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C12000 Controller
& C12000 Preamplifier
Owner's Manual





The lightning flash with arrowhead, 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.

WARNING - TO REDUCE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

IMPORTANT SAFETY INSTRUCTIONS!

PLEASE READ THEM BEFORE OPERATING THIS EQUIPMENT.

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 any 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 other apparatus (including amplifiers) that produce 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 are provided for your safety. If the provided plug does not fit into your 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/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.



ATTENTION:

RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

**NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING
TO QUALIFIED PERSONNEL.**

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
Ne pas exposer cet appareil à des éclaboussures ou gouttelettes d'un liquide. Aucun objet remplie de liquide comme par exemple un vase ne doit être placé sur l'appareil.
15. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
Ne pas exposer cet appareil à des éclaboussures ou gouttelettes d'un liquide. Aucun objet remplie de liquide comme par exemple un vase ne doit être placé sur l'appareil.
16. If this equipment is supplied with a power supply cord only, the mains plug of the power supply cord shall remain readily operable. To completely disconnect this equipment from the a.c. mains remove the plug from the a.c. receptacle.
Si l'équipement est uniquement alimenté par un cordon d'alimentation, la fiche du cordon d'alimentation doit demeurer aisément accessible. Pour déconnecter complètement l'équipement du réseau d'alimentation, déconnecter la fiche du cordon d'alimentation de la prise murale.
17. If this equipment is supplied with AC /DC Adapter with separate power supply cord or the AC/DC Adapter plugging directly into an a.c. receptacle, they shall remain readily operable. To completely disconnect this equipment from the a.c. mains remove the AC /DC Adapter mains power supply cord from the a.c. receptacle or remove the AC /DC Adapter when it is directly plugged into the a.c. receptacle.
Si l'équipement est alimenté par un adaptateur AC/DC muni d'un cordon d'alimentation ou un adaptateur AC/DC qui est alimenté directement à la prise murale, ils doivent demeurer aisément accessibles. Pour déconnecter complètement l'équipement du réseau d'alimentation, déconnecter l'adaptateur AC/DC de la prise murale ou

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.

To prevent the risk of electric shock, do not remove cover or back. No user-serviceable parts inside.

déconnecter le cordon d'alimentation de l'adaptateur AC/DC de la prise murale.

18. **WARNING:** Do not expose batteries or battery pack to excessive heat such as sunshine, fire or the like.
AVERTISSEMENT: Les batteries ou bloc de batteries ne doivent pas être exposées à une chaleur excessive telle que celle du soleil, feu ou autre source de chaleur similaire.
19. **CAUTION:** danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
ATTENTION: danger d'explosion si la pile n'est pas remplacée correctement. Ne remplacer que par le même type ou un type équivalent.
20. Connect mains power supply cord only to a mains socket outlet with a protective earthing connection.
21. **WARNING:** The Ethernet connector of this equipment must not be directly connected to a public network. Connection is to be made only by way of a modem or router approved for this purpose.

WARNING

The McIntosh C12000 is a two chassis design, with separate Preamplifier and Controller chassis. There are custom interconnecting cables and custom chassis sockets used to connect the two chassis together.

Use ONLY the custom interconnect cables supplied with the C12000 to connect the chassis together.

Do NOT connect the C12000 Left and Right 25-Pin Chassis Sockets to any other component.

Failure to observe this warning will result in damage to the components connected.

Thank You from all of us at McIntosh

You have invested in a precision instrument that will provide you with many years of enjoyment. Please take a few moments to familiarize yourself with the features and instructions to get the maximum performance from your equipment. If you need further technical assistance, please contact your dealer who may be more familiar with your particular setup including other brands. You can also contact McIntosh with additional questions or in the unlikely event of needing service.

McIntosh Laboratory, Inc.

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Technical Assistance (607) 723-3512
Fax (607) 724-0549

Customer Service (607) 723-3515
Fax (607) 723-1917

Email support@mcintoshlabs.com

Website www.mcintoshlabs.com

Please Take A Moment

For future reference, you can write down your serial number and purchase information here. We can identify your purchase from this information if the occasion should arise:

Serial Number: _____

Purchase Date: _____

Dealer Name: _____

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General Information

1. The C12000 System consists of two separate chassis; a "Controller" and a "Preamplifier". When specific clarification is necessary for instruction, the separate chassis will be referenced individually with their corresponding names. Otherwise, "C12000" will be used to reference the unit as a whole.
2. For additional connection information, refer to the owner's manual(s) for any component(s) connected to the C12000 Audio Preamplifier.
3. The Main AC Power going to the C12000 and any other McIntosh Component(s) should not be applied until all the system components are connected together. Failure to do so could result in malfunctioning of some or all of the system's normal operations. When the C12000 and other McIntosh Components are in their Standby Power Off Mode, the Microprocessor's Circuitry inside each component is active and communication is occurring between them.
4. Balanced and Unbalanced Inputs and Outputs can be mixed. For example, you may connect signal sources to Unbalanced Inputs and send signals from the Balanced Outputs. You can also use Balanced and Unbalanced Outputs simultaneously, connected to different Power Amplifiers.
5. Sound Intensity is measured in units called Decibels and "dB" is the abbreviation.
6. The McIntosh C12000 is factory configured for immediate use. It can also be customized to complement the components making up your system. Refer to the C12000 "Setup Mode" starting on Page 20 for additional information.
7. The Remote Control Supplied with the C12000 is capable of operating other components. For additional information go to www.mcintoshlabs.com.

8. The IR Input, with a 3.5mm mini phone jack, is configured for non-McIntosh IR sensors such as a Xantech Model HL85BK Kit. Use a Connection Block such as a Xantech Model ZC21 when two or more IR sensors need to be connected to the C12000. The signal from a connected External IR Sensor will have priority over the signal from the Front Panel IR Sensor.
9. Controller to Preamplifier Cable Part No. 171872 is three foot, shielded 23 conductor, male-to-female custom cable. Two cables are required between Controller and Preamplifier.
Do not use any other cable when connecting the C12000 Controller to the C12000 Preamplifier.
10. When discarding the unit, comply with local rules or regulations. Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal.
11. For additional information on the C12000 and other McIntosh Products please visit the McIntosh Web Site at www.mcintoshlabs.com.

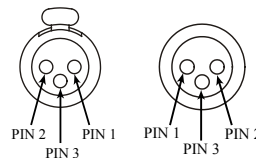


Connector and Cable Information

XLR Connectors

Below is the Pin configuration for the XLR Balanced Input and Output Connectors on the C12000. Refer to the diagrams for connections:

- PIN 1: Shield/Ground
PIN 2: + Output
PIN 3: - Output

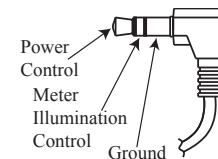


Power Control and Trigger Connectors

The C12000 Power Control Out, Trigger and PASSTHRU Output Jacks send Power On/Off Signals (+12 volt/0 volt) when connected to other McIntosh

Components. An additional connection is for controlling the illumination of the Power Output Meters on McIntosh Power Amplifiers. A 3.5mm stereo mini phone plug is used for connection to the Power Control, Trigger and PASSTHRU Outputs on the C12000.

Main, Triggers 1-4 and PASSTHRU



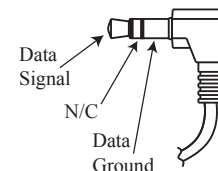
Note: The Power Control, Trigger, PASSTHRU and Data Connecting Cable is available from the McIntosh Parts Department:

Power Control, Trigger, PASSTHRU and Data Cable Part No. 170202

Six foot, shielded 2 conductor, with 3.5mm stereo mini phone plugs on each end.

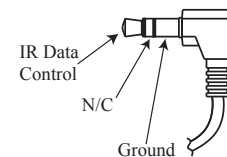
Data Port Connectors

The C12000 Data Out Ports send Remote Control Signals to Source Components. A 3.5mm stereo mini phone plug is used for connection.



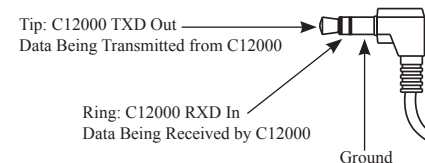
IR IN Port Connectors

The IR IN Port also uses a 3.5mm stereo mini phone plug and allows the connection of other brand IR Receivers to the C12000.



RS232 Port Connector

The RS232 Port uses a 3.5mm stereo mini phone plug to connect to external third-party controllers.



Introduction

The McIntosh C12000 Preamplifier is one of the finest ever created. The Outputs have the ability to drive multiple Power Amplifiers with the versatility of choosing between any combination of Solid State and Tube amplification. The C12000 Audio Reproduction is sonically transparent and absolutely accurate. The McIntosh Sound is "The Sound of the Music Itself."

Performance Features

Dual Chassis with Dual Mono Design - The Dual Chassis design completely separates all power supply, microprocessor and control circuits from the pure audio circuits for total noise isolation. To further aid in channel isolation, the circuitry for both channels is totally separate, physically isolated and shielded; and incorporates two identical power supplies one for each channel, to help assure total channel isolation.

Vacuum Tube Phono Amplification - The C12000 utilizes Vacuum Tube Amplification Circuitry for the Phono Inputs. The circuits use the latest designs providing the lowest possible noise and distortion.

Selectable High-Level Amplification - The C12000 has the Output 1 and Output 2 ports dedicated to Solid State Amplification and Tube Amplification respectively. Combined with the ability to assign the Main Output to either use Solid State or Tube via the Trim Menu (refer to Page 29), the C12000 is equipped to deliver high performance in any environment for any preference.

Fully Balanced Circuitry - The C12000 utilizes the very latest in Fully Balanced Circuitry from the Input Connectors all the way to the Output Connectors for the lowest possible noise and distortion.

Phono Inputs - The C12000 has two precision Phono Preamplifier Circuits. They have the ability to be configured for Moving Coil or Moving Magnet Cartridges. The close tolerance resistors and

capacitors used in the RIAA Correction Equalization Circuitry provide an extremely flat frequency response.

Selectable Phono Cartridge Loading - Adjustable Capacitance and Resistance Loading are available for both Moving Coil and Moving Magnet Phono Cartridges. Resistance Loading is selectable from values of 25 ohms to 47,000 ohms. Capacitance Loading is selectable from values of 50 picofarads to 400 picofarads.

Adjustable Gain for Phono Inputs - The C12000's Phono Inputs have a wide range of gain settings to accommodate a variety of Phono Cartridges.

Illuminated Output Meters - The Illuminated Output Meters are peak responding, and indicate the output of the C12000 Phono Preamplifier.

Electromagnetic Input Switching with Level Trim Adjustment - Digital Logic integrated circuits drive Electromagnetic Switches on all Inputs and operating functions for reliable, noiseless, distortion free switching. All the Inputs on the C12000 can be matched in level, so there are no abrupt changes in volume levels between the different Inputs.

Balanced Inputs - The Balanced Inputs allow the connection of a source component using long cable lengths without a loss in sound quality.

Precision Tracking Volume Control - Volume levels are controlled by a Precision Balanced Digitally Controlled Attenuator System with an Optical Encoder Rotary Control. This assures a 0.1dB tracking accuracy between channels. There are 214 individual 0.5dB volume level steps with no noise as the volume level is changed.

Variable Rate Volume and Balance Controls - The C12000's Volume and Balance Control Circuitry provides an ideal rate of change with control rotation.

HXD® for Headphones - The C12000 Headphone Crossfeed Director Circuitry (HXD®) improves the

sound localization for Headphone Listening. HXD® restores the directionality component of the spatial sound stage normally heard with Loudspeaker listening. HXD® is a registered trademark of McIntosh Laboratory, Inc.

Alphanumeric Fluorescent Display - The Front Panel Information Display indicates the Source Selection, Volume/Balance Levels and Setup Mode Selections. The display intensity is adjustable.

PASSTHRU Mode - The Automatic PASSTHRU Mode allows the C12000 to become part of a Home Theater Multichannel Sound System.

Remote Control with External Sensor Input - The Remote Control provides control of the C12000 operating functions and McIntosh Source Components connected to it. Enjoy your McIntosh System from another room in your home by connecting an external sensor.

Power Control Output and Trigger Assignment - A Power Control connection for convenient Turn-On of McIntosh Power Amplifiers, Source Components and Accessories is included. The Power Control Trigger Outputs may be assigned to activate when a given Input/Output is selected.

Dual Special Power Supply - Two fully separate and regulated Power Supplies with special R-Core Power Transformers ensure stable noise free operation even though the power line varies.

