input Signal

Shows information about the audio input signals.

<b>Surround Mode</b>	The current surround mode is displayed.
<b>SIGNAL</b>	The input signal type is displayed.
<b>fs</b>	Shows the input signal's sampling frequency
<b>Format</b>	Shows the no. of channels in the input signal
<b>Offset</b>	* Shows the dialogue normalization correction value
<b>Flag</b>	"MATRIX" is displayed if the input signal has undergone matrix processing, "DISCRETE" if the input signal has undergone discrete processing.

\* "Offset" is automatically activated when playing a Dolby Digital source. This function automatically corrects the standard signal level for individual program sources. The correction value can be checked using the "STATUS" button located on **CP-8's** hidden front control panel. The figure shown is the correction value when the standard level is corrected.

### HDMI Information

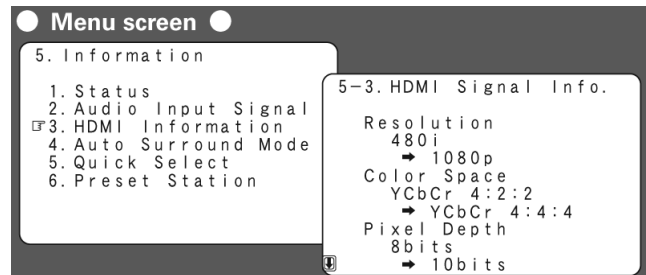
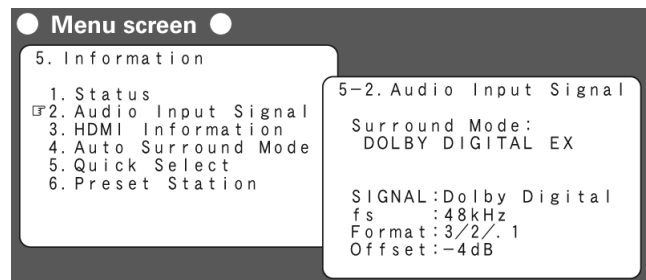
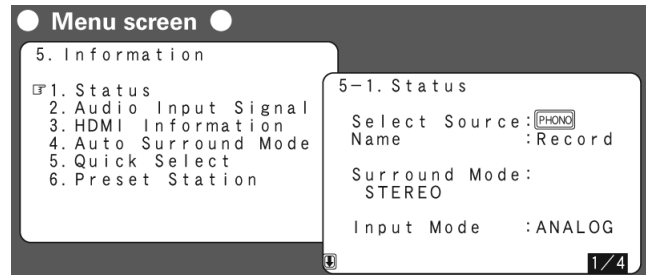
Shows information about the HDMI input/output signals and the monitor.

**HDMI Signal Information** The HDMI input/output signal information is displayed. Items to be checked are:

Resolution	Color Space	Pixel Depth
------------	-------------	-------------

**HD MI Monitor Information** The HDMI monitor information is displayed. Items to be checked are:

Interface	Support Resolution
-----------	--------------------

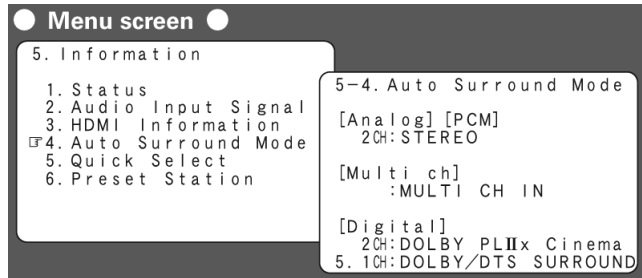


# MOON CP-8 Surround Preamplifier / Processor

## Auto Surround Mode

Shows information about auto surround mode settings. The surround mode for which the last memory function was used for the different input signal types is displayed. Items to be checked are:

**Analog/PCM 2CH**   **Multi ch**   **Digital 2CH**   **Digital 5.1CH**

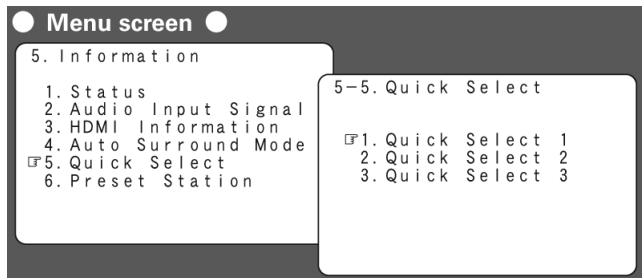


## Quick Select

Shows information about the quick select settings. Items to be checked are:

Name	Input Source	Input Mode	Volume Level
<b>Analog/PCM 2CH</b>	<b>Multi ch</b>	<b>Digital 2CH</b>	<b>Digital 5.1CH</b>

For instructions on how to store Quick Select settings 1, 2 and 3, refer to "Quick Select Function" on page 62.



## Preset Stations

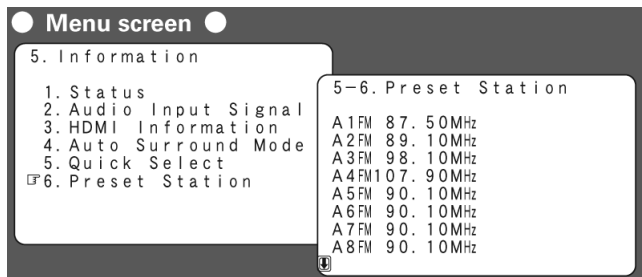
Shows information about the preset stations.

Input Sources:

**TUNER**   **XM**

Items to be checked are:

**A1 ~ G8**

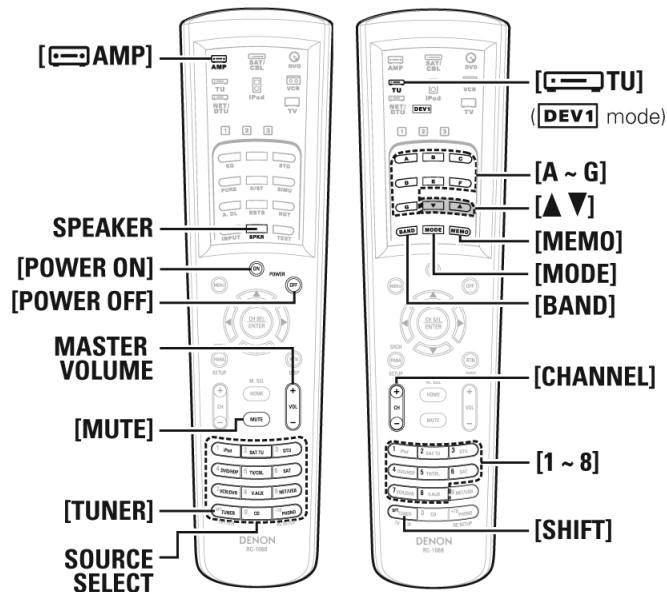


Pressing the "STATUS" button located on CP-8's hidden front control panel, the set's status can be checked on the display.

# MOON CP-8 Surround Preamplifier / Processor

## Playback

### Preparations



### Turning the Power On

You must first turn on the main power rocker switch, located on rear panel above AC input receptacle. This places the unit into standby mode. Next press the 'Standby' button located on the front panel. The blue LED will illuminate and after a four (4) second delay the **CP-8** will be ready for use. To turn on the **CP-8** using the main remote control, set the remote control to "AMP" mode (top left button) and press the "POWER ON" button.

### Turning the Power Off

Press the 'Standby' on the front panel or "POWER OFF" the main remote control. Power continues to be supplied to some of the circuitry even when the **CP-8** is in the standby mode. As well, the rear panel main power rocker switch should remain in the on position unless you do not plan to use the **CP-8** for an extended period of time.

### Selecting the Input Source

Press the 'Source' button on the **CP-8** and then rotate the "Selector" knob to scroll through the various inputs. Using the main remote control, you can directly select your source by pressing one of the ten (10) source buttons located on the lower section of the remote.

### Playback Operations

The volume can be adjusted by rotating the large master volume knob on CP-8's front panel or by pressing the "+ VOL -" on the main remote control. To temporarily turn off the sound, press the "MUTE" button on the main remote control. To cancel muting, press the "MUTE" button again or rotate the master volume knob.

## Playing Video and Audio Equipment

Select the appropriate input source and monitor output (if applicable) on the **CP-8**. Then load a DVD, CD or other software into your disc player and begin playback. If you are using using the main remote control, make sure to set the remote control to "AMP" mode.

# MOON CP-8 Surround Preamplifier / Processor

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## Listening to AM/FM Broadcasts

Use the "Source" button and "Selector" knob on the **CP-8's** front panel or press the "TUNER" button on the main remote control. If you are using the main remote control, press the "DEV1" button to place the remote into tuner mode. Then press the "BAND" button to select "AM" or "FM". To tune to a desired broadcast station, you can use either Auto Tuning or Manual Tuning via the remote control; To tune automatically, press the "MODE" button, the "AUTO" indicator will illuminate on the front panel display, and use the ▲ and ▼ buttons to select the station you want to hear. To manually tune, press the "MODE" button, the "AUTO" indicator will shut off on the front panel display, and use the ▲ and ▼ buttons to select the station you want to hear. If the desired station cannot be tuned in with auto tuning, tune it in manually. When tuning in stations manually, press and hold the ▲ ▼ buttons to change frequencies continuously.

## Creating Preset Radio Stations

Your favorite broadcast stations can be preset so that you can tune them in easily. A total of 56 stations can be preset.

Using the main remote control, tune into the broadcast station you want to preset. Press the "MEMO" button. Next, press "A ~ G" to select the block into which the station is to be preset, then press the "+ CHANNEL -" button or "1 ~ 8" on the numeric keypad to select the preset number. The memory block can also be selected by pressing the "SHIFT" button. Press "MEMO" again to complete the setting. Preset stations are erased when you overwrite them with a new station.