LED Front Panel Illumination - The even Illumination of the Front Panel is accomplished by multiple extra long life Light Emitting Diodes (LEDs) arranged with a special orientation.

Glass Front Panel and Super Mirror Chassis

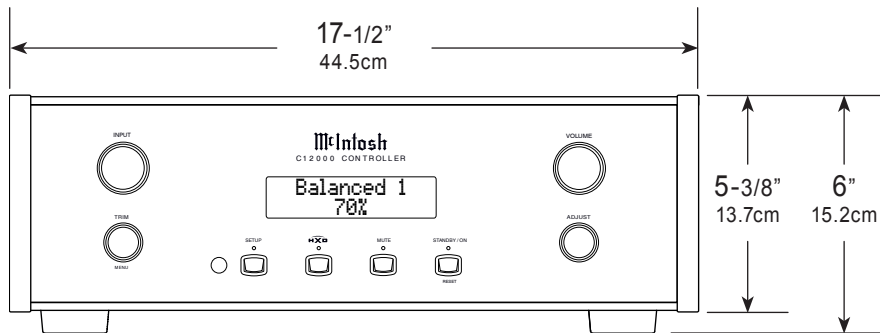
Finish - The famous McIntosh Illuminated Glass Front Panel and the Lower Chassis are Stainless Steel with a Mirror Finish. The Upper Chassis and Top Cover is hairline brushed black Titanium Stainless Steel Finish. This will ensure the pristine beauty of the C12000 will be retained for many years to come.



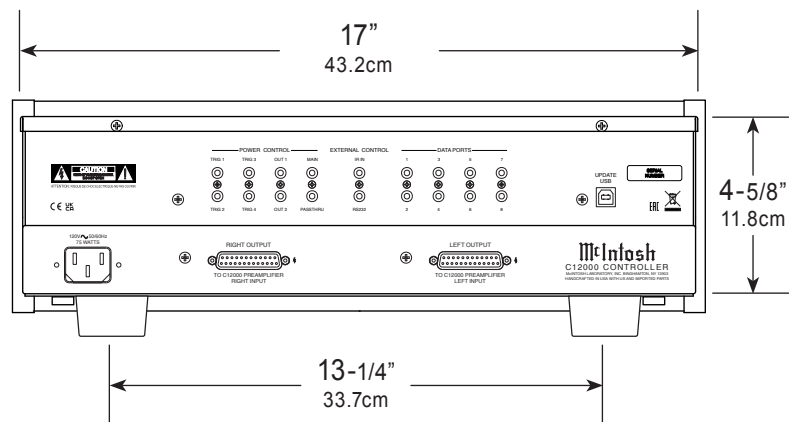
Dimensions - C12000 Controller

The following dimensions can assist in determining the best location for your C12000 Controller.
There is additional information on the next page pertaining to installing the C12000 Controller into cabinets.

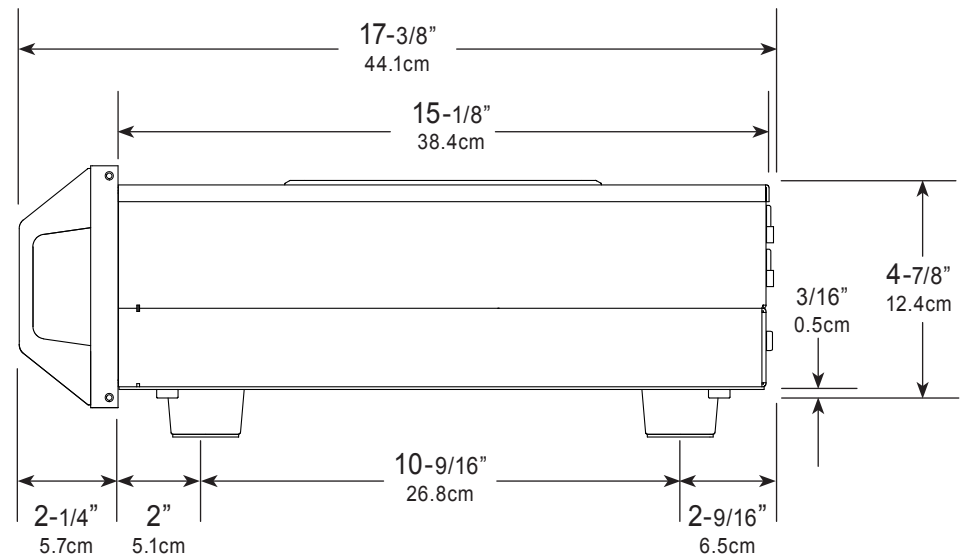
Front View of the C12000 Controller



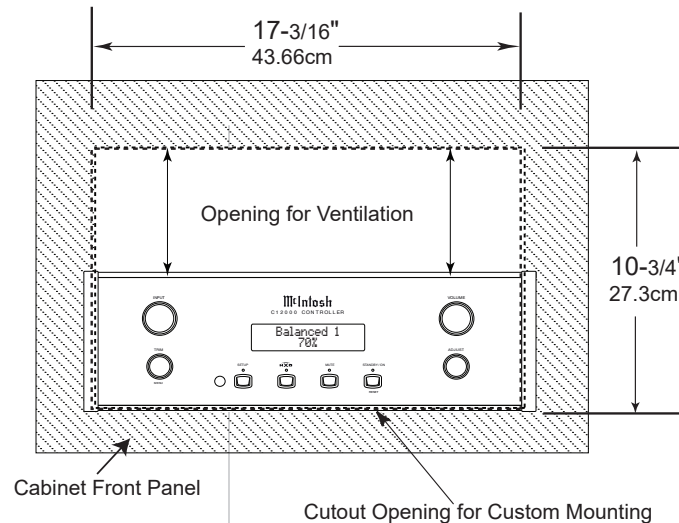
Rear View of the C12000 Controller



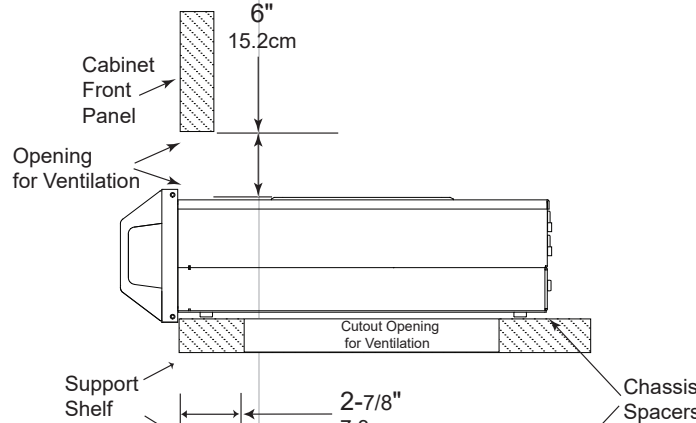
Side View of the C12000 Controller



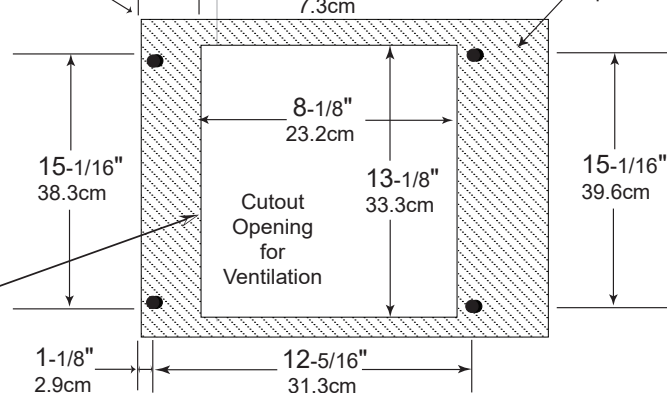
**C12000 Controller
Front Panel
Custom Cabinet Cutout**



**C12000 Controller
Side View
in Custom Cabinet**



**C12000 Controller
Bottom View
in Custom Cabinet**



Note: Center the cutout Horizontally on the unit. For purposes of clarity, the above illustration is not drawn to scale.

Installation - C12000 Controller

The C12000 Controller can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in a piece of furniture or cabinet of your choice. The four feet may be removed from the bottom of the unit when it is custom installed as outlined below. The four feet together with the mounting screws should be retained for possible future use if the C12000 Controller is removed from the custom installation and used free standing. The required panel cutout, ventilation cutout and unit dimensions are shown.

Always provide adequate ventilation for your C12000 Controller. Cool operation ensures the longest possible operating life for any electronic instrument. Do not install the Controller directly above a heat generating component such as a high powered amplifier. Also do not stack the C12000 Preamplifier on top of the C12000 Controller. If all the components are installed in a single cabinet, a quiet running ventilation fan can be a definite asset in maintaining all the system components at the coolest possible operating temperature.

A custom cabinet installation should provide the following minimum spacing dimensions for cool operation.

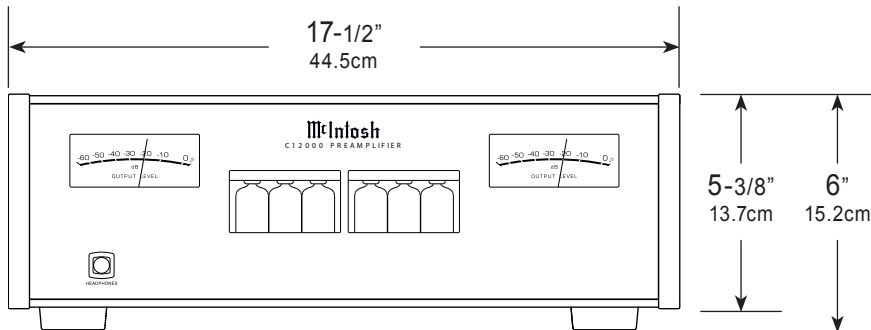
Allow at least 6 inches (15.2cm) above the top, 2 inches (5.1cm) below the bottom and 1 inch (2.5cm) on each side of the Controller, so that airflow is not obstructed. Allow 20 inches (50.8cm) depth behind the front panel. Allow 1-7/16 inch (3.7cm) in front of the mounting panel for knob clearance. Be sure to cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing.



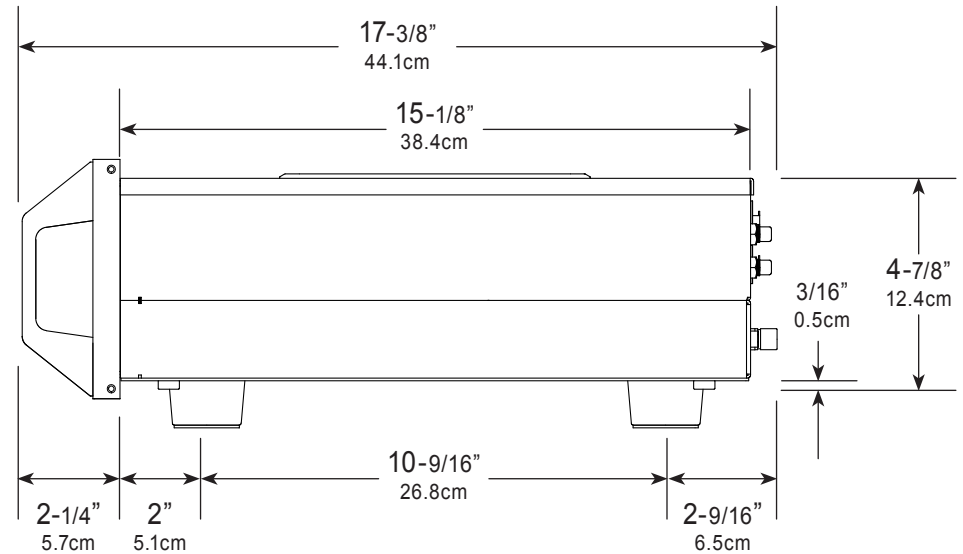
Dimensions - C12000 Preamplifier

The following dimensions can assist in determining the best location for your C12000 Preamplifier. There is additional information on the next page pertaining to installing the C12000 Preamplifier into cabinets.

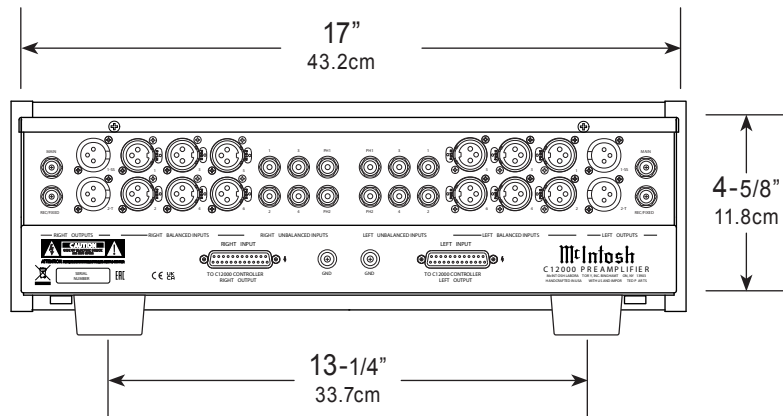
Front View of the C12000 Preamplifier



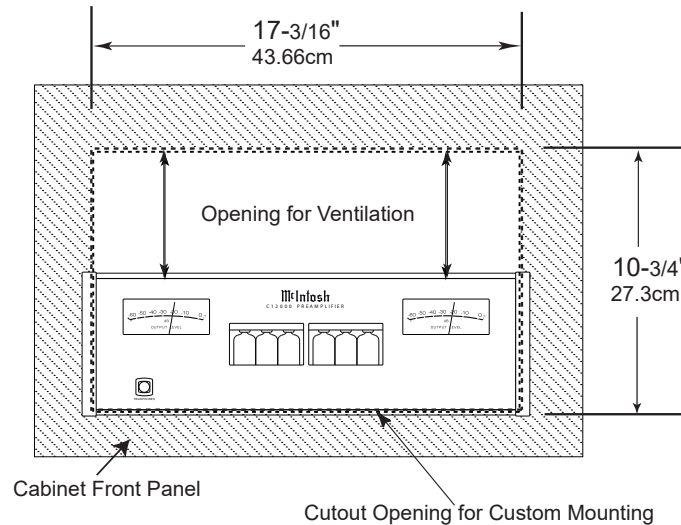
Side View of the C12000 Preamplifier



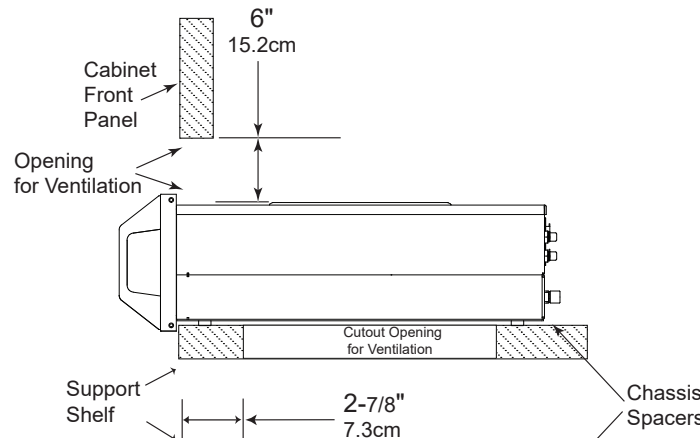
Rear View of the C12000 Preamplifier



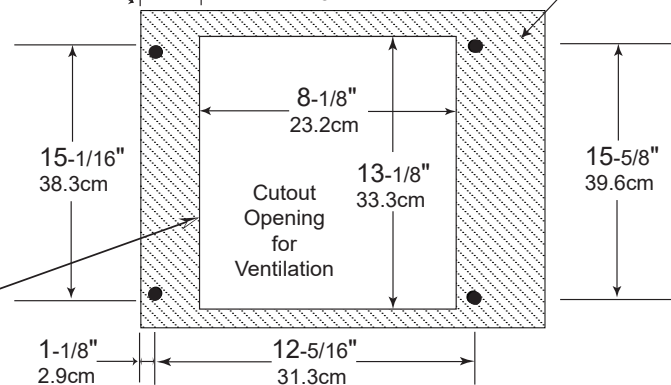
**C12000 Preamplifier
Front Panel
Custom Cabinet Cutout**



**C12000 Preamplifier
Side View
in Custom Cabinet**



**C12000 Preamplifier
Bottom View
in Custom Cabinet**



Note: Center the cutout Horizontally on the unit. For purposes of clarity, the above illustration is not drawn to scale.

Installation - C12000 Preamplifier

The C12000 Preamplifier can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in a piece of furniture or cabinet of your choice. The four feet may be removed from the bottom of the unit when it is custom installed as outlined below. The four feet together with the mounting screws should be retained for possible future use if the C12000 Preamplifier is removed from the custom installation and used free standing. The required panel cutout, ventilation cutout and unit dimensions are shown.

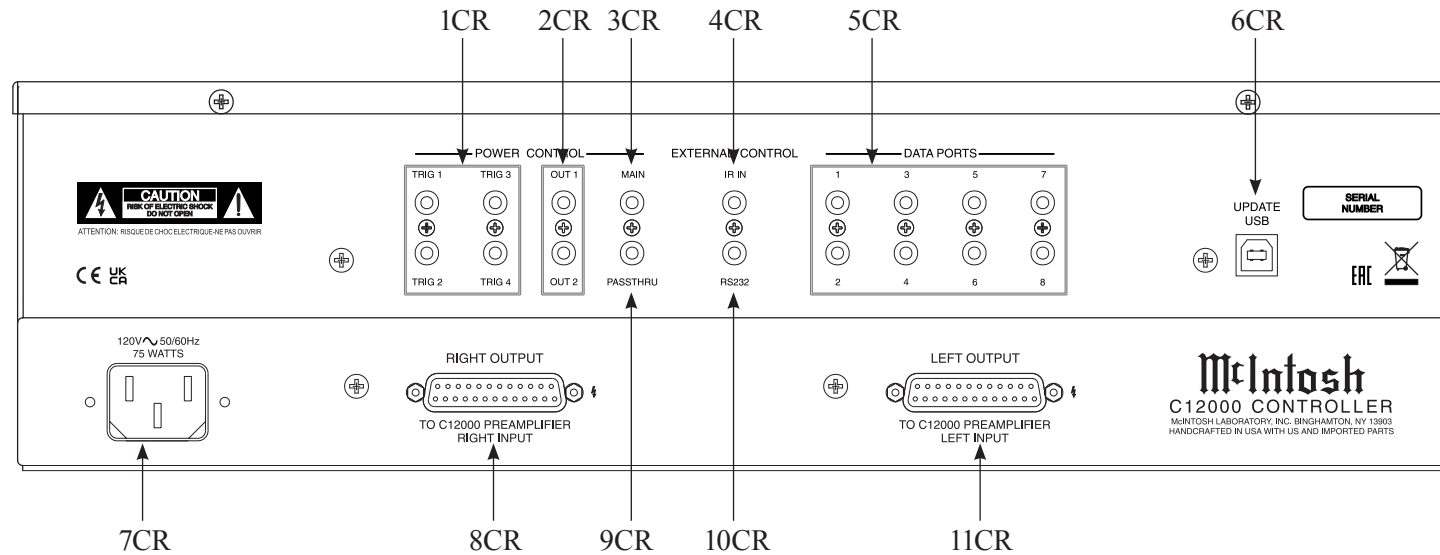
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A custom cabinet installation should provide the following minimum spacing dimensions for cool operation.

Allow at least 6 inches (15.2 cm) above the top, 2 inches (5.1cm) below the bottom and 1 inch (2.5cm) on each side of the Preamplifier, so that airflow is not obstructed. Allow 20 inches (50.8cm) depth behind the front panel. Allow 1-7/16 inch (3.7cm) in front of the mounting panel for knob clearance. Be sure to cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing.



Navigating the Rear Panel (Controller)

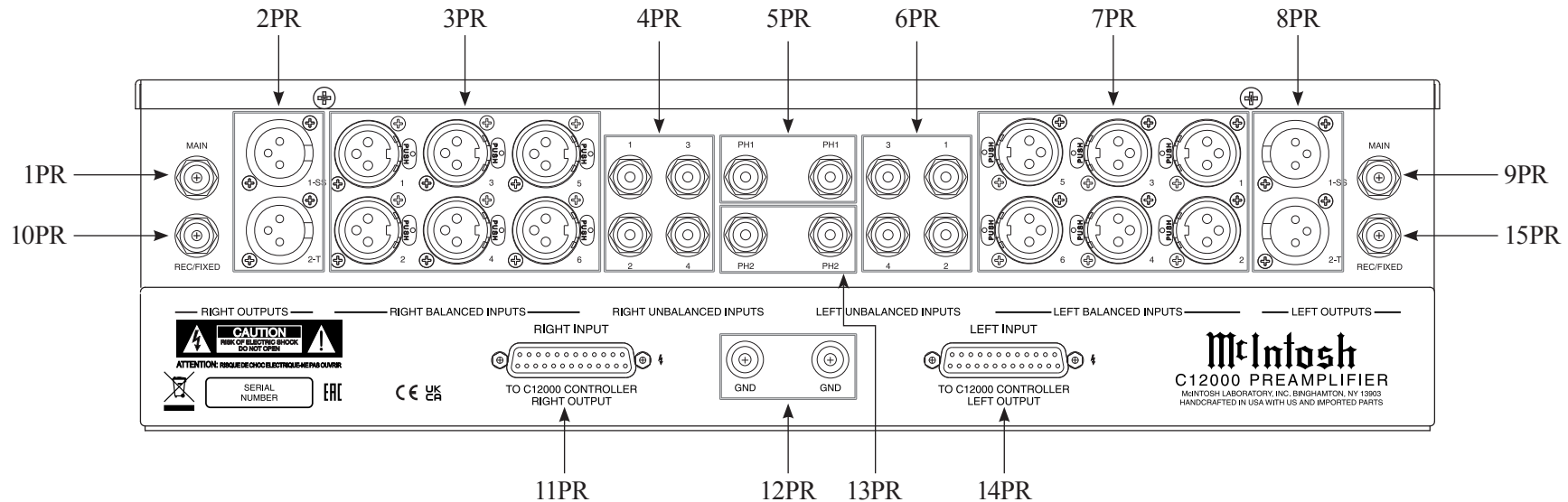


- 1CR POWER CONTROL TRIGger outputs 1 thru 4 are assignable to send turn On/Off signals to components
- 2CR POWER CONTROL OUT 1 and 2 send turn On/Off signals to a McIntosh Component when Output 1 and 2 are activated
- 3CR POWER CONTROL MAIN Output sends turn On/Off signals to a McIntosh Component when the C12000 Controller is switched On/Off
- 4CR IR INput for signals from a compatible IR Sensor for Remote Control use
- 5CR DATA PORTS are assignable to send signals to Source Components to allow control with the C12000 Controller Remote Control

- 6CR For Service Use Only
- 7CR Connect the C12000 Controller power cord to a live AC outlet. Refer to information on the back panel of your C12000 Controller to determine the correct voltage for your unit
- 8CR RIGHT OUTPUT Connector accepts the custom McIntosh 23-Conductor Cable. This cable connects to the C12000 Controller RIGHT TUBE PREAMPLIFIER INPUT. It supplies the control signals and power supply voltages for the Right Channel Circuitry in the Preamplifier
- 9CR PASSTHRU Power Control Input receives turn On/Off signals from an Audio/Video Processor
- 10CR RS232 connector for connection to a computer or other control device

- 11CR LEFT OUTPUT Connector accepts the custom McIntosh 23-Conductor Cable. This cable connects to the C12000 Controller LEFT TUBE PREAMPLIFIER INPUT. It supplies the control signals and power supply voltages for the Left Channel Circuitry in the Preamplifier

Navigating the Rear Panel (Preamp)



1PR RIGHT OUTPUT MAIN (Unbalanced) sends signals to a Power Amplifier - Can be configured to use Solid State or Tube amplification (see Page 29)

2PR RIGHT OUTPUT Balanced send signals to Power Amplifier(s) and are switched On/Off using a trim setting with the Front Panel Controls or Remote Control Push-Buttons - Output 1 (1-SS) uses Solid State amplification, Output 2 (2-T) uses Tube Amplification

3PR RIGHT BALANCED INPUTS 1 thru 6 accept high level program source signals

4PR RIGHT UNBALANCED INPUTS 1 thru 4 accept high level program source signals

5PR PH1 (Right and Left channels) accept signals from a Phono Cartridge

6PR LEFT UNBALANCED INPUTS 1 thru 4 accept high level program source signals

7PR LEFT BALANCED INPUTS 1 thru 6 accept high level program source signals

8PR LEFT OUTPUT Balanced send signals to Power Amplifier(s) and are switched On/Off using a trim setting with the Front Panel Controls or Remote Control Push-Buttons - Output 1 (1-SS) uses Solid State amplification, Output 2 (2-T) uses Tube Amplification

9PR LEFT OUTPUT MAIN (Unbalanced) sends signals to a Power Amplifier - Can be configured to use Solid State or Tube amplification (see Page 29)

10PR RIGHT OUTPUT REC/FIXED sends signals to the input of a recording device

11PR RIGHT INPUT Connector accepts the custom McIntosh 23-Conductor Cable. This cable connects to the C12000 CONTROLLER OUTPUT. It supplies the control signals and power supply voltages for the Right Channel Circuitry in the Preamplifier

12PR GND terminals accept a ground wire from a turntable

13PR PH2 (Right and Left channels) accepts signals from a Phono Cartridge

14PR LEFT INPUT Connector accepts the custom McIntosh 23-Conductor Cable. This cable connects to the C12000 CONTROLLER OUTPUT. It supplies the control signals and power supply voltages for the Left Channel Circuitry in the Preamplifier

15PR LEFT OUTPUT REC/FIXED sends signals to the input of a recording device



Connecting Components

The C12000 has the ability to automatically switch power On/Off to Source Components via the Power Control connections. The Data Port Connections allow for the remote operation of basic functions using the included HR085 Remote Control. With an external sensor connected to the C12000, remote control operation of the system is possible from another room and/or when the C12000 is located in a cabinet with the doors closed.