- To preset other stations, repeat steps 1 to 4.
- Stations can be preset automatically at MENU "Input Setup" – "Auto Preset" (page 41).

## Listening to Preset Stations

From the **CP-8's** front panel, press then "TUNING PRESET" button, then rotate the "SELECTOR" to scroll through the preset radio stations. From the main remote control, making sure that it is in tuner mode, press "A ~ G" to select the memory block, then "+ CHANNEL -" button or "1 ~ 8" on the numeric keypad to select the desired preset radio station.

## Listening to XM Satellite Radio

**About XM Satellite Radio** XM Satellite Radio offers an extraordinary variety of commercial-free music, plus the best in sports, news, talk and entertainment. XM is broadcast in superior digital audio from coast to coast. From rock to reggae, from classical to hip hop, XM has something for every music fan. XM's dedication to playing the richest selection of music is matched by its passion for live sporting events, talk radio, up-to-the-minute news, stand-up comedy, children's programming, and much more. For U.S. customers, information about XM Satellite Radio is available online at [www.xmradio.com](http://www.xmradio.com). For Canadian customers, information about XM Canada is online at [www.xmradio.ca](http://www.xmradio.ca).

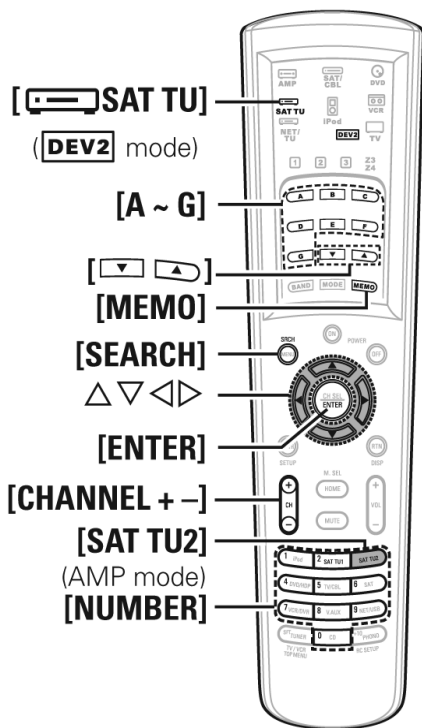
**XM Ready® Legal** Hardware and required monthly subscription sold separately. Other fees and taxes, including a one-time activation fee may apply. Subscription fee is consumer only. All fees and programming subject to change. Channels with frequent explicit language are indicated with an XL. Channel blocking is available for XM radio receivers by calling 1-800-XMRADIO (US residents) and 1-877-GET-XMSR (Canadian residents). For a full listing of the XM commercial-free channels and advertising supported channels, visit [lineup.xmradio.com](http://lineup.xmradio.com) (US residents) or [xmradio.ca](http://xmradio.ca) (Canadian residents).

**XM Ready® Subscriptions** Subscriptions subject to Customer Agreement available at [xmradio.com](http://xmradio.com) (US residents) and [xmradio.ca](http://xmradio.ca) (Canadian residents). Only available in the 48 contiguous United States and Canada. ©2006 XM Satellite Radio Inc. All rights reserved. All other trademarks are the property of their respective owners. Once you have installed the XM Mini-Tuner Dock, inserted the XM Mini-Tuner, connected the XM Dock to your XM Ready® home audio system, and installed the antenna, you are ready to subscribe and begin receiving XM programming. There are three places to find your eight character XM Radio ID: on the XM Mini-Tuner, on the XM Mini-Tuner package, and on XM Channel 0. Record the 8 character Radio ID in the space below for future reference.

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# MOON CP-8 Surround Preamp / Processor

Note: The XM Radio ID does not use the letters "I", "O", "S" or "F". Activate your XM Satellite Radio service in the U.S. online at <http://activate.xmradio.com> or call 1-800-XM-RADIO (1-800-967-2346). You will need a major credit card. XM will send a signal from the satellites to activate the full channel lineup. Activation normally takes 10 to 15 minutes, but during peak busy periods you may need to keep your XM Ready home audio system on for up to an hour. When you can access the full channel lineup on your XM Ready home audio system you are done. For more information or to subscribe in Canada, visit XM on the Web at [www.xmradio.ca](http://www.xmradio.ca) or call XM's Listener Care at 1-877-GET-XMSR (1-877-438-9677).



## Basic Operation

Use the "Source" button and "Selector" knob on the **CP-8's** front panel or press the 'SAT TU2" button on the main remote control to select "XM". If you are using the main remote control, press the "DEV2" button to place the remote into XM mode (page 66).

Use the ▲ and ▼ buttons to select a station. When the station is tuned in, the name of the track and artist will appear on the front panel display. Press and hold the ▲ and ▼ buttons to change stations continuously.

XM Satellite Radio stations can be preset using the same previously described procedure as for AM/FM stations. The artist name, track name, category and reception level can be checked by pressing "STATUS" button on the **CP-8's** hidden control panel.

The time for which the menus are displayed can be set at MENU "Manual Setup" – "Option Setup" – "On-Screen Display" (page 39).

## Checking the XM Signal Strength and Radio ID

Use the "Source" button and "Selector" knob on the **CP-8's** front panel or press the 'SAT TU2" button on the main remote control to select "XM". Press the "STATUS" button on the **CP-8's** hidden control panel until "SIGNAL" appears on the front panel display. The display will switch and show the following, depending on the reception conditions:

<u>Display</u>	<u>Status</u>
<b>GOOD</b>	Signal strength is good
<b>MARGINAL</b>	Signal strength is marginal
<b>WEAK</b>	Signal strength is weak
<b>NO</b>	No signal

Adjust the position of the XM satellite antenna until "SIGNAL: GOOD" appears on the display. Press the "STATUS" button on the **CP-8's** hidden control panel until the station you want to check (i.e. "XM001") is displayed. Press ▲ or ▼ to select channel 0 (XM000) - the radio ID is shown on the display (refer to image to the right). The strength of the XM satellite and terrestrial signals can be checked at MENU "Input Setup" – "Antenna Aiming" (page 44).



# MOON CP-8 Surround Preamplifier / Processor

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## Presetting XM Radio Channels

You can save your favorite XM Radio channels into a preset memory so that you can easily tune them anytime. A maximum of 56 channels can be preset. Using the main remote control::

1. Tune in the broadcast channel you want to preset.
2. Press "MEMO".
3. Press "A ~ G" to select the block in which the channel is to be preset.
4. Press "CHANNEL + -]" or "NUMBER (1 ~ 8)" to select the preset number.
5. Press "MEMO" again to complete the setting.

To preset other channels, repeat steps 1 to 5. Preset channels are erased by overwriting them.

## Listening to Preset XM Channels

To select a preset channel using the **CP-8's** front panel, press "Tuning Preset", then turn the "Selector" knob.  
To select a preset channel using the main remote control, press "A ~ G" to select the memory block (A to G). Then press "CHANNEL + -" or "NUMBER (1 ~ 8)" to select the desired preset channel.

## Searching Categories

Press the ◀ or ▶ buttons to display the XM satellite channel category. Use the ◀ and ▶ buttons to select a category and then use the ▲ and ▼ buttons to select a station.



XM040 DeepTrks  
CAT: Rock

## Accessing XM Radio Stations Directly

Using the main remote control, press the "SEARCH" button. Next press the "NUMBER" button and then input the station's channel using the numeric keypad at the bottom of the remote control. Pressing buttons 1,3 and 5 followed by the "ENTER" button will switch the **CP-8** to station XM135. If no button is pressed within several seconds, the station automatically switches to the one whose number has been input.

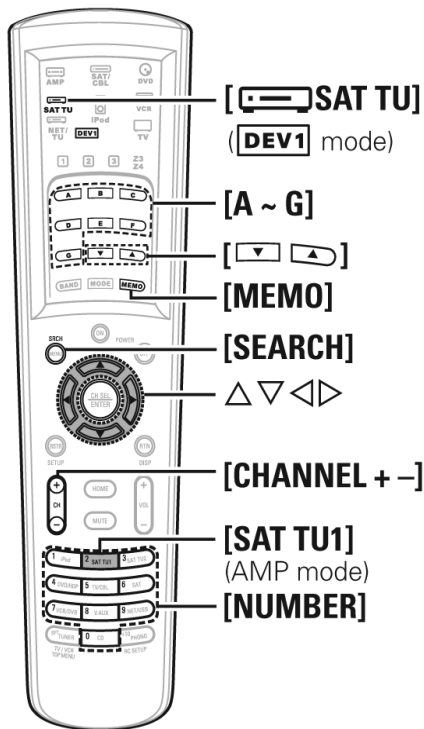
- "LOADING" is displayed while stations or data are being received.
- "UPDATING" is displayed while the encoding code is being updated.
- "XM - -" is displayed if the selected channel cannot be used.

## Listening to Sirius Satellite Radio

Simply The Best Radio on Radio™ with all your favorite entertainment including 100% commercial-free music, plus superior sports coverage, uncensored talk and comedy, world-class entertainment, news, weather and more for your car, home or office. For more information visit [sirius.com](http://sirius.com) or [siriuscanada.ca](http://siriuscanada.ca)

Sirius is available in the US for subscribers with addresses in the continental US and is available in Canada for subscribers with a Canadian address. Required subscription plus compatible SIRIUS tuner and antenna are required and sold separately. SIRIUS Programming is subject to change. Visit [sirius.com](http://sirius.com) for the most complete and up-to-date channel lineup and product information. "SIRIUS" and the SIRIUS dog logo and related marks are trademarks of Sirius Satellite Radio Inc. All rights reserved.

# MOON CP-8 Surround Preamplifier / Processor



## Basic Operation

Use the "Source" button and "Selector" knob on the **CP-8's** front panel or press the 'SAT TU1" button on the main remote control to select "SIRIUS". If you are using the main remote control, press the "DEV1" button to place the remote into SIRIUS mode (page 66).