The Connection Diagrams (Pages 16-19) are examples of a typical audio system. Your system may vary from this, however the actual components would be connected in a similar manner. For additional information refer to “Connector and Cable Information” on Page 4.

Note: The C12000 Controller allows re-naming of the Audio Input Names as indicated on the Front Panel Information Display. Example, “UNBAL 1” may be changed to “TUNER” or your own personal preference. Refer to Input Settings on Page 20.

Power Control Connections:

1. Connect a Control Cable from the C12000 Controller POWER CONTROL MAIN Jack to the Power Control In on the Turntable.
2. Connect a Control Cable from the Turntable Power Control Out Jack to the Digital Audio Player Trigger In Jack.
3. Connect a Control Cable from the Digital Audio Player Trigger Out Jack to the SACD/CD Player Power Control In Jack.
4. Connect a Control Cable from the SACD/CD Player Power Control Out Jack to the AM/FM

Tuner In Jack.

5. Connect a Control Cable from the AM/FM Tuner Power Control Out Jack to the Media Bridge Pwr Ctrl (Power Control) In Jack.
6. Connect a Control Cable from the C12000 Controller POWER CONTROL OUT 1 Jack to the Power Amplifier Power Control In Jack.

Notes: 1. If two separate Power Amplifiers are used (Left and Right Channels), connect the Power Control Output of the first Amplifier to the Power Control Input on the second Amplifier.

2. By the default settings, POWER CONTROL OUT 1 and 2 are active by default. They can be switched On/Off by using the C12000 Controller TRIM Function.

7. Optionally, connect a Control Cable from the C12000 Controller POWER CONTROL OUT 2 Jack to the Power Amplifier (Secondary Room) Power Control In Jack.
8. Connect any additional Components in a similar manner, as outlined in steps 1 thru 5.

Data Control Connections:

9. Connect a Control Cable from the C12000 Controller DATA PORTS 2 Jack to the TUNER Data In Jack.

Note: To have source components (e.g. Tuner) respond only to their specific “Function Commands” issued by the Remote Control, it is first necessary change the Data Ports Default settings for the “Tuner” Input. Refer to Data Ports on Page 23.

10. Connect a Control Cable from the C12000 Controller CD DATA PORT 3 Jack to the

SACD/CD Player Data In Jack.

11. Connect a Control Cable from the C12000 Controller DATA PORT 1 Jack to the Media Bridge Data In Jack.
12. Connect any additional McIntosh Components in a similar manner, as outlined in steps 9 thru 11.

Sensor Connection:

13. Connect a Control Cable from the C12000 Controller IR INput Connector to the external Sensor. For additional information, refer to “General Information” note 8 on Page 4.

Audio Connections:

14. Connect an Audio Cable from the C12000 Preamplifier UNBALANCED INPUT 1 (Left and Right Channels) Jacks to the Tuner Unbalanced Output Jacks.
15. Connect XLR Audio Cables from the C12000 Preamplifier BALANCED INPUT 1 (Left and Right Channels) connectors to the SACD/CD Player Balanced output connectors.
16. Connect XLR Audio Cables from the C12000 Preamplifier BALANCED INPUT 3 (Left and Right Channels) connectors to the Media Bridge Balanced output connectors.
17. Connect XLR Audio Cables from the C12000 Preamplifier BALANCED INPUT 2 (Left and Right Channels) connectors to the Digital Audio Player Balanced output connectors.
18. Connect the Audio Cables coming from the Turntable to the C12000 Preamplifier PH1 or PH2 PHONO INPUT (Left and Right Channels) Jacks.
19. Connect XLR Audio Cables from the C12000

Preamplifier OUTPUT 1 connectors (Left and Right Channels) to the Power Amplifiers (Primary Room) Balanced (Left and Right) Inputs.

20. Optionally, connect XLR Audio Cables from the C12000 Preamplifier OUTPUT 2 connectors (Left and Right Channels) to the Power Amplifier (Secondary Room) Balanced (Left and Right) Inputs.

21. Connect any additional McIntosh Components in a similar manner, as outlined in steps 14 thru 19.

Optional PASSTHRU Connections:

22. Connect XLR Audio Cables from the A/V Processor, Front Channels (Left and Right) Balanced Output connectors to the C12000 Preamplifier BALANCED INPUT 6 connectors (Left and Right Channels).

Note: Refer to Passthru on Page 23 to activate the BALANCED 6 Input.

23. Connect a Control Cable from the C12000 Controller PASSTHRU Jack to A/V Processor Power Control Zone ZA Jack.

Ground Connections:

24. Connect the Ground Cable coming from the Turntable to the C12000 Preamplifier PHONO INPUT GND Binding Post.

C12000 Controller and Preamplifier

Inner Connections:

25. Connect one of the supplied custom cables from the C12000 Controller RIGHT OUTPUT Socket to the C12000 Preamplifier RIGHT INPUT Socket. In a similar manner, connect the second cable from the C12000 Controller LEFT OUTPUT Socket to the C12000

Preamplifier LEFT INPUT Socket.

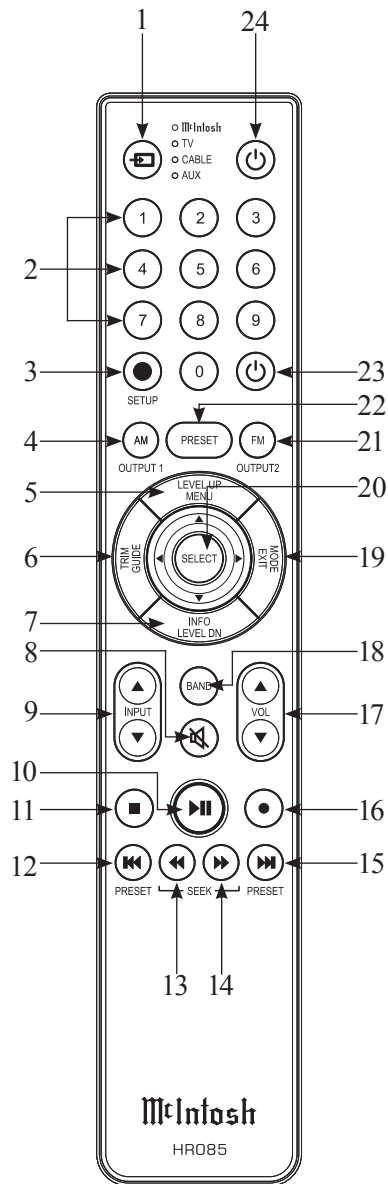
AC Power Cord Connections:

26. Connect the C12000 Controller to a live AC Outlet using the supplied Power Supply Cord.

Input Assignment Chart

C12000 DEFAULT SETTINGS					CONNECTION EXAMPLE SETTINGS			
Input Type	Input Number	Input Name	Data Port	Power Control	Input Number	Input Name	Data Port	Power Control
Unbalanced	1 UNBALANCED (L & R)	UNBAL 1	All (1 thru 8)	Main	1 UNBALANCED (L & R)	Tuner	2	Main
Unbalanced	2 UNBALANCED (L & R)	UNBAL 2	All (1 thru 8)	Main	2 UNBALANCED (L & R)			
Unbalanced	3 UNBALANCED (L & R)	UNBAL 3	All (1 thru 8)	Main	3 UNBALANCED (L & R)			
Unbalanced	4 UNBALANCED (L & R)	UNBAL 4	All (1 thru 8)	Main	4 UNBALANCED (L & R)			
Balanced	1 UNBALANCED (L & R)	BAL 1	All (1 thru 8)	Main	1 BALANCED (L & R)	SACD/CD	3	Main
Balanced	2 UNBALANCED (L & R)	BAL 2	All (1 thru 8)	Main	2 BALANCED (L & R)	Digital Audio Player	-----	Main
Balanced	3 UNBALANCED (L & R)	BAL 3	All (1 thru 8)	Main	3 BALANCED (L & R)	Media Bridge	1	Main
Balanced	4 UNBALANCED (L & R)	BAL 4	All (1 thru 8)	Main	4 BALANCED (L & R)			
Balanced	5 UNBALANCED (L & R)	BAL 5	All (1 thru 8)	Main	5 BALANCED (L & R)			
Balanced	6 UNBALANCED (L & R)	BAL 6	All (1 thru 8)	Main	6 BALANCED (L & R)			
Phono	PH1 (L & R)	PHONO 1	-----	Main	PH1 (L & R)			
Phono	PH2 (L & R)	PHONO 2	-----	Main	PH2 (L & R)	Turntable	-----	Main

Navigating the Remote Control



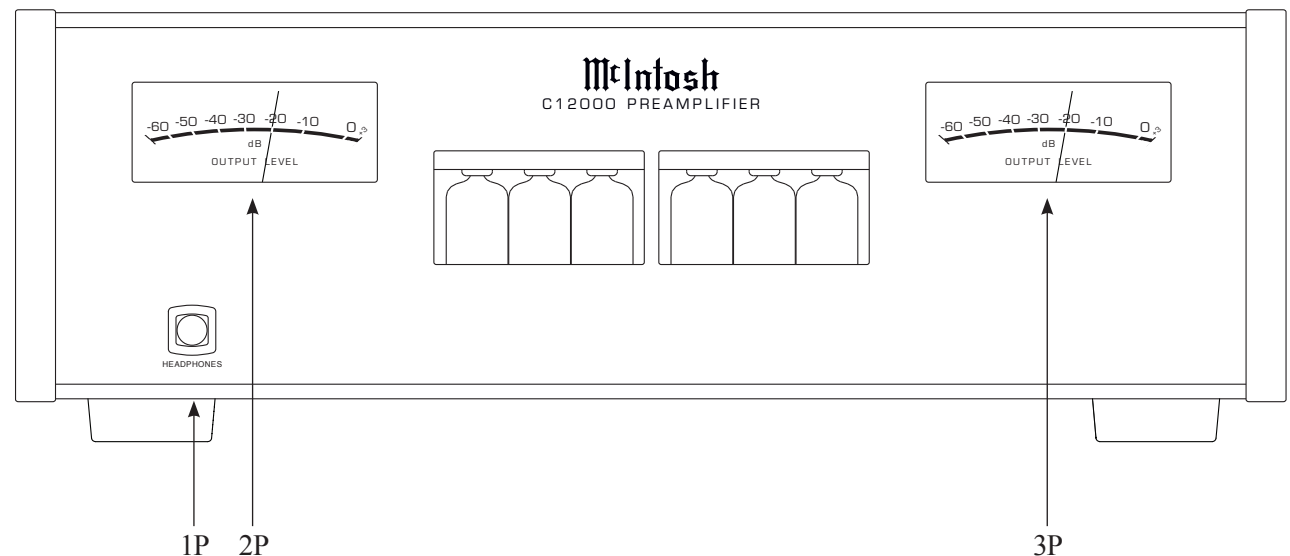
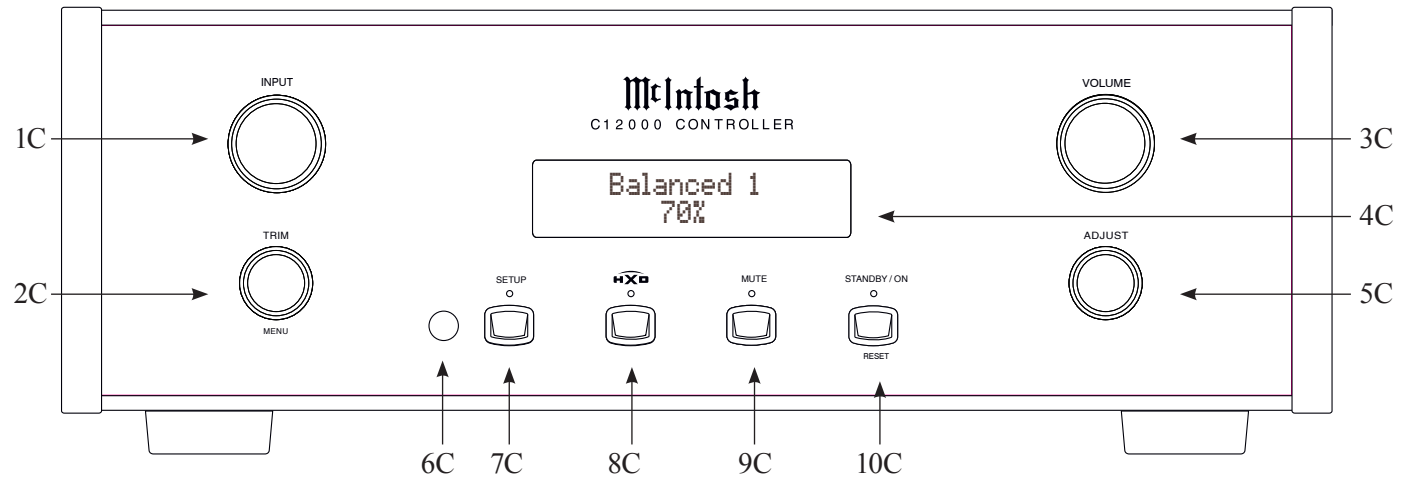
- 1. Switch Device:** Select different devices for remote operation. Selected device is indicated by the LED light when buttons are pressed.
- 2. Numbers:** You can select tuner presets and manually enter disc tracks and radio stations – among other numerical functions – using these buttons.
- 3. Setup:** The Setup Button gives you access to the additional functions for the buttons represented in blue text. It's like using the "Shift" key on a keyboard to access special characters above the number keys. (*Note: Cannot be used to enter Setup Mode.*)
- 4. AM Tuner/Output 1:** Access AM Tuner or press Setup followed by this button to toggle Output 1.
- 5. Level Up/Menu:** Adjusts trim functions settings. Accesses menu on compatible devices.
- 6. Trim/Guide:** Enters Trim Functions Menu. Opens guide on compatible devices.
- 7. Info/Level Down:** Adjusts trim functions settings. Accesses info on compatible devices.
- 8. Mute:** Mutes audio playback.
- 9. Input:** Changes and selects different inputs.
- 10. Play/Pause:** Pressing this button will halt playback of active media, and it will resume from where it left off if you press the button again.
- 11. Stop:** Cancels media playback and resets progress through it.
- 12. Previous/Previous Preset:** You can go back to your previous media selection by pressing this button. Also allows you to navigate to a previous tuner preset.
- 13. Fast Reverse/Seek Down:** Navigate backwards through the current active media using this button. This is also used to adjust the tuner downwards.

- 14. Fast Forward/Seek Up:** Navigate forward through the current active media using this button. This is also used to adjust the tuner upwards.
- 15. Next/Next Preset:** You can go forward to your next media selection by pressing this button. Also allows you to navigate to a later tuner preset.
- 16. Record:** On devices with a record function, this will begin recording the actively playing media.
- 17. Volume:** Adjust the volume with these buttons.
- 18. Band:** You will have the option to change the band on your connected tuner or select certain options on a variety of McIntosh models.
- 19. Mode/Exit:** This will exit the Trim Functions Menu. It will also display information or certain options.
- 20. Select:** Where applicable, you can press this button to select any highlighted option.
- 21. FM Tuner/Output 2:** Access FM Tuner or press Setup followed by this button to toggle Output 2.
- 22. Preset:** Press this button followed by a number (0-9) to immediately select that stored preset.
- 23. Power Off:** Whichever device you have selected on the remote control will turn off when you press this button.
- 24. Power On:** Whichever device you have selected on the remote control will turn on when you press this button.

Note: The included McIntosh HR085 Remote Control has buttons used to control multiple devices. While operating the C12000 Controller and Preamplifier with the remote, nothing will happen when pressing buttons that activate features not present on these units. Refer to HR085 Owner's Manual on www.mcintoshlabs.com.

Front Panels

- 1C INPUT Control - used to select a source for listening and recording. The control is also used in the SETUP Modes
- 2C TRIM Control - allows selection of Trim settings and is also used in the SETUP Mode
- 3C VOLUME Control - allows adjustment of the listening level for both channels
- 4C INFORMATION DISPLAY - indicates the Sources, Volume, other Audio Settings, Operational Functions and Setup Mode Settings
- 5C ADJUST Control - used for Trim Mode Adjustments and also various SETUP Functions
- 6C IR Sensor - receives commands from a Remote Control
- 7C SETUP Push-button with indicator - activates the Setup Mode allowing changes to the default settings
- 8C HXD Push-button with indicator - activates the Crossfeed Director Circuitry for Headphones
- 9C MUTE Push-button - mutes the audio from the Loudspeakers and Headphones
- 10C STANDBY/ON Push-button with indicator - switches the C12000 ON or OFF (Standby) and resets the microprocessors
- 1P Connection for low impedance dynamic headphones, for private listening
- 2P Meter indicates the Left Channel Output of the Preamplifier
- 3P Meter indicates the Right Channel Output of the Preamplifier



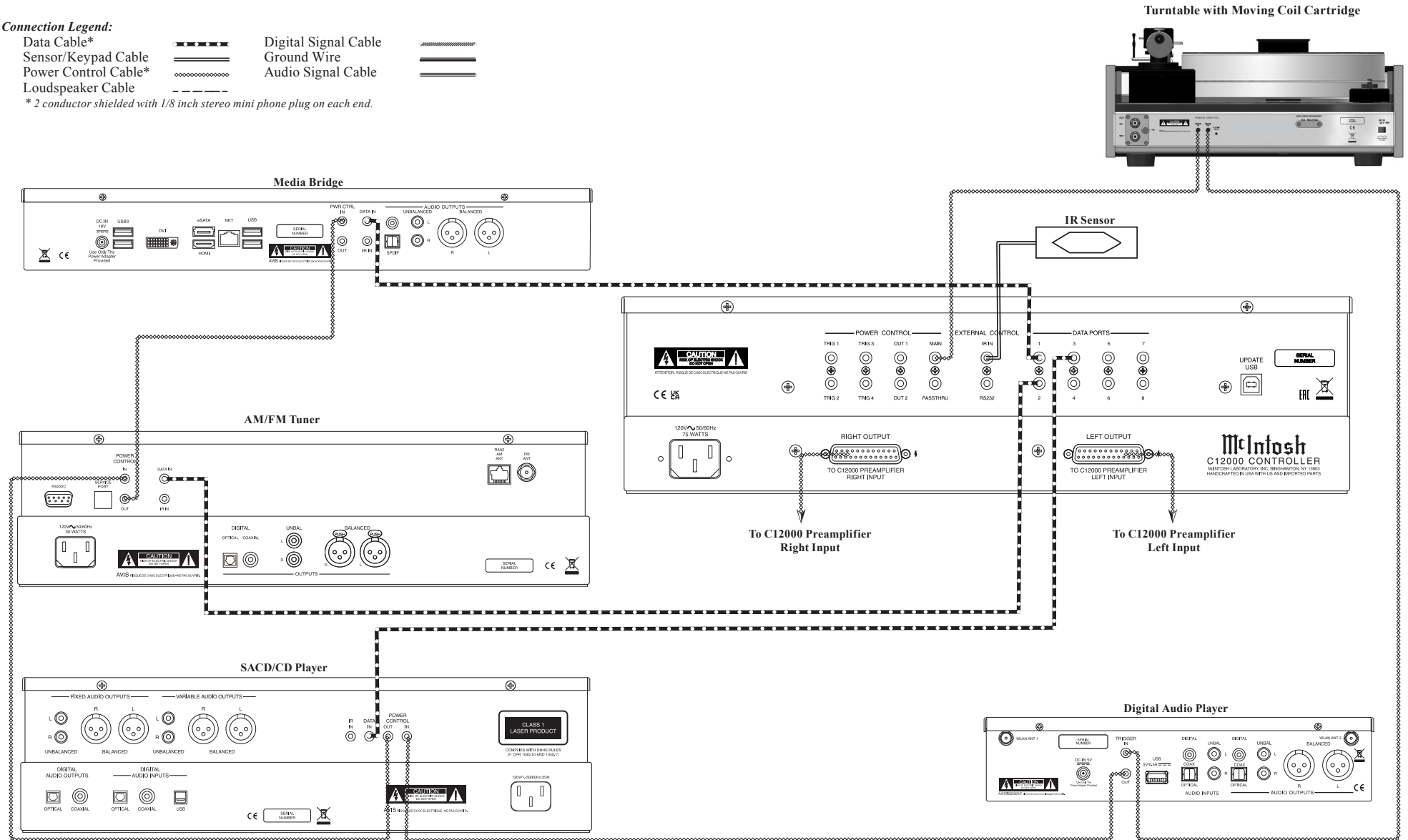


Controller Connection Diagram - Input and Control

Connection Legend:

Data Cable*		Digital Signal Cable	
Sensor/Keypad Cable		Ground Wire	
Power Control Cable*		Audio Signal Cable	
Loudspeaker Cable			

* 2 conductor shielded with 1/8 inch stereo mini phone plug on each end.



Data Cable*
Sensor/Keypad Cable
Power Control Cable*
Loudspeaker Cable

* 2 conductor shielded with 1/8 inch stereo mini phone plug on each end.

Digital Signal Cable
Ground Wire
Audio Signal Cable



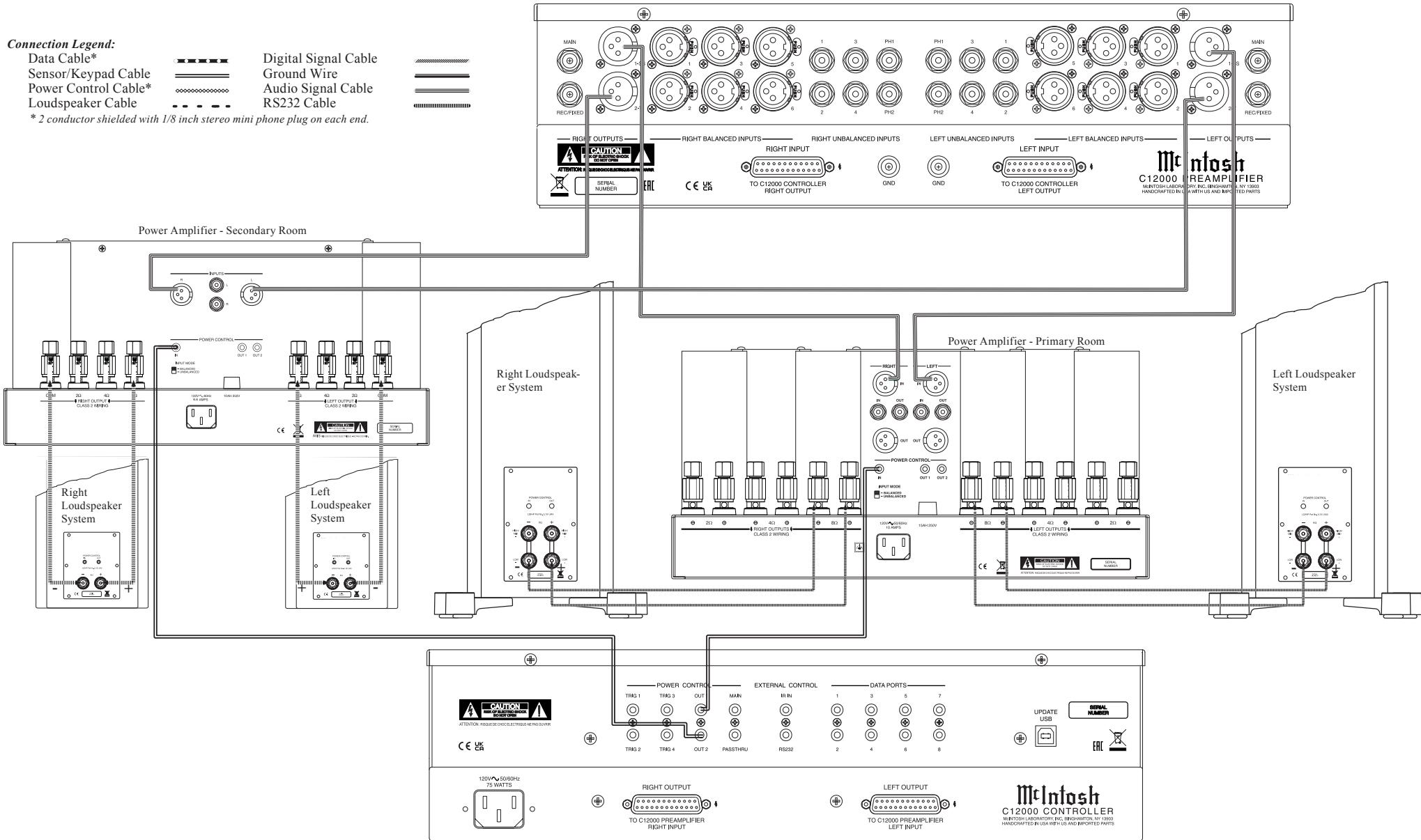


Preamplifier Connection Diagram - Output Connections

Connection Legend:

Data Cable*  Digital Signal Cable
Sensor/Keypad Cable  Ground Wire
Power Control Cable*  Audio Signal Cable
Loudspeaker Cable  RS232 Cable

* 2 conductor shielded with 1/8 inch stereo mini phone plug on each end.