Use the ▲ and ▼ buttons to select a station. When the station is tuned in, the name of the track and artist will appear on the front panel display. Press and hold the ▲ and ▼ buttons to change stations continuously.

XM Satellite Radio stations can be preset using the same previously described procedure as for AM/FM stations. The artist name, track name, category and reception level can be checked by pressing "STATUS" button on the **CP-8's** hidden control panel.

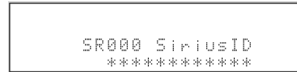
The time for which the menus are displayed can be set at MENU "Manual Setup" – "Option Setup" – "On-Screen Display" (page 39).

## Checking the SIRIUS Signal Strength and Radio ID

Use the "Source" button and "Selector" knob on the **CP-8's** front panel or press the 'SAT TU1" button on the main remote control to select "SIRIUS". Press the "STATUS" button on the **CP-8's** hidden control panel until "SIGNAL" appears on the front panel display. The display will switch and show the following, depending on the reception conditions:

<u>Display</u>	<u>Status</u>
<b>EXCELLENT</b>	Signal strength is excellent
<b>GOOD</b>	Signal strength is good
<b>WEAK</b>	Signal strength is weak
<b>NO SIGNAL</b>	No signal

Adjust the position of the SIRIUS satellite antenna until "SIGNAL: EXCELLENT" appears on the display. Press the "STATUS" button on the **CP-8's** hidden control panel until the station you want to check (i.e. "SR001") is displayed. Press ▲ or ▼ to select channel 0 (SR000) - the radio ID is shown on the display (refer to image to the right). The strength of the SIRIUS satellite and terrestrial signals can be checked at MENU "Input Setup" – "Antenna Aiming" (page 44).



Record the 12 character SIRIUS Radio ID in the space below for future reference.

\_\_\_\_\_

# MOON CP-8 Surround Preamplifier / Processor

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## Presetting SIRIUS Radio Channels

You can save your favorite SIRIUS Radio channels into a preset memory so that you can easily tune them anytime. A maximum of 56 channels can be preset. Using the main remote control::

1. Tune in the broadcast channel you want to preset.
2. Press "MEMO".
3. Press "A ~ G" to select the block in which the channel is to be preset.
4. Press "CHANNEL + -]" or "NUMBER (1 ~ 8)" to select the preset number.
5. Press "MEMO" again to complete the setting.

To preset other channels, repeat steps 1 to 5. Preset channels are erased by overwriting them.

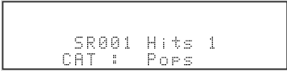
## Listening to Preset SIRIUS Channels

To select a preset channel using the **CP-8**'s front panel, press "Tuning Preset", then turn the "Selector" knob.

To select a preset channel using the main remote control, press "A ~ G" to select the memory block (A to G). Then press "CHANNEL + -" or "NUMBER (1 ~ 8)" to select the desired preset channel.

## Searching Categories

Press the ◀ or ▶ buttons to display the SIRIUS satellite channel category. Use the ◀ and ▶ buttons to select a category and then use the ▲ and ▼ buttons to select a station.



```
SR001 Hits 1
CAT : Pops
```

## Accessing SIRIUS Radio Stations Directly

Using the main remote control, press the "SEARCH" button. Next press the "NUMBER" button and then input the station's channel using the numeric keypad at the bottom of the remote control. Pressing buttons 1,3 and 5 followed by the "ENTER" button will switch the **CP-8** to station SR135. If no button is pressed within several seconds, the station automatically switches to the one whose number has been input.

- "UPDATING" is displayed while the encoding code is being updated.
- "SIRIUS UPDATING" is displayed when updating SIRIUS tuner firmware.
- "Invalid Channel" is displayed if the selected channel doesn't exist.

## Parental Lock

You can create 4-digit access codes to password protect certain Sirius channels from being accessed by other people:

1. Tune to the channel you want to lock.
2. Press "ENTER" for at least 3 seconds. "Code: [ ]" is displayed.
3. Enter the 4-digit lock code using ▲▼◀ and ▶. When you enter the code, the corresponding channel is locked.
4. Press "ENTER".

- Channels under Parental Lock cannot be tuned in by performing Tuning Up/Down or by category search.
- Channels stored in preset memory can be tuned in by the preset channel select operation, even if Parental Lock is applied.
- To cancel the Parental Lock for a channel, simply tune in to that channel and perform Step 2.

# MOON CP-8 Surround Preamp / Processor

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## Other Operations and Functions

### Other Operations

#### Playing Super Audio CDs

At the "HDMI" setting (page 43) select the input source for "HDMI" is assigned. The "HDMI" indicator lights on the front panel display. Use "INPUT MODE" button on the **CP-8's** hidden control panel to select "Auto" (page 42). Select the input mode based on the program source to be played. Select the surround mode (page 45-46). We recommend playing in the "DIRECT" mode. Start playing the Super Audio CD. The "DSD" indicator lights on the front panel display. For operating instructions, refer to the respective equipment's operating instructions.

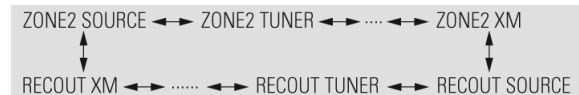
- When playing DSD signals in the "DIRECT" or "PURE DIRECT" mode, the DSD signals are converted into analog signals. When playing in other surround modes, the DSD signals are converted first into PCM format and then into analog signals.
- "DSD DIRECT" is shown on the front panel display when playing DSD 2-channel signals in the "DIRECT" mode. "DSD MULTI DIRECT" is shown on the display when playing DSD multi-channel signals in the "DIRECT" mode.

#### Recording on an External Device (REC OUT mode)

The **CP-8** allows you to listen to one program source while recording a different program source.

Press the "ZONE2/3" button on the front panel. "ZONE2 SOURCE" is appears on the front panel display:

Rotate the "Selector" knob until "RECOU SOURCE" is displayed. The "REC" indicator lights on the front panel display. Rotate the "Selector" knob again to select the input source to be recorded. Play the program source. For operating instructions regarding the playback device, refer to the respective equipment's owner's manual. If you wish to record FM or AM broadcasts, select the broadcast (page 56). You can now begin recording. For operating instructions regarding the recording device, refer to the respective equipment's owner's manual.



- To cancel, press the "ZONE2/3" button then rotate the "Selector" knob until "ZONE2 SOURCE" is displayed.
- We recommend making a test recording before starting the actual recording.
- Signals are only output to the analog "REC OUT" connectors when a digital signal is input to any of the digital input connectors.
- Digital audio signals input to HDMI connectors aren't output to the REC OUT connectors; use the optical or coaxial connectors.
- Sources selected with the REC OUT mode are output from ZONE2 as well.
- In the REC OUT mode, the remote control unit's ZONE2 mode buttons cannot be operated.
- The "XM" digital audio output signals are not output from the OPTICAL2 or OPTICAL3 output connectors.
- Input sources for which "Delete" is selected at "Source Delete" cannot be selected.

# MOON CP-8 Surround Preamp / Processor

## Convenient Functions

### Channel Level

You can adjust the channel level according to the playback sources or to suit your taste.

Press the "CH SEL" button on the main remote control. Use either the ▲ and ▼ buttons or "CH SEL" on the remote to select the speaker. The speaker that can be set switches each time one of these buttons is pressed. Use the ◀ or ▶ buttons to adjust the volume. "OFF" can be set by pressing the ◀ button when the subwoofer's volume is set to -12 dB.

Channel Volume			
FL	◀ 0.0dB	SR	0.0dB
C	0.0dB	SBR	0.0dB
FR	0.0dB	SBL	0.0dB
SW	0.0dB	SL	0.0dB
Fader			
FRONT ◀ : ▶ REAR			

**Fader Function** This function lets you adjust (fade) the sound from all the front or rear speakers at once.

Press the "CH SEL" button on the main remote control. Then press the ▲ and ▼ buttons or "CH SEL" to select "Fader". Use the ◀ or ▶ buttons to adjust the volume of the speakers (◀ for front and ▶ for rear). The fader function does not affect the subwoofer. The fader can be adjusted until the volume of the speaker adjusted to the lowest value is -12 dB.

### Quick Select Function

With this function you can store in memory, the currently playing input source, input mode, surround mode, room EQ settings and volume. Set the input source, input mode, surround mode, room EQ settings and volume to the conditions you want to store. Press and hold the desired "Quick Select" button (1, 2, or 3). Keep pressing the button until the associated quick select indicator lights up. The "Quick Select" name can be changed (page 39). Input sources stored with the quick select function cannot be selected if they have been deleted at MENU "Manual Setup" – "Option Setup" – "Source Delete" (page 39). In this case, store them again. The "Quick select" factory default settings are as follows:

<u>Input</u>	<u>Source</u>	<u>Volume</u>
Quick Select 1	DVD	- 40 dB
Quick Select 2	TV/CBL	- 40 dB
Quick Select 3	VCR	- 40 dB

### Personal Memory Plus Function

This function saves the settings (input mode, surround mode, etc.) last selected for the individual input sources. When you switch to an input source, the settings are automatically set to the ones that were set the last time that input source was used. The surround parameters, tone control, room EQ settings and the volumes of the different speakers are stored for the individual surround modes.

### Last Function Memory

This stores the settings as they were directly before the standby mode was set. When the power is turned back on, the settings are restored to as they were directly before the standby mode was set.

### Backup Memory

The various settings are backed up for about 1 week, even if the power is turned off or the power cord is disconnected.

### Resetting the Microprocessor

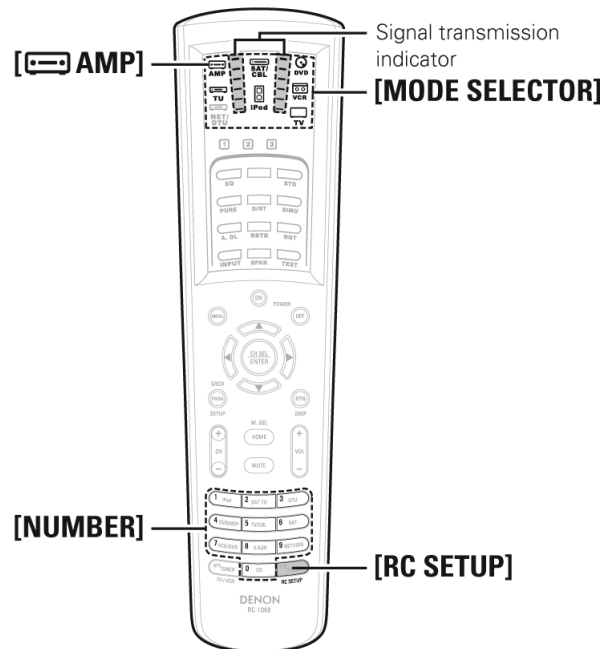
Perform this procedure if the display is abnormal or if operations cannot be performed. When the microprocessor is reset, all the settings are reset to their factory default values. Turn off the power by pressing the "Standby" button. Then press the "Standby" button again while simultaneously pressing the "Std" and "DSP" buttons located on the CP-8's hidden control panel. Once the display starts flashing at intervals of approx. 1 second, release the two buttons. If the display does not flash at intervals of approx. 1 second, power off the unit and repeat the process again.

# MOON CP-8 Surround Preamplifier / Processor

## Remote Control Operations

### Main Remote Control Unit

- On the main remote control unit, the display switches according to the device being operated and the mode.
- The mode switches between "DEV1" and "DEV2" each time the "MODE SELECTOR" button is pressed.
- In the "AMP" and "TUNER" modes, when the remote ID is set, the **CP-8** can be used independently even in an environment containing multiple components.
- The device mode "DEV1" or "DEV2" cannot be changed while the setting is being made.
- "HOME" is used to return to the "AMP" mode when in any mode other than AMP.



### Presetting

The main remote control included with the **CP-8** can be preset to operate devices of various brands:

Press the "MODE SELECTOR" button for the device you want to preset. Then press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Finally, using the "NUMBER" keypad, input the 5-digit numeric code of the brand of the component to be preset. The codes can be found in the document titled "Remote Control Preset Codes List", included with the **CP-8**.

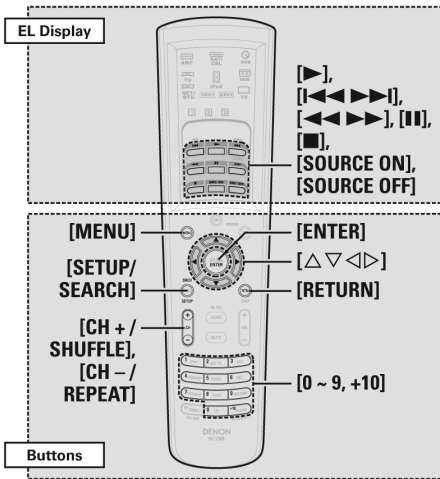
- When the code is registered, the signal transmission indicator flashes twice.
- When the preset code is transmitted, the mode indicator for the component to which that code belongs flashes.
- The input mode is canceled if no button is operated for 10 seconds.
- Some brands have more than one preset code. If the component does not operate, try using a different code.

### Operating Preset Components

Press "MODE SELECTOR" for the component to be operated. The mode indicator of the device to be operated flashes. Operate the component. Refer to the component's operating instructions for details.

# MOON CP-8 Surround Preamp / Processor

## Function of Remote Buttons by Component Type



### Special Remarks:

1. Only one component can be preset for each mode. If a new code is preset, the previous code is automatically cleared.
2. The names of the functions for the DVD remote control buttons differ from brand to brand. Check beforehand.

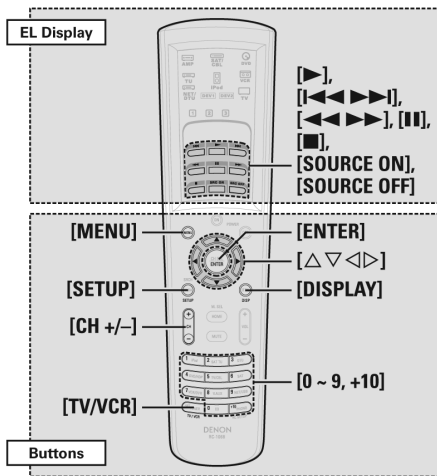
### Notes:

- Preset a DVD player or DVD recorder for the DVD "DEV1" mode. Preset a CD player or CD recorder for the DVD "DEV2" mode.
- Preset a VCR for the VCR "DEV1" mode. Preset a tape deck for the VCR "DEV2" mode.

EL Display						
MODE SELECTOR	DVD				VCR	
Device Mode	DEV1		DEV2		DEV1	DEV2
Device operated	DVD (Default setting)	DVD Recorder	CD (Default setting)	CD Recorder	VCR	TAPE
▶	Playback	Playback	Playback	Playback	Playback	Playback
⏮ ⏭	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)
⏪ ⏩	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)
⏸	Pause	Pause	Pause	Pause	Pause	Pause
■	Stop	Stop	Stop	Stop	Stop	Stop
<b>SOURCE ON</b>	Power on	Power on	–	–	Power on	–
<b>SOURCE OFF</b>	Power off	Power off	–	–	Power off	–
Buttons						
<b>MENU</b>	Menu/guide	Menu/guide	–	–	Menu/guide	–
△ ▽ ◀ ▶	Cursor	Cursor	–	–	Cursor	–
<b>ENTER</b>	Enter setting	Enter setting	–	–	Enter setting	–
<b>SETUP/SEARCH</b>	Set up	Set up	–	–	Set up	–
<b>RETURN</b>	Return	Return	–	–	Cancel	–
<b>CH + / SHUFFLE</b>	–	–	–	–	Switch channels	–
<b>CH - / REPEAT</b>	–	–	–	–	Switch channels	–
<b>0 ~ 9, +10</b>	Select track	Select track	Select track	Select track	–	–
<b>Special Remarks</b>	①, ②		①		①	①

# MOON CP-8 Surround Preamplifier / Processor

## Function of Remote Buttons by Component Type (cont'd)



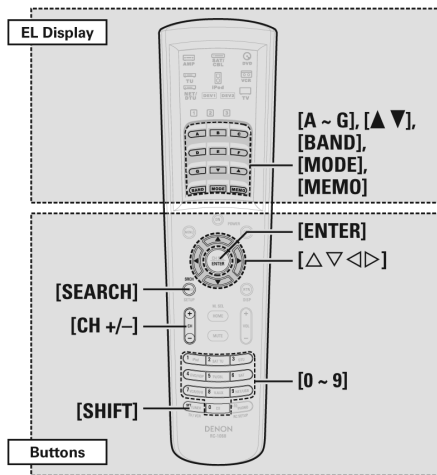
### Special Remarks:

1. Only one component can be preset for each mode. If a new code is preset, the previous code is automatically cleared.
3. The CD, VCR or DVD buttons (one only set) can be assigned to the monitor, satellite receiver and cable TV (see page 63 "Punch Through Function").

EL Display				
MODE SELECTOR	TV		Satellite Receiver / Cable TV	
Device Mode	DEV1	DEV2	DEV1	DEV2
Device operated	TV (HITACHI)	TV (SONY)	SAT	SAT
▶	Punch through	Punch through	Punch through	Punch through
◀▶▶▶				
▶▶▶▶				
■				
<b>SOURCE ON</b>	Power on	Power on	Power on	Power on
<b>SOURCE OFF</b>	Power off	Power off	Power off	Power off
Buttons				
<b>MENU</b>	Menu/guide	Menu/guide	Menu/guide	Menu/guide
△ ▽ ◀ ▶	Cursor	Cursor	Cursor	Cursor
<b>ENTER</b>	Enter setting	Enter setting	Enter setting	Enter setting
<b>SETUP</b>	Set up	Set up	Set up	Set up
<b>DISPLAY</b>	Display	Display	Display	Display
<b>CH +/-</b>	Switch channels	Switch channels	Switch channels	Switch channels
<b>0 ~ 9, +10</b>	Channel selection	Channel selection	Channel selection	Channel selection
<b>TV/VCR</b>	Switch inputs	Switch inputs	-	-
<b>Special Remarks</b>	①, ③	①, ③	①, ③	①, ③

# MOON CP-8 Surround Preamplifier / Processor

## Function of Remote Buttons by Component Type (cont'd)

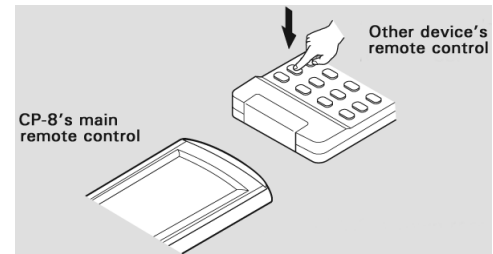


EL Display			
MODE SELECTOR	SAT TU		NET/TU
Device Mode	DEV1	DEV2	DEV2
Device operated	SIRIUS	XM	Analog tuner
A ~ G	Preset memory block selection	Preset memory block selection	Preset memory block selection
▲ ▼	Channel selection	Channel selection	Tuning + / -
BAND	-	-	AM/FM switching
MODE	-	-	Switch search modes
MEMO	Preset memory registration	Preset memory registration	Preset memory registration
Buttons			
Δ ▽ < ▷	Category search	Category search	Direct Frequency Tuning
ENTER	To parental lock password check screen (press and hold)	-	-
SEARCH	Direct search	Direct search	Direct Frequency Tuning
CH +/-	Preset channel selection	Preset channel selection	Preset channel selection
1 ~ 8	Preset channel selection (1 ~ 8) / Direct channel search (0 ~ 9)	Preset channel selection (1 ~ 8) / Direct channel search (0 ~ 9)	Preset channel selection (1 ~ 8) / Direct Frequency Search (0 ~ 9)
SHIFT	Switch memory block	Switch memory block	Switch memory block

## Learning Function

If your AV devices are of a brand other than MOON or if they cannot be operated with the preset memory function, their remote control signals can be transferred to and stored in the **CP-8's** main remote control unit.