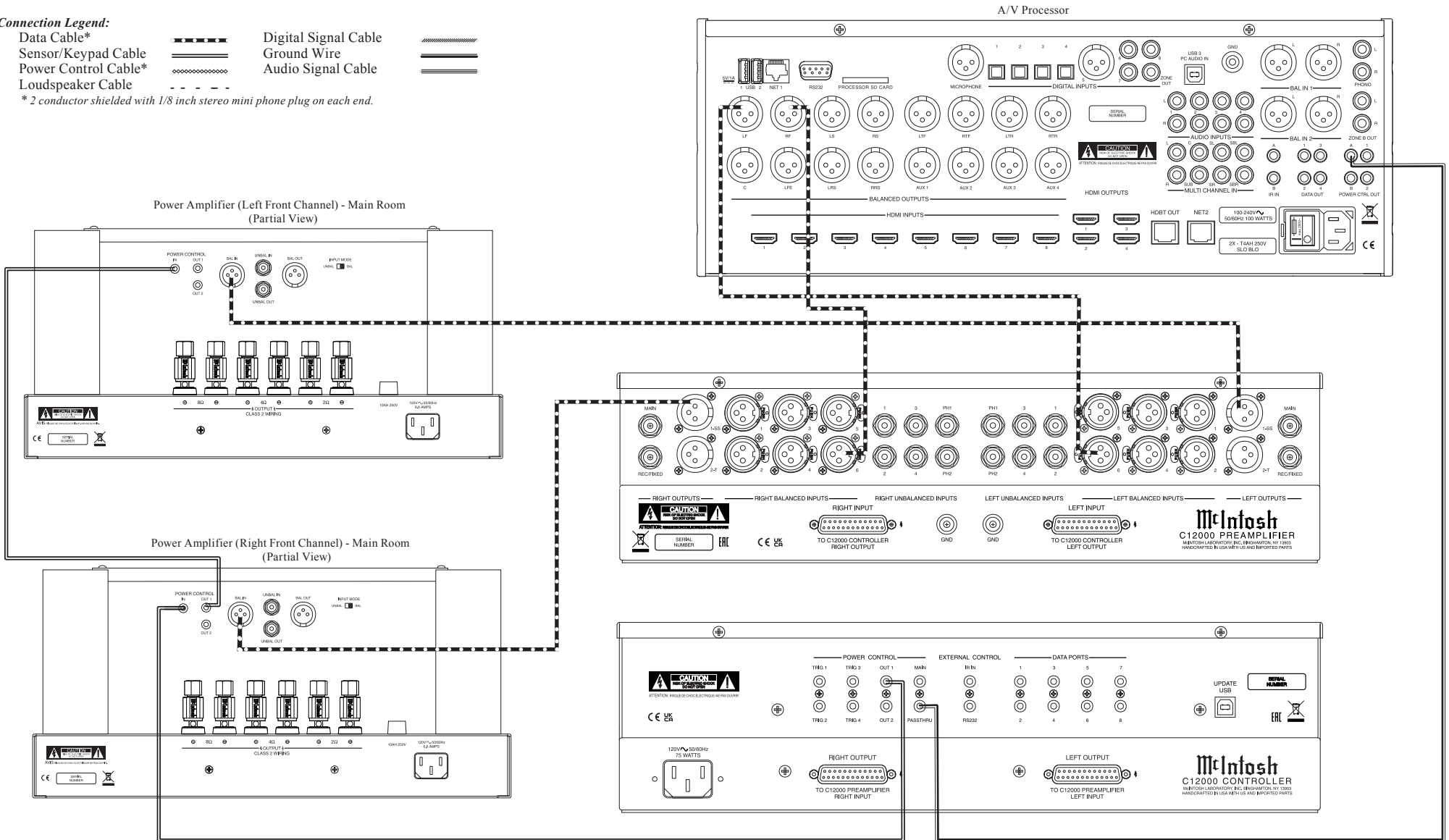


Preamplifier Connection Diagram - Passthru Connections

Connection Legend:

Data Cable*		Digital Signal Cable	
Sensor/Keypad Cable		Ground Wire	
Power Control Cable*		Audio Signal Cable	
Loudspeaker Cable			

* 2 conductor shielded with 1/8 inch stereo mini phone plug on each end.



How to Operate the Setup Mode

Your McIntosh C12000 has been factory configured for default operating settings that will allow immediate enjoyment of superb audio without the need for further adjustments. If you wish to make changes to the factory default settings, a Setup Feature is provided to customize the operating settings using the Front Panel Information Display. Refer to the C12000 Front Panel Illustration on Page 15 while performing the following steps.

Note: If the C12000 is currently On, proceed to step 2.

1. Press the STANDBY/ON Push-button on the Front Panel or press the  (Power ON) Push-button on the Remote Control to switch On the C12000. The C12000 will go through a TUBE WARMUP (15 seconds) with the Tubes in the C12000 glowing an amber color and a brief startup initialization with the Front Panel Information Display indicating the last used source and volume setting. The illumination of the Tubes will now glow a green color; this is followed by the volume setting indication starting at zero, then increasing to the last used volume setting. Refer to figure 1.



Figure 1

2. Press the SETUP Push-button, rotate TRIM (MENU) Control until the Front Panel Information Display indicates “C12000, V_ ___ - S/N: AEE ___” (or higher Firmware version). Refer to figure 2.



Figure 2

3. Rotate the TRIM Control to select the next Setup Mode Menu item, “SETUP: Balanced 1, On/Name (Hold SETUP)”. Refer to figure 3. Continue to rotate the INPUT CONTROL to view the other SETUP Mode Options.



Figure 3

4. To exit from the SETUP Mode, press the SETUP Push-button and the Front Panel Display will revert back to its normal display. Refer to figure 1.

Firmware Version

The C12000 functionality is controlled by internal software that is known as Firmware. The Version of the Firmware in the C12000 can be identified at any time by utilizing the Setup Mode.

1. Press the SETUP Push-button to enter Setup Mode.
2. Referring to the Front Panel Information Display, the number after the character “V” is the Firmware number. Refer to figure 2.
3. To exit the Setup Mode, press the SETUP Push-button.

Input Settings

The C12000 provides the ability to switch unused INPUTS Off (or back On if they have been previously switched Off). The default INPUT Names can be changed to match the name of the component connected to it or any other custom name desired (within 10 Characters).

INPUT SWITCHED ON/OFF:

In the following example, the Unbalanced 4 Input

will be switched Off.

Note: When an INPUT is switched Off, its name will no longer appear on the Front Panel Information Display when using the INPUT Control (Front Panel or Remote Control).

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.

2. Rotate the TRIM Control until “SETUP: ____, On/Name (Hold SETUP)” appears on the Information Display. Refer to figure 3.

3. Then rotate the INPUT Control to select the Unbalanced 4 Input. Refer to figure 4.



Figure 4

4. To switch the Unbalanced 4 Input Off, rotate the ADJUST Control until the display indicates “SETUP: Unbalanced 4, Off”. Refer to figure 5.



Figure 5

5. Exit the SETUP Mode by pressing the SETUP Push-button.

In the following example, the Unbalanced 4 Input will be switched On.

Note: When an INPUT is switched ON, its name will appear on the Front Panel Information Display when using the INPUT Control (Front Panel or Remote Control).

6. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..

7. Rotate the TRIM Control until “SETUP: ____, On/Name (Hold SETUP)” appears on the Information Display. Refer to figure 3.

8. Rotate the INPUT Control to select the Unbalanced 4 Input. Refer to figure 5.

9. To switch the Unbalanced 4 Input On, rotate the ADJUST Control until the display indicates SETUP: Unbalanced 4, On/Name (Hold SETUP)". Refer to figure 4 on Page 20.

10. Exit the SETUP Mode by pressing the SETUP Push-button.

RENAME INPUT:

In the following example, the Balanced 1 Input will be renamed to match up with the component connected.

The C12000 Default Input Names as indicated on the Front Panel Display can be customized to a different name up to 12 characters long (TUNER, CD PLAYER, etc.). The available characters for renaming the input include the following: ! < > * , / - _ 0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z .

In the following example, the Balanced 1 Input will be renamed to "MEDIA BRDG".

11. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2, on Page 20.

12. Rotate the TRIM Control until "SETUP: _____, On/Name (Hold SETUP)" appears on the Information Display. Then rotate the INPUT Control to select the "Balanced 1" Input. Refer to figure 6.

Figure 6

13. Press and hold in the SETUP Push-button until "RENAME: Balanced 1, >Balanced 1 <" appears on the Display. The character "B" is flashing to indicate it is ready to be changed. Refer to figure 7.

Figure 7

14. Rotate the ADJUST Control to change the character "B" to "M". Refer to figure 8.

Figure 8

15. Rotate the TRIM Control until the character "a" is flashing, then rotate the ADJUST Control to change the character "a" to "E". Refer to figure 9.

Figure 9

16. Rotate the TRIM Control until the character "I" is flashing, then rotate the ADJUST Control to change the character "I" to "D". Refer to figure 10.

Figure 10

17. Rotate the TRIM Control until the character "a" is flashing, then rotate the ADJUST Control to change the "a" character to "I". Refer to figure 11.

Figure 11

18. Repeat steps 14 thru 17 until the new name of "RENAME: Balanced 1, >MEDIA BRDG <" is indicated on the Front Panel Display. Refer to figures 12 thru 18.

Figure 12

Figure 13

Figure 14

Figure 15

Figure 16

Figure 17

Figure 18

19. To save the new name, press and hold in the SETUP Push-Button until "SETUP: MEDIA BRDG , ON/Name (Hold SETUP)" appears on the Front Panel Information Display. Refer to figure 19.

Figure 19

21. Exit the SETUP Mode by pressing the SETUP Push-button.

Output Settings

Note: Output 1 (1-SS) uses Solid State amplification, Output 2 (2-T) uses Tube amplification.

The Output Settings provide the ability to change how the C12000 Output 1 and Output 2 function.

OUTPUT 1 and 2:

By default OUTPUT 1 and 2 are set to go On/Off by using the Front Panel TRIM and ADJUST Controls or the OUTPUT 1 and 2 Push-buttons on the Remote Control. If it is desirable to have OUTPUT 1 and/or 2 always On regardless of the TRIM setting, perform the following:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..
2. Rotate the TRIM Control until “SETUP: OUTPUT 1, Switched” appears on the Information Display. Refer to figure 20.



Figure 20

3. Rotate the ADJUST Control until “SETUP: OUTPUT 1, Unswitched” appears on the Information Display. Refer to figure 21.



Figure 21

4. In a similar manner, perform steps 2 and 3 to change the OUTPUT 2 setting. Refer to figures 22 and 23.



Figure 22



Figure 23

5. Exit the SETUP Mode by pressing the SETUP Push-button.

Headphone Settings

The C12000 has the ability to automatically mute the Output Jacks and/or Connectors when a Headphone Cable Plug is inserted into the C12000 Front Panel HEADPHONES Jack. The Output Default Settings are:

MAIN - Unmuted
OUTPUT 1 - Muted
OUTPUT 2 - Muted

In the following examples the MAIN Output Jacks will Mute and the OUTPUT 1 Connectors will not Mute when Headphones are connected:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.
2. Rotate the TRIM Control until “SETUP: MUTE WITH HDPH, Main = Unmuted ” appears on the Information Display. Refer to figure 24.



Figure 24

3. Rotate the ADJUST Control to change the current setting to “SETUP: MUTE WITH HDPH, Main = Muted”. Refer to figure 25.

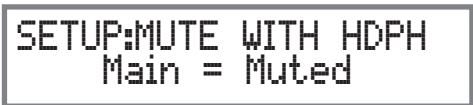


Figure 25

4. Rotate the INPUT Control to change the current

setting to “SETUP: MUTE WITH HDPH, Output 1 = Muted”. Refer to figure 26.

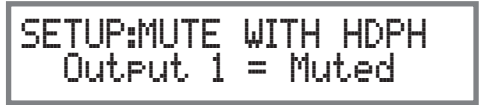


Figure 26

5. Rotate the ADJUST Control to change the current setting to “SETUP: MUTE WITH HDPH, Output 1 = Unmuted”. Refer to figure 27.

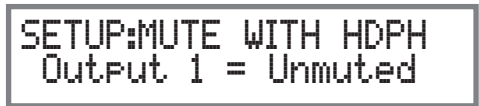


Figure 27

6. In a similar manner, perform steps 4 and 5 to change the OUTPUT 2 setting. Refer to figures 28 and 29.

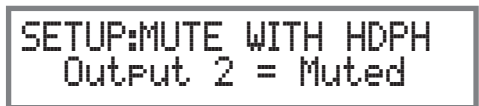


Figure 28

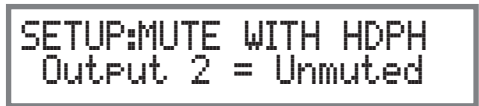


Figure 29

7. Exit the SETUP Mode by pressing the SETUP Push-button.

Power Control Triggers

In the first example, the Power Control Triggers 1 and 2 will be assigned to Output 1 and 2 respectively:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..

2. Rotate the TRIM Control until SETUP: TRIGGER 1, MAIN” appears on the Display. Refer to figure 30.

SETUP: TRIGGER 1
Main

Figure 30

3. Rotate the ADJUST Control to select Output 1 from the available additional selections including Output 2 or Input. Refer to figure 31.

SETUP: TRIGGER 1
Output 1

Figure 31

4. To change the Trigger 2 setting from Main to OUTPUT 2, first rotate the INPUT Control to select TRIGGER 2. Then Rotate the ADJUST Control to select Output 2. Refer to figure 32.

SETUP: TRIGGER 2
Output 2

Figure 32

The second example will use selection of the Trigger 3 to activate when the BAL 1 Input is selected:

5. Rotate the INPUT Control to select “SETUP: TRIGGER 3, Main” appears on the Display. Refer to figure 33.

SETUP: TRIGGER 1
Main

Figure 33

6. Rotate the ADJUST Control until “SETUP: TRIGGER 3, Balanced 1: OFF” appears on the Display. Refer to figure 34.

SETUP: TRIGGER 3
Balanced 1: OFF

Figure 34

7. Rotate the VOLUME Control to select “Balanced 1: ON”. Refer to figure 35.

SETUP: TRIGGER 3
Balanced 1: ON

Figure 35

8. Exit the SETUP Mode by pressing the SETUP Push-button.

By default the Power Control TRIGGER 1 thru TRIGGER 4 Outputs function the same as the MAIN Power Control Jack, switching On/Off with the C12000. Triggers 1 thru 4 are also reassignable to activate when Output 1 or 2 is selected. All four Triggers can also be assigned to a given Input or Inputs.

Data Ports

Data Ports Connections between the C12000 and a McIntosh Source Component allow for basic function control of the source component using the C12000 supplied Remote Control. By default, all eight Data Ports are sent the same Data for the selected source. To dedicate a Data Port for only one source component (BAL 1 Input will be assigned to Data Port 1) perform the following Steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..
2. Rotate the TRIM Control until “SETUP: Data Port 1, All Data” appears on the Information Display. Refer to figure 36.

SETUP: DATA PORT 1
All Data

Figure 36

3. Rotate the ADJUST Control until “SETUP: DATA PORT 1, Balanced 1 Data” appears on the Display. Refer to figure 37.

SETUP: DATA PORT 1
Balanced 1 Data

Figure 37

4. To assign additional Data Ports, first rotate the INPUT Control to select the Data Port and then rotate the ADJUST Control to select the desired Input. Refer to figure 38.

SETUP: DATA PORT 2
Unbalanced 1 Data

Figure 38

5. In a similar manner, assign any additional Data Ports.

6. Exit the SETUP Mode by pressing the SETUP Push-button.

Passthru

When the C12000 is part of a Home Theater or Multichannel Audio System the Right and Left Front Channels from an Audio/Video Processor or Surround Decoder can “Passthru” the C12000 and onto its associated Power Amplifier(s). The Setup Mode allows selection of the specified C12000 Input to be used for the Right and Left Front Channels. In the example below, the Right and Left Front Channels from the Audio/Video Processor will be connected to the BALANCED 6 Input Connectors on the C12000. Refer to Pages 16 and 17 for additional connection information.

Notes: 1. The Phono Inputs are not assignable as a Passthru Input.

2. If Balanced Input 6 is already assigned to a given Input, it will not appear in the list of available Inputs.

3. When one of the Unbalanced Inputs is selected as a Passthru Input, it is advisable to remove it from the Input List by switching it Off. Refer to “Input Settings” on Page 20.

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..

2. Rotate the TRIM Control until “SETUP: Passthru, Off” appears on the Information Display. Refer to figure 39.



Figure 39

3. Rotate the ADJUST Control to select “Balanced 6” Input. Refer to figure 40.

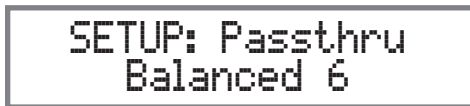


Figure 40

4. Exit the SETUP Mode by pressing the SETUP Push-button.

Comm Port Baud Rate

The C12000 may be remotely controlled from other equipment connected to the Rear Panel RS232 Jack. The speed at which the C12000 communicates (8 bit, no parity and 1 stop bit) with other equipment is adjustable from 9,600 bits per second to 115,200 bits per second. To change from the default speed of 115,200 bits per second, perform the following steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.

2. Rotate the TRIM Control until “SETUP: RS232, 115200 Baud” appears on the Information Display. Refer to figure 41.

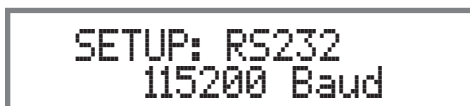


Figure 41

3. Rotate the ADJUST Control to select the desired Baud Rate Speed (115200 thru 9600).

4. Exit the SETUP Mode by pressing the SETUP Push-button.

Remote Control Codes

The Remote Control included with the C12000 utilizes the NORMAL McIntosh Control Codes. The Second Set of Control Codes the C12000 will respond to is referred to as the ALTERNATE Codes. The Alternate Codes are used when the C12000 is used in the same location as another McIntosh Preamplifier and/or A/V Processor. This will prevent the Remote Control from affecting the operation of both units at the same time. To activate the Remote Control ALTERNATE Codes perform the following steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.

2. Rotate the TRIM Control until “SETUP: IR Codes, Normal” appears on the Information Display. Refer to figure 42.

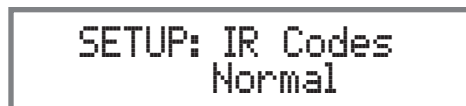


Figure 42

3. Rotate the ADJUST Control to select the Alternate Codes. Refer to figure 43.



Figure 43

4. It is now necessary to change the HR085 Remote Control over to the Alternate Codes. Information on the HR085 Remote Control is available for download from the McIntosh Web Site:

<http://www.mcintoshlabs.com/>

5. Exit the SETUP Mode by pressing the SETUP Push-button.

IR Sensor

The C12000 Front Panel Sensor, which receives the signals from the HR085 Remote Control, can be switched off to prevent interference when an external IR Sensor is connected. To de-activate the Front Panel IR Sensor perform the following steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.

2. Rotate the TRIM Control until “SETUP: Front IR, Enabled” appears on the Information Display. Refer to figure 44.



Figure 44

3. Rotate the VOLUME (ADJUST) Control to select Disabled. Refer to figure 45.



Figure 45

4. Exit the SETUP Mode by pressing the SETUP Push-button.

Power Mode

The C12000 incorporates an Auto Off Feature, which automatically places the preamplifier into the Power Saving Standby/Off Mode. This occurs approximately 30 minutes after there has been an absence of audio input or user activity (includes changes to any of the Operation Functions such as source selection, volume adjustment, etc). If it is desirable to disable the

Auto Off Feature perform the following steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2.

2. Rotate the TRIM Control until “SETUP: Auto Off, Enabled” appears on the Information Display. Refer to figure 46.



Figure 46

3. Rotate the ADJUST Control to select Disabled. Refer to figure 47.



Figure 47

4. Exit the SETUP Mode by pressing the SETUP Push-button.

Factory Reset

If it becomes desirable to reset all the adjustable settings (Setup and Trim Settings) to the factory default values, perform the following steps:

1. Press the SETUP Push-button to enter the SETUP MODE. Refer to figure 2..
2. Rotate the TRIM Control until “FACTORY RESET, (Hold SETUP)” appears on the Information Display. Refer to figure 48.



Figure 48

3. Press and hold in the SETUP Push-button until “FACTORY RESET, In Progress” appears on

the Information Display, then release the SETUP Push-button. Refer to figures 49 and 50.



Figure 49



Figure 50

4. Press the Front Panel STANDBY/ON Push-button to switch the C12000 on.

How to Operate the C12000

Power On and Off

The Red LED above the STANDBY/ON Push-button lights to indicate the C12000 is in Standby mode. To switch ON the C12000, press the STANDBY/ON Push-button on the Front Panel or the (Power On) Push-button on the Remote Control. The C12000 will go through a TUBE WARMUP (15 seconds) with the Tubes in the C12000 Preamplifier glowing an amber color, a brief startup initialization with the Front Panel Information Display indicating the last used source and volume setting. The illumination of the Tubes will now glow a green color; this is followed by the volume setting indication starting at zero, then increasing to the last used volume setting. To switch OFF the C12000, press the STANDBY/ON Push-button on the Front Panel or the OFF Push-button on the Remote Control.

Note: For an explanation of the Remote Control Push-button functions, refer to Page 14.



Figure 51

Source Selection

Rotate the Front Panel INPUT Control to select the desired source or press the INPUT Up▲ or Down▼ Push-button on the Remote Control. Refer to figure 52.

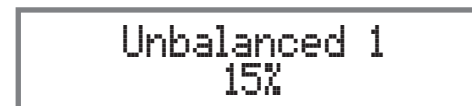


Figure 52

Volume Control

Rotate the Front Panel VOLUME Control or use the VOLUME Up▲ or Down▼ Push-buttons on the Remote Control for the desired listening level.

Trim Functions

The C12000 has nine different Trim Selections with Adjustments. The Trim Selections include Balance, Input Trim Level, Output 1, Output 2, Meter Lights, Display Brightness, Phono Cartridge (MC & MM) Loading (when the Input is Selected), and Headphone HXD Mode and Headphone Gain. The Trim Settings are stored in memory independently for each Input Source Selected, except the Meter Illumination, Display Brightness and Headphone Settings of which are the same for all inputs.

Note: Selection and Adjustment of all Trim Functions may be performed by rotating the Front Panel TRIM Control and then use the ADJUST Control to change the setting. Remote Control TRIM Push-Button together with the LEVEL UP / Down Push-button may also be used. Refer to Remote Control diagram on Page 14.

BALANCE

Listening balance varies with different program sources, room acoustics and listening positions relative to the Loudspeakers. Use the Balance (Trim Function) as needed to achieve approximately equal listening volume levels in each Loudspeaker. To adjust the Balance perform the following:

1. Press the TRIM Push-button repeatedly on the Remote Control until “L BALANCE R” appears on the Front Panel Information Display. Refer to figure 53.

Note: The Front Panel TRIM and ADJUST Controls may also be used.



Figure 53

2. Press the LEVEL UP / DOWN Push-buttons on the Remote Control to emphasize the Right Channel (refer to figure 54) or the Left Channel (refer to figure 55).



Figure 54



Figure 55

The Front Panel Display indicates the Balance changes are from 0 to 50dB. After approximately 10 seconds the Information Display returns to indicate the Source Selection and Volume Level. To verify the Balance setting without changing it, use the TRIM Push-button and select Balance.