- Press the "MODE SELECTOR" button for the device type (VCR, DVD, etc) you want to set.
- Press and hold the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice.
- Press buttons [9] [7] and [5] on the numeric keypad in that order. The signal transmission indicator will flash twice and the learning mode is set.
- Press the button to be set. The main remote control unit's display turns off. If a button that cannot be learned is pressed, the signal transmission indicator lights but the signal is not learned.
- Point the main remote control units directly at each other and press and hold the button on the other device's remote control unit that you want to learn. Once learning is completed normally, the display lights and the signal transmission indicator flashes twice.
  - If you want to learn other buttons, repeat steps 4 and 5.
  - The mode can be switched by pressing the "MODE SELECTOR" button.
  - The signal transmission indicator lights once for a long time if learning was not possible
- Press and hold the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice and the setting is completed.
  - With some remote control units, the signals cannot be learned by the **CP-8** remote control's learning function or the device may not operate properly even when the signals have been learned. In this case, use the device's own remote control unit.
  - Learned buttons have priority over preset memory. If you no longer need a learned setting, reset the learning function (page 68).
  - "HOME" cannot be learned.
  - The "AMP", "ZONE2", "ZONE3", "ZONE4" and "SYSTEM CALL" modes cannot be learned.



# MOON CP-8 Surround Preamp / Processor

## System Call Function

This function lets you register a series of operations at a single button. For example, the amplifier can be turned on, the input source selected, the monitor's power turned on, the source device's power turned on and the play mode set all by pressing a single button. Up to 32 signals each can be registered at "SYSTEM CALL" (1, 2 or 3).

### Registering

Press the "MODE SELECTOR" button for the device you want to register. Press and hold the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Then press buttons [9] [7] and [8] on the numeric keypad in that order. The signal transmission indicator flashes twice and the system call registration mode is set. Press the "SYSTEM CALL" button (1, 2 or 3) at which you want to register the signals. Press the buttons you want to register in the same sequence as the operations you want to perform. The signal transmission indicator lights when a button is pressed.

Example : Press "POWER ON" → Press "MODE SELECTOR" [DVD] → Press ▶

The mode can be switched by pressing "MODE SELECTOR". Perform the registration procedure for all the buttons you want to register. Press and hold in "RC SETUP" for at least 3 seconds. The signal transmission indicator flashes twice and the setting is completed.

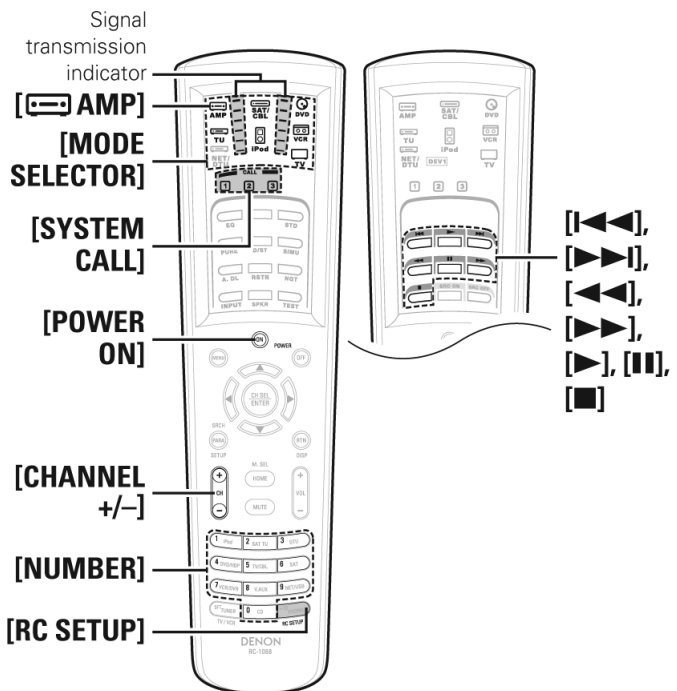
### Calling out

Press "AMP" to select "SYSTEM CALL". Press "SYSTEM CALL" (1, 2 or 3) at which the signals were registered. The registered signals are transmitted in the registered sequence.

## Punch Through Function

CD, DVD or VCR mode buttons can be stored at unused TV or SAT/CBL mode buttons. For example, when DVD mode buttons are assigned to the TV mode, the DVD mode operations can be performed while in the TV mode.

Press the "MODE SELECTOR" button for the device you want to punch through (CD, DVD or VCR). Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Then press [9] [8] and [4] on the numeric keypad in that order. The signal transmission indicator flashes twice and the punch through setting mode is set. Press the button you want to punch through (1, 2, 6, 7, 8, 9 or 3). Press "MODE SELECTOR" for the device you want to punch through (TV or SAT/CBL). Press and hold in "RC SETUP" for at least 3 seconds. The signal transmission indicator flashes twice and the setting is completed.



# MOON CP-8 Surround Preamplifier / Processor

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## Setting the Time the Backlight Stays Lit

Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Then press [9] [8] and [4] on the numeric keypad in that order. The signal transmission indicator flashes twice and the backlight on time setting mode is set. Set the light on time. The signal transmission indicator flashes twice. Settable times are as follows:

- [1] 5 sec.
- [2] 10 sec. (Default)
- [3] 15 sec.
- [4] 20 sec.
- [5] 25 sec.

## Adjusting the Backlight's Brightness

Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press the "CHANNEL +" or "CHANNEL -" button. The display gets one step brighter when "+" is pressed. The display gets one step darker when "-" is pressed. Press "RC SETUP" to complete the setting.

## Resetting the Main Remote Control Unit

### Learning Function

To reset button by button, Press the "MODE SELECTOR" button for the device you want to reset. Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press [9] [7] and [6] on the numeric keypad in that order. The signal transmission indicator flashes twice. Press the button you want to reset twice. The signal transmission indicator flashes twice. To reset by device mode, Press the "MODE SELECTOR" button for the device you want to reset. Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press [9] [7] and [6] on the numeric keypad in that order. The signal transmission indicator flashes twice. Press the "MODE SELECTOR" button for the device you want to reset twice. The signal transmission indicator flashes twice.

### System call function

Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press [9] [7] and [8] on the numeric keypad in that order. The signal transmission indicator flashes twice. Press the "SYSTEM CALL" (1, 2 or 3) you want to reset. Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice.

### Punch-through function

Press the "MODE SELECTOR" button for the device you want to reset (TV or SAT/CBL). Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press [9] [8] and [4] on the numeric keypad in that order. The signal transmission indicator flashes twice. Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice.

### All settings

Press and hold in the "RC SETUP" button for at least 3 seconds. The signal transmission indicator flashes twice. Press [9] [8] and [4] on the numeric keypad in that order. The signal transmission indicator flashes 4 times. All the settings are restored to their defaults.

# MOON CP-8 Surround Preamplifier / Processor

## Amplifier Assign / Multi-zone Connections and Operations

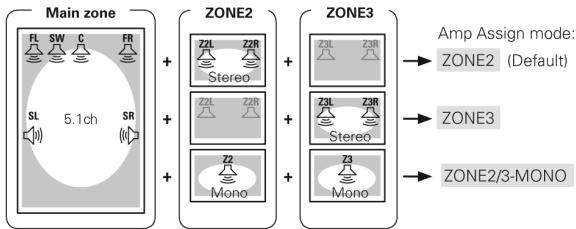
### Multi-zone Settings with the Amp Assign Function

The “amp assign” function lets you assign the analog outputs for the different channels built into the **CP-8** to the outputs for the different zones. Select the desired playback environment from among “Setting 1” to “Setting 3”, then set the corresponding “Amp Assign” mode at MENU “Manual Setup” – “Option Setup” – “Amp Assign” (page 38). Connect the analog outputs as described at “Amp Assign mode settings.”

#### Setting 1: Multi-zone playback

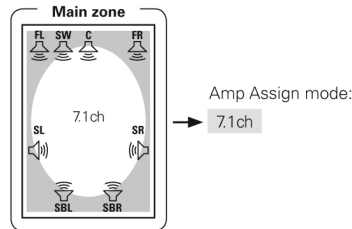
5.1-channel playback + ZONE2 or ZONE3 stereo playback OR 5.1-channel playback + ZONE2 + ZONE3 monaural playback. The “Stereo” or “Mono” depends on setting at menu “Manual Setup” – “(select zone)” – “Zone Setup” – “Channel” (page 37).

In essence, this feature allows you to assign the 2 surround back channel outputs to either Zone-2 or Zone-3 (for stereo playback in one zone only) or for monaural playback in both zones simultaneously.



Amp Assign mode	FRONT		CENTER	SURR		SURR. BACK / AMP ASSIGN	
	R	L		R	L	R	L
ZONE2						Z2R	Z2L
ZONE3	FR	FL	C	SR	SL	Z3R	Z3L
ZONE2/3-MONO						Z3 (MONO)	Z2 (MONO)

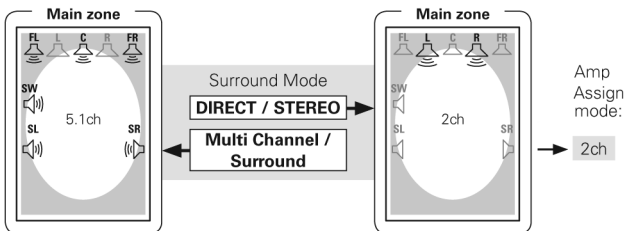
#### Setting 2: 7.1-channel playback



Amp Assign mode	FRONT		CENTER	SURR		SURR. BACK / AMP ASSIGN	
	R	L		R	L	R	L
7.1ch	FR	FL	C	SR	SL	SBR	SBL

#### Setting 3: 5.1-channel playback / 2-channel playback

Surround Mode switching; With this setting it is possible to switch between the following two playback modes.



Amp Assign mode	FRONT		CENTER	SURR		SURR. BACK / AMP ASSIGN	
	R	L		R	L	R	L
2ch	FR	FL	C	SR	SL	FR	FL

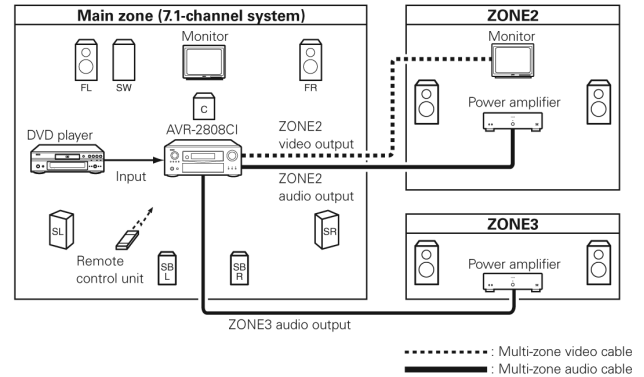
# MOON CP-8 Surround Preamplifier / Processor

## Multi-zone Settings and Operations with Zone Pre-out Output

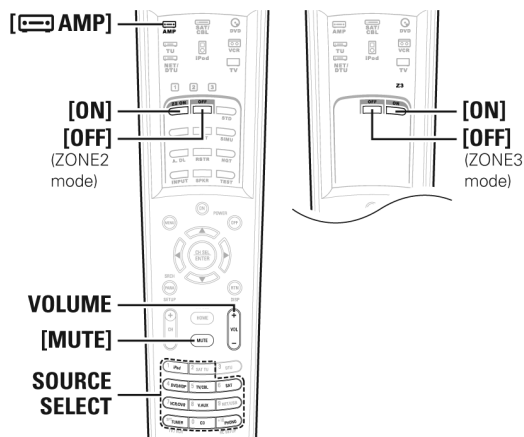
Prepare power amplifiers for ZONE2 and ZONE3.

	Connectors for audio output	Audio signals	Connectors for video output
ZONE2	ZONE2 PRE OUT	Stereo	ZONE2 VIDEO OUT
ZONE3	ZONE3 PRE OUT	Stereo	-

- When only using one speaker for ZONE2 or ZONE3, set to "Mono". In this case, the ZONE2 (ZONE3) monaural output is output from the ZONE2 (ZONE3) pre-out L and R connectors, so connect as desired.



## Multi-zone Operations



### Turning the Power On and Off

Press the "Zone 2" or "Zone 3" button located on **CP-8's** hidden front control panel for the zone to be operated. When the power turns on, the multi-zone indicator "Z2" or "Z3" lights on the front panel display. Using the main remote control press "ON" or "OFF" in the zone mode you want to operate.

### Selecting the Input Source

On the **CP-8's** front panel, press "Zone 2/3" to select the zone to be adjusted. Then rotate the "Selector" knob to choose the source. Using the main remote control press "Source Select" In the zone mode you want to operate.

### Adjusting the Volume

On the **CP-8's** front panel, press "Zone 2/3" to select the zone to be adjusted. Then rotate the master "Volume" knob. Using the main remote control in the zone mode you want to adjust, press the "+ Volume -" button. The volume can be adjusted when MENU "Manual Setup" - "Zone Setup" - "(select the zone)" - "Volume Level" is set to "VAR". The volume can be increased up to the value set at menu "Manual Setup" - "Zone Setup" - "(select the zone)" - "Volume Limit" (page 37).

### Turning off the Sound Temporarily

In the zone mode for which you want to mute the sound, press the "MUTE" button the main remote control. The sound is reduced to the level set at MENU "Manual Setup" - "Zone Setup" - "(select the zone)" - "Mute Level" (page 38). To cancel, either adjust the volume or press "MUTE" again. The setting is canceled when the zone's power is turned off. The source selected for ZONE2 is also output from the recording output connectors.

- When the input source to which the digital input connectors (OPTICAL/COAXIAL) are assigned is selected in ZONE2 or ZONE3, playback is only possible if the digital signal being input is in PCM (2-channel) format.
- Digital audio signals input from the HDMI connectors cannot be played in multi-zone.
- When certain digital signals are being input, noise may be output from the ZONE2 and ZONE3 audio output connectors.

# MOON CP-8 Surround Preamplifier / Processor

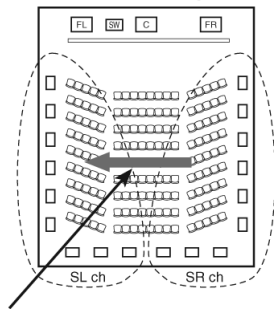
## Other Information

### Speaker Installation

#### Surround back speakers

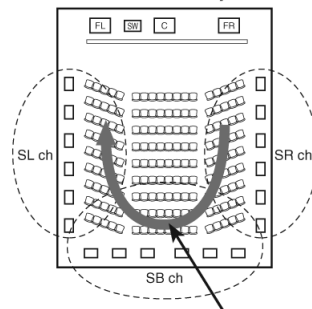
Because consumer electronics devices are using increasingly complex digital signal processing to enhance the clarity and detail of the content, synchronization of video and audio in user devices has become a greater challenge and could potentially require complex enduser adjustments. HDMI 1.3 incorporates an automatic video/audio syncing capability that allows devices to perform this synchronization automatically with full accuracy. In addition to sources recorded in 6.1-channels, the surround effect of conventional 2 to 5.1-channel sources can also be enhanced.

Change of positioning and acoustic image with 5.1-channel systems



Movement of acoustic image from SR to SL

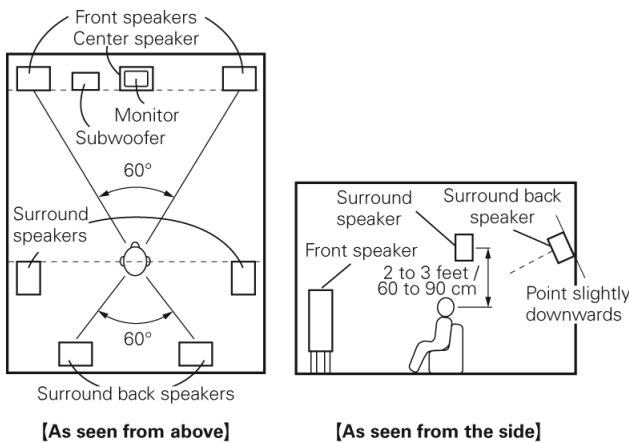
Change of positioning and acoustic image with 6.1-channel systems



Movement of acoustic image from SR to SB to SL

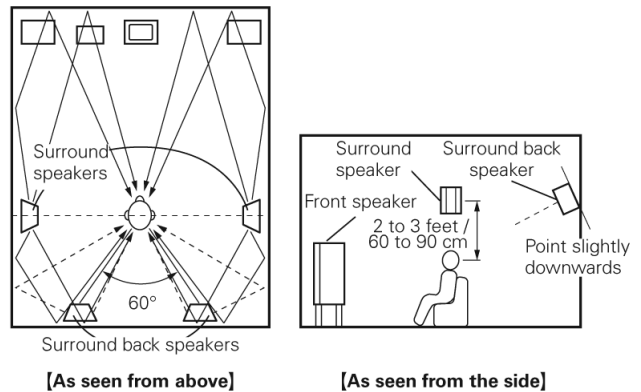
**Examples of speaker layouts** How to setup your speakers according to their type and how you want to use them:

**(1) When using surround back speaker(s):**



When mainly playing movies and your surround speakers are single or 2-way speakers, this is the recommended setup.

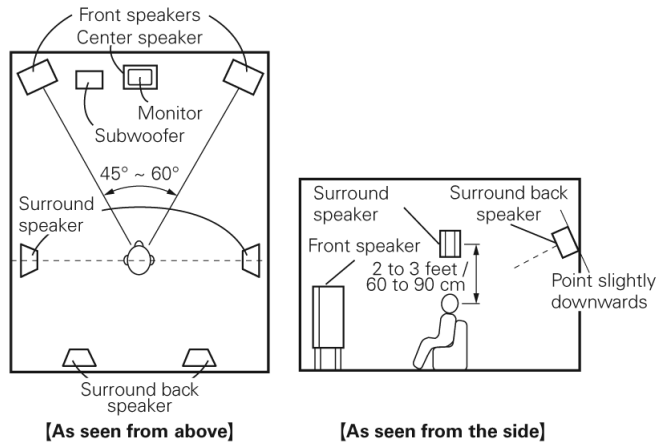
Path of the surround sound from the speakers to the listening position



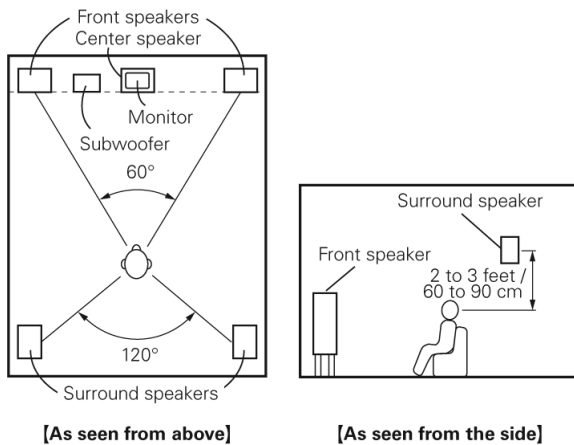
When mainly playing movies and your surround speakers are diffusion type this is the recommended setup. For the greatest sense of surround sound envelopment, diffuse radiation speakers such as bipolar types, or dipolar types, provide a wider dispersion than is possible to obtain from a direct radiating speaker (monopolar). Place these speakers at either side of the prime listening position, mounted above ear level.

# MOON CP-8 Surround Preamp / Processor

When playing movies and music and your surround speakers are diffusion type this is the recommended setup.



## (2) When NOT using surround back speaker(s):



## Surround Modes

The **CP-8** is equipped with a digital signal processing circuit that lets you play program sources in the surround mode to achieve the same sense of presence as in a movie theater.

### Dolby Surround

**Dolby Digital** is a multichannel digital signal format developed by Dolby Laboratories. A total of 5.1-channels are played: 3 front channels ("FL", "FR" and "C"), 2 surround channels ("SL" and "SR") and the "LFE" channel for low frequencies. Because of this, there is no crosstalk between channels and a realistic sound field with a "three-dimensional" feeling (sense of distance, movement and positioning) is achieved. A real, overpowering sense of presence is achieved when playing movie sources in AV rooms as well.

**Dolby Digital Plus** is an improved Dolby Digital signal format that is compatible with up to 7.1-channels of discrete digital sound and also improves sound quality thanks to extra data bit rate performance. It is upwardly compatible with conventional Dolby Digital, so it offers greater flexibility in response to the source signal and the conditions of the playback equipment.

## **MOON CP-8 Surround Preamplifier / Processor**

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**Dolby TrueHD** is a high definition audio technology developed by Dolby Laboratories, using lossless coding technology to faithfully reproduce the sound of the studio master. This format is compatible with a maximum sampling frequency of 96 kHz and up to 7.1-channels, so it is used for applications particularly prioritizing sound quality.

**Dolby Pro Logic II** is a matrix decoding technology developed by Dolby Laboratories. Regular music such as that on CDs is encoded into 5-channels to achieve an excellent surround effect. The surround channel signals are converted into stereo and full band signals (with a frequency response of 20Hz to 20kHz or greater) to create a "three-dimensional" sound image offering a rich sense of presence for all stereo sources.

**Dolby Pro Logic IIx** is a further improved version of the Dolby Pro Logic II matrix decoding technology. Audio signals recorded in 2-channels are decoded to achieve a natural sound with up to 7.1-channels. There are 3 modes: "Music" suited for playing music, "Cinema" suited for playing movies, and "Game" which is optimized for playing games.

### **DTS Surround**

**DTS Digital Surround** is the standard digital surround format of DTS, Inc., compatible with a sampling frequency of 44.1 or 48kHz and up to 5.1-channels of digital discrete surround sound.

**DTS-HD High Resolution Audio** is an improved version of the conventional DTS, DTS-ES and DTS 96/24 signals formats, compatible with sampling frequencies of 96 or 48kHz and up to 7.1-channels of discrete digital sound. High data bit rate performance provides high quality sound. This format is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

**DTS-HD Master Audio** is DTS, Inc's lossless audio format compatible with up to 96kHz/7.1-channels. The lossless audio coding technology faithfully reproduces the sound of the studio master. It is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

**DTS-ES™ Discrete 6.1** is a 6.1-channel discrete digital audio format adding a surround back (SB) channel to the DTS digital surround sound. Decoding of conventional 5.1-channel audio signals is also possible according to the decoder.

**DTS-ES™ Matrix 6.1** is a 6.1-channel discrete digital audio format inserting a surround back (SB) channel to the DTS digital surround sound through matrix encoding. Decoding of conventional 5.1-channel audio signals is also possible according to the decoder.

**DTS NEO:6™ Surround** is a matrix decoding technology for achieving 6.1- channel surround playback with 2-channel sources. It includes "DTS NEO:6 CINEMA" suited for playing movies and "DTS NEO:6 MUSIC" suited for playing music.

**DTS 96/24** DTS 96/24 is a digital audio format enabling high sound quality playback in 5.1-channels with a sampling frequency of 96 kHz and 24 bit quantization on DVD-Video.

### **Audyssey MultEQ XT**

Audyssey MultEQ XT is a technology designed to provide the optimum listening environment for multiple listeners within the listening area. Test data collected from multiple listening points is analyzed comprehensively and equalization that improves the sound quality for the entire listening area is performed. Audyssey MultEQ XT not only corrects frequency response problems in large listening areas, it also fully automates the surround system setup. For a detailed description, refer to the "Auto Setup" section (page 29)

Note: Audyssey MultEQ XT is a trademark of Audyssey Laboratories. It is licensed under US and National Patent Applications 20030235318 and 10/700,220. Additional U.S. and Foreign Patents pending. MultEQ and the Audyssey MultEQ logo are trademarks of Audyssey Laboratories, Inc.. All rights reserved.

# MOON CP-8 Surround Preamplifier / Processor

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## **HDMI (High-Definition Multimedia Interface)**

HDMI is a digital interface standard for next generation TVs based on DVI (Digital Visual Interface) standards and optimized for use in consumer equipment. Non-compressed digital video and multi-channel audio signals are transmitted with a single connection. HDMI is also compatible with HDCP (High-bandwidth Digital Contents Protection), a technology for protecting copyrights that encrypts digital video signals in the same way as with DVI.

**Deep Color** eliminates on-screen color banding, for smooth tonal transitions and subtle gradations between colors. Enables increased contrast ratio. Can represent many times more shades of gray between black and white. At 30-bit pixel depth, a four times improvement would be the minimum, and the typical improvement would be eight times or more.

Next-generation "xvYCC" color space supports 1.8 times as many colors as existing HDTV signals. Lets HDTVs display colors more accurately. Enables displays with natural, vivid colors.

**Lip Sync:** Because consumer electronics devices are using increasingly complex digital signal processing to enhance the clarity and detail of the content, synchronization of video and audio in user devices has become a greater challenge and could potentially require complex enduser adjustments. HDMI 1.3 incorporates an automatic video/audio syncing capability that allows devices to perform this synchronization automatically with total accuracy.

## **Surround Modes and Parameters**

Please refer to the charts included in the document entitled "Surround Modes & Parameters" for a detailed breakdown of the relationship between surround modes and **CP-8's** parameter adjustments.

## **Relationship Between Video Signals and Monitor Output**

Please refer to the charts included in the document entitled "Video Signals & Monitor Output" for a detailed breakdown of the relationship between video input signals and **CP-8's** monitor outputs, with and without the video conversion feature.

# MOON CP-8 Surround Preamplifier / Processor

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## Troubleshooting

If a problem should arise, first check the following:

1. Are the connections correct?
2. Is the set being operated as described in the owner's manual?
3. Are the other components operating properly?

If this unit does not operate properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. In this case, disconnect the power cord immediately and contact your retailer.

### General:

Symptom	Cause	Countermeasure
Power does not turn on, or turns off directly after it was turned on.	<ul style="list-style-type: none"> <li>• Connection of the power cord is faulty.</li> </ul>	<ul style="list-style-type: none"> <li>• Check that the power plugs are securely inserted into the CP-8's AC inlets and the wall power outlet.</li> </ul>
No sound is produced from speakers.	<ul style="list-style-type: none"> <li>• Connection with the input devices or connection of the speaker cables is faulty.</li> <li>• Device you want to play and set input source do not match.</li> <li>• Master volume is turned too low.</li> <li>• Mute mode is set.</li> <li>• No digital signals are being input.</li> <li>• The connectors to which the digital inputs are assigned and the settable input modes do not match.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the connections.</li> <li>• Select an appropriate input source.</li> <li>• Adjust the master volume to an appropriate level.</li> <li>• Cancel the mute mode.</li> <li>• Select an input source for which the digital input setting has been made.</li> <li>• Set the input mode.</li> </ul>
Display is off.	<ul style="list-style-type: none"> <li>• The "Dimmer" setting is set to "OFF".</li> <li>• The PURE DIRECT mode is set.</li> </ul>	<ul style="list-style-type: none"> <li>• Set to something other than "OFF".</li> <li>• Set a surround mode other than the PURE DIRECT mode.</li> </ul>
"DOLBY DIGITAL" indicator does not appear on display.	<ul style="list-style-type: none"> <li>• DVD player's digital audio output setting is not proper.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the DVD player's audio output setting. For details, read the DVD player's operating instructions.</li> </ul>
Power turns off suddenly and power indicator flashes red.	<ul style="list-style-type: none"> <li>• Protection circuit activated due to rise of internal temperature.</li> <li>• Set is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn off the power, wait for the set to fully cool down, then turn the power back on.</li> <li>• Place the set in a well-ventilated place.</li> <li>• Turn off the power</li> </ul>

## MOON CP-8 Surround Preamplifier / Processor

### Remote Control:

Symptom	Cause	Countermeasure
Set does not work properly when remote control unit operated.	<ul style="list-style-type: none"> <li>Batteries are worn.</li> <li>You are operating outside of the specified range.</li> <li>Obstacle between main unit and remote control unit.</li> <li>The batteries are not inserted in the proper direction, as indicated by the polarity marks in the battery compartment.</li> <li>The set's remote control sensor is exposed to strong light (direct sunlight, inverter type fluorescent bulb light, etc.).</li> <li>The remote ID of the main unit and remote control unit do not match.</li> </ul>	<ul style="list-style-type: none"> <li>Replace with new batteries.</li> <li>Operate within the specified range.</li> <li>Remove the obstacle.</li> <li>Insert the batteries in the proper direction, following the polarity marks in the battery compartment.</li> <li>Move the set to a place in which the remote control sensor will not be exposed to strong light.</li> <li>Set the same remote IDs for the main unit and remote control unit.</li> </ul>

### Video:

Symptom	Cause	Countermeasure
No picture appears.	<ul style="list-style-type: none"> <li>The connections between the <b>MOON CP-8</b> and monitor are faulty.</li> <li>The monitor's input setting is wrong.</li> <li>PURE DIRECT mode is set.</li> <li>The player is connected using the component input connectors, the monitor is connected using the video (yellow) or S-Video output connectors.</li> </ul>	<ul style="list-style-type: none"> <li>Check the connections.</li> <li>Set properly.</li> <li>Cancel the PURE DIRECT mode.</li> <li>High definition (1080i/720p) and progressive (480p/576p) video signals are not down-converted. Set the player to interlace (480i/576i) signals.</li> </ul>
No picture appears with HDMI connections.	<ul style="list-style-type: none"> <li>The connections to the HDMI connectors are faulty.</li> <li>HDMI input setting is improper.</li> <li>The monitor is not compatible with copyright protection (HDCP).</li> <li>The HDMI format of the player and monitor do not match.</li> </ul>	<ul style="list-style-type: none"> <li>Check the connections.</li> <li>Check the HDMI input setting.</li> <li>Connect a monitor that is compatible with copyright protection (HDCP).</li> <li>Match the HDMI format of the player and monitor.</li> </ul>
Picture cannot be recorded.	<ul style="list-style-type: none"> <li>Input source does not match recorder's video connection connector (video or S-Video).</li> </ul>	<ul style="list-style-type: none"> <li>The video conversion function does not work for the REC OUT connectors. Match the input source and recorder connections.</li> </ul>
DVDs cannot be copied on a VCR.	-	<ul style="list-style-type: none"> <li>This is not a malfunction. Most movie software includes copy prevention signals and cannot be copied.</li> </ul>

## MOON CP-8 Surround Preamplifier / Processor

### Audio:

Symptom	Cause	Countermeasure
No sound is produced from center speaker.	<ul style="list-style-type: none"> <li>• Monaural source (monitor, AM station, etc.) being played in STANDARD mode.</li> </ul>	<ul style="list-style-type: none"> <li>• The mode is set to something other than "STANDARD".</li> </ul>
No sound is produced from surround speakers.	<ul style="list-style-type: none"> <li>• The surround mode is set to "STEREO", "DIRECT" or "PURE DIRECT".</li> </ul>	<ul style="list-style-type: none"> <li>• Set to a surround playback mode.</li> </ul>
No sound is produced from surround back speaker.	<ul style="list-style-type: none"> <li>• The surround back speaker's power amplifier is assigned to a different channel.</li> <li>• Surround back speaker setting is set to "None".</li> <li>• Surround mode not set to a mode for 6.1- or 7.1-channel playback.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the setting and change it as necessary.</li> <li>• Set to something other than "None".</li> <li>• Select a surround playback mode.</li> </ul>
No sound is produced from subwoofer.	<ul style="list-style-type: none"> <li>• Subwoofer's power not turned on.</li> <li>• The "Subwoofer" setting at "Speaker configuration" is set to "No".</li> <li>• The subwoofer is not properly connected.</li> <li>• The subwoofer's volume is turned off.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn on the subwoofer's power.</li> <li>• Set to "Yes".</li> <li>• Check the connections.</li> <li>• Adjust the subwoofer's volume to an appropriate level.</li> </ul>
No test tones are produced when main remote control unit's <b>TEST TONE</b> button is pressed.	<ul style="list-style-type: none"> <li>• Surround mode not set to "STANDARD".</li> </ul>	<ul style="list-style-type: none"> <li>• Set to the STANDARD mode.</li> </ul>
DTS sound is not output.	<ul style="list-style-type: none"> <li>• DVD player's audio output setting is not set to bitstream.</li> <li>• DVD player is not compatible with DTS sound playback.</li> <li>• The <b>MOON CP-8</b>'s "Decode Mode" setting is set to "PCM".</li> </ul>	<ul style="list-style-type: none"> <li>• Set the DVD player. For details, refer to the DVD player's operating instructions.</li> <li>• Use a DTS-compatible player.</li> <li>• Set to the "Auto" or "DTS" mode.</li> </ul>
HDMI audio signals are not output from speakers.	<ul style="list-style-type: none"> <li>• The "Manual Setup" – "HDMI Setup" – "HDMI Audio Setup" – "HDMI Audio Out" setting is set to "TV".</li> </ul>	<ul style="list-style-type: none"> <li>• Set to "AMP".</li> </ul>
No sound is output from the monitor connected with HDMI connections.	<ul style="list-style-type: none"> <li>• The "Manual Setup" – "HDMI Setup" – "HDMI Audio Setup" – "HDMI Audio Out" setting is set to "AMP".</li> </ul>	<ul style="list-style-type: none"> <li>• Set to "TV".</li> </ul>

# MOON CP-8 Surround Preamp / Processor

## Specifications

### Input Processing:

	Digital Input <sup>1</sup> 2-ch DSD	Digital Input <sup>2</sup> 2-ch DSD	Analog Input	Analog Pass-Through
Frequency Response .....	10Hz – 100kHz.....	4Hz – 100kHz.....	10Hz – 100kHz .....	4Hz – 100kHz
S/N Ratio @ full output.....	> 113dB .....	> 107dB .....	> 103dB .....	> 104dB
Dynamic Range .....	> 113dB .....	> 107dB .....	> 103dB .....	> 107dB
THD.....	< 0.003% .....	< 0.002% .....	< 0.05% .....	< 0.005%
Channel Separation .....	> 109dB .....	> 103dB .....	> 99dB .....	> 112dB

Note 1: EIAJ, A-weighted,  $f_s = 24\text{-bit}/192\text{kHz}$

Note 2: EIAJ, A-weighted,  $f_s = 24\text{-bit}/96\text{kHz}$

### Preamp Audio Section:

#### Measurements

Maximum Overall Gain ..... 10dB  
Volume adjustment ..... 0.5dB increments  
THD (20Hz - 20kHz) ..... < 0.005%  
Frequency response..... 20Hz - 20kHz  $\pm 0.25\text{dB}$   
Signal-to-noise Ratio ..... 102dB @ full output  
Analog input impedance ..... 47k ohms

Analog input sensitivity ..... 200mV - 3.0V rms  
Analog output impedance ..... 50 ohms (RCA) / 100 ohms (XLR)  
Analog output voltage ..... 5 Volts (RCA) / 10 Volts (XLR)  
Digital Input ..... S/PDIF - 75 ohms @ 0.4Vp-p  
Digital Input/Output ..... Optical Toslink - 660nm wavelength

#### Analog Input Connections

7.1 Channel ..... 1 x Single-ended (RCA)  
2 Channel ..... 6 x Single-ended (RCA)  
Auxiliary ..... 1 x Balanced pair (XLR)  
CD (audio only) ..... 1 x Single-ended pair (RCA)  
Phono (audio only) ..... 1 x Single-ended pair (RCA)

#### Analog Output Connections

7.1 Channel.....1 x Balanced (XLR)  
7.1 Channel .....1 x Single-ended (RCA)  
2 Channel - Zone 2 .....1 single-ended pair (RCA)  
2 Channel - Zone 3 .....1 single-ended pair (RCA)

#### Digital Input Connections

Optical ..... 3 x TosLink  
S/PDIF coaxial ..... 3 x RCA

#### Digital Output Connections

Optical .....1 x TosLink

### Video Section:

#### HDMI 1.3a

Number of inputs ..... 4  
Number of outputs ..... 1  
Bandwidth ..... 5Hz - 340MHz +0/-3dB

#### Composite

Number of inputs ..... 6  
Number of outputs ..... 4 (1 x zone 2)  
Level / Impedance ..... 1Vp-p / 75 ohms  
Bandwidth ..... 5Hz - 10MHz +0/-3dB

#### Component

Number of inputs ..... 3  
Number of outputs ..... 1  
Y signal ..... 1.0Vp-p / 75 ohms  
PB/CB signal ..... 0.7Vp-p / 75 ohms  
PR/CR signal ..... 0.7Vp-p / 75 ohms  
Bandwidth ..... 5Hz - 100MHz +0/-3dB

#### S-Video

Number of inputs ..... 6  
Number of outputs ..... 3  
Y signal ..... 1.0Vp-p / 75 ohms  
C signal ..... 0.286Vp-p / 75 ohms  
Bandwidth ..... 5Hz - 10MHz +0/-3dB

# MOON CP-8 Surround Preamplifier / Processor

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## **Tuner Section:**

FM Frequency tuning range ..... 87.5MHz - 107.9MHz  
AM Frequency tuning range ..... 520kHz - 1720kHz  
FM - Usable sensitivity ..... 1.0µV @ 11.2dBf  
AM - Usable sensitivity ..... 18µV  
50dB quieting sensitivity - stereo ..... 23µV @ 38.5dBf  
50dB quieting sensitivity - mono ..... 1.6µV @ 15.3dBf  
Signal-to-noise Ratio - stereo ..... 72dB  
Signal-to-noise Ratio - mono ..... 77dB  
THD @ 1kHz (stereo / mono) ..... 0.3% / 0.15%

## **Phono Section:**

Input sensitivity ..... 2.5mV  
Frequency Response ..... 20Hz - 20kHz (±0.5dB)  
Signal-to-noise Ratio ..... 74dB  
Rated output ..... 150mV  
THD @ 1kHz ..... 0.03%

## **Miscellaneous Information:**

Available Faceplate Finishes ..... Black and Silver  
Remote Controls ..... Full-Function & Basic Function WRM-2  
Display Type ..... VFD (Vacuum Fluorescent Display)  
Power Consumption ..... 30 Watts  
AC Power Requirements ..... 120V / 60Hz and 240V / 50Hz  
Shipping weight ..... 47 lbs / 21 Kg  
Dimensions (W x H x D) ..... 17.4 x 7.75 x 17.34 in. (44.2 x 19.7 x 44.0 cm.)

### Balanced Pin Assignment:

Pin 1..... Ground  
Pin 2..... Positive  
Pin 3..... Negative

**NOTE:** In the event that you require the RS-232 codes for your **MOON CP-8**, please contact Simaudio Ltd. directly by either email ([service@simaudio.com](mailto:service@simaudio.com)) or toll-free telephone (877-980-2400).



Fuse Replacement:      120V - 4A Short Fast blow (5 x 20mm size).  
   230V - 2A Short Fast blow (5 x 20mm size).