TRIM LEVEL

Source Components can have slightly different volume levels resulting in the need to readjust the C12000 Volume Control when switching between different sources. The C12000 allows the adjustment of levels for each of the Source Inputs for the same relative volume. To adjust the Trim Level for the currently selected Input Source perform the following steps:

1. Select “INPUT TRIM” as indicated on the Front Panel Information Display. Refer to figure 56.



Figure 56

2. Adjust the Trim Level of each Input to match the average volume level of the Input most frequently listened to. The range of adjustment is $\pm 6.0\text{dB}$ in half dB steps. Refer to figures 57 and 58.



Figure 57

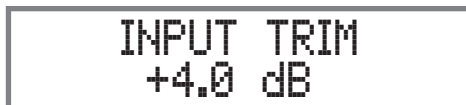


Figure 58

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Volume Level.

OUTPUT 1 (Solid State) and OUTPUT 2 (Tube)

The Rear Panel Output 1 (Solid State) and Output 2 (Tube) Connectors (along with the Power Control Output 1 and 2) can be switched On or Off by using the TRIM FUNCTIONS OUTPUT 1 and OUTPUT

2. The default settings for TRIM OUTPUT 1 and OUTPUT 2 is ON. To change the setting perform the following:

1. Select “OUTPUT 1” as indicated on the Front Panel Information Display. Refer to figures 59



Figure 59

2. Either rotate the Front Panel ADJUST Control or LEVEL UP / Down Push-button on the Remote Control to change the setting for OUTPUT 1 or OUTPUT 2. Refer to figures 60 thru 62.



Figure 60



Figure 61



Figure 62

Note: The OUTPUT 1 and OUTPUT 2 Remote Control Push- buttons may also be used. Refer to the Remote Control diagram on Page 14 for additional information.

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Volume Level.

METER ILLUMINATION

The C12000 Front Panel Meter Illumination may be

switched On or Off by performing the following:

1. Select “METER LIGHTS, On” as indicated on the Front Panel Information Display. Refer to figure 63.



Figure 63

2. Switch Off the Meter Illumination. Refer to figure 64.



Figure 64

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Volume Level.

*Notes: 1. Meter Illumination of recent McIntosh Power Amplifiers will also switch On/Off when connected to the C12000 via a power control cable.
2. Some A/V Processors will provide an On/Off Control Signal when the C12000 Passthru Input Jack is connected to the A/V Processor via the power control cable.*

INFORMATION DISPLAY BRIGHTNESS

The Brightness Level of C12000 Front Panel Information Display can be adjusted from bright to dim by performing the following:

1. Select “DISPLAY BRIGHTNESS” as indicated on the Front Panel Information Display. Refer to figure 65.



Figure 65

2. Reduce the Brightness level by adjusting the TRIM LEVEL. Refer to figure 66.



Figure 66

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Volume Level.

HEADPHONE HXD SELECTION

The C12000 Internal Headphone Amplifier incorporates McIntosh HXD Circuitry bringing acoustical depth and spatiality of music normally heard with loudspeakers, to your headphones. It can be switched On or Off as follows:

1. Select the “HEADPHONE HXD, ___” TRIM FUNCTION. Refer to figures 67 and 68.



Figure 67



Figure 68

2. Select either ON or OFF.

HEADPHONE GAIN SELECTION

The C12000 Internal Headphone Amplifier Circuitry also incorporates three available Ranges of Amplifier Gain, to more closely match the impedance Ω (ohms) of the connected Headphones (16Ω - 40Ω , 40Ω - 150Ω , 150Ω - 600Ω), for the best performance. To select one of the three available ranges perform the following:

1. Select the “HEADPHONE GAIN, 40Ω - 150Ω ”, default setting. Refer to figure 69.



Figure 69

2. If the impedance of the connected Headphones doesn't match within the current setting, select one of the other choices. Refer to figures 70 and 71.



Figure 70



Figure 71

Mute

Press the MUTE Push-button, on the C12000 Front Panel or on the Remote Control, to Mute the Audio in all outputs (Main, Output 1, Output 2 and Headphones) except the FIXED OUTPUT. The Front Panel Information Display will indicate the Source Name and the word MUTE in place of the actual volume setting. Refer to figure 72.



Figure 72

Pressing the Mute Push-button a second time or adjusting the volume control (either the Front Panel or Remote Control) will unmute the C12000.

Trim

Rotate the TRIM Control on the front panel of the C12000 to activate Trim Functions. Rotate the INPUT Control to select the desired Trim Function and then use the ADJUST Control to change the Trim setting.

The Remote Control TRIM and LEVEL UP / DOWN-Push-buttons may also be used. Approximately 10 seconds after Trim Function Selection and/or adjustments have stopped, the C12000 will switch the Trim Mode Off.

Adjust

The Front Panel ADJUST Control is used to make changes to the currently selected TRIM FUNCTION.

HXD

Press the the Front Panel HXD Push-button to activate or de-activate the HXD Circuitry. Refer to “HEADPHONE HXD SELECTION” on this page for additional information.

Output Meters

The C12000 Preamplifier Output Meters indicate the Output Level in Decibels (dB) available at the MAIN, OUTPUT 1 and OUTPUT 2 Connectors/Jacks to drive Power Amplifiers. Refer to figure 73. The Meters are calibrated in dB (decibels) and respond to all the peaks contained in the musical information. A meter reading of 0dB indicates the unit is delivering its rated output.

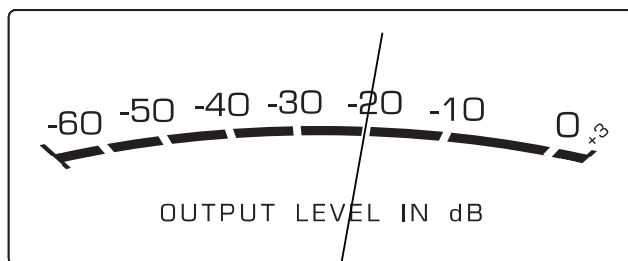


Figure 73

Passthru

The C12000 will automatically turn On and switch to the previously setup Passthru Input when the McIntosh A/V Processor or Multichannel Surround Decoder is turned-on. The Audio Preamplifier Front Panel Alphanumeric Display will indicate “PASSTHRU”.

Refer to figure 74.



Figure 74

The Front Panel Controls and Push-buttons are deactivated when in the Passthru Mode.

Headphones Jack

Connect a pair of dynamic headphones to the Headphones Jack with a 1/4” (0.635cm) stereo phone type plug for private listening. The default setting is for the OUTPUT 1 and OUTPUT 2 Power Amplifier Output Connections to automatically mute, when headphones are connected to the C12000 Front Panel Jack.

How To Make a Recording

1. Select the desired signal source you wish to record by using the Front Panel INPUT Control or using the INPUT UP / DOWN Push-button on the Remote Control.
2. Adjust the record level using the recorder level control and proceed with the recording process.
3. Listen to the playback of the program source just recorded by selecting the Input Source connected to the recorder component output.

Reset of Microprocessors

In the unlikely event the controls of the unit stop functioning, the microprocessors can be reset by performing the following:

1. Press and hold in the STANDBY/ON Push-button until the LED above the STANDBY/ON Push-button illumination is extinguished. Then release the STANDBY/ON Push-button.
2. To switch the C12000 back On press the STANDBY/ON Push-button.

Note: This can be performed with the C12000 On or in the Standby Mode.

PHONO ADJUSTMENTS

When either the Phono 1 or Phono 2 Input is selected, the following additional Trim Functions become available when adjusting the TRIM Control. Use the documentation for your turntable(s) attached to these inputs to find the best settings and match them accordingly.

RESISTANCE

Change the Resistance Load Setting for a selected Phono Cartridge (Phono 1 in this example) by performing the following Steps:

1. Select the Phono 1 Input Source.
2. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Phono 1 RES, 47kΩ” as indicated on the Front Panel Information Display. Refer to figure 75.

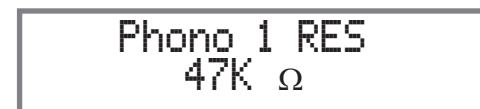


Figure 75

3. Rotate the ADJUST Control to select desired Resistance. The available settings are: 25Ω, 50Ω, 100Ω, 200Ω, 400Ω, 1KΩ, and 47kΩ.

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.

CAPACITANCE

Change the Capacitance Load Setting for a selected Phono Cartridge (Phono 1 in this example) by performing the following Steps:

1. Select the Phono 1 Input Source.
2. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Phono 1 CAP, 100 pF” as indicated on the Front Panel Information Display. Refer to figure 76.

Phono 1 CAP
100 pF

Figure 76

3. Rotate the ADJUST Control to select desired Capacitance. The available settings are: 50pF, 100pF, 150pF, 200pF, 250pF, 300pF, 350pF, and 400pF.

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.

GAIN

To change the Amplification Gain Settings from the default setting for the selected Phono Input, perform the following Steps:

1. Select the desired PHONO Input Source.

Note: Phono 1 was selected for this example.

2. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Phono 1 GAIN, 46 dB” as indicated on the Front Panel Information Display. Refer to figure 77.

Phono 1 GAIN
46 dB

Figure 77

4. To change the current gain setting, rotate the Front Panel ADJUST Control or press the ▲ and ▼ Push-buttons on the Remote Control. The available settings are 40db, 46db, 52db, 58db, and 64db.

After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.

PHONO ADJUSTMENTS (Default Settings)

The following are the default settings for each of the Phono inputs. Phono 1 (PH1) defaults to match common configurations for a Moving Magnet turntable, while Phono 2 (PH2) defaults to match common configurations for a Moving Cartridge turntable. Use the documentation for your turntable(s) attached to these inputs to find the best settings and match them accordingly.

Resistance: 47KΩ, (PH1), 1kΩ (PH2)

Capacitance: 100pF (PH1), 50pF (PH2)

Gain: 46dB (PH1), 64dB (PH2)

MAIN OUTPUT (Solid State OR Tube)

Change which circuitry the Main Output uses (Solid State or Tube). This example assumes the Main Output is currently set to “Solid State”. Perform the following steps to change the circuitry to “Tube”.

1. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Main Output, Solid State” as indicated on the Front Panel Information Display. Refer to figure 78.

Main Output
Solid State

Figure 78

2. Rotate the ADJUST Control to change “Solid State” to “Tube”.

Perform the same steps to change “Tube” to “Solid State.” After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.

ENABLE OR DISABLE OUTPUTS 1 AND 2

Note: Output 1 (I-SS) uses Solid State amplification, Output 2 (2-T) uses Tube amplification.

You can turn On or Off the functionality of the Output 1 and 2 push-buttons from the Trim Menu. Perform the following steps to change Output 1 from On to Off.

1. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Output 1, On” as indicated on the Front Panel Information Display. Refer to figure 79.

Output 1
On

Figure 79

2. Rotate the ADJUST Control to change “On” to “Off”.

Perform the same steps to change “Off” to “On”. The same steps can be performed for Output 2. After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.

ENABLE OR DISABLE TUBE LIGHTS

You can turn On or Off the lights of the Amplifier Tubes from the Trim Menu. Perform the following steps to change Tube Lights from On to Off.

1. Rotate the Front Panel TRIM Control (TRIM) or press the ◀ and ▶ Push-buttons on the Remote Control to select “Tube Lights, On” as indicated on the Front Panel Information Display. Refer to figure 80.

Tube Lights
On

Figure 80

2. Rotate the ADJUST Control to change “On” to “Off”.

Perform the same steps to change “Off” to “On”. After approximately 10 seconds the Information Display returns to indicate the Source Selection and Settings.



Specifications

Frequency Response

+0, -0.5dB from 20Hz to 20,000Hz

+0, -3dB from 10Hz to 100,000Hz

Total Harmonic Distortion

0.005% maximum from 20Hz to 20,000Hz
(High Level Inputs)

0.05% maximum from 20Hz to 20,000Hz
(Phono Inputs)

Rated Output

5V Balanced, 2.5V Unbalanced (Main Outputs)

Maximum Voltage Output

20V RMS Balanced, 10V RMS Unbalanced

Sensitivity (for rated output)

High Level, 450mV Unbalanced, 900mV Balanced
Phono 1 & 2, 0.25mV - 4.5mV
w/ selectable 40-64dB gain

Signal To Noise Ratio (A-Weighted)

High Level - 107dB (Below rated output)
MM Phono - 83dB (Below 5mV input)
MC Phono - 79dB (Below 0.5mV input)

Input Impedance

High Level - 50K ohms Balanced
25K ohms Unbalanced

Maximum Input Signal

High Level, 20V Balanced, 10V Unbalanced
Phono MC, 10mV
Phono MM, 100mV

Voltage Gain

High Level to Main, Output1 and 2: 15dB

High Level to Rec/Fixed Output: 0dB

Phono MM and MC - Selectable 40dB,
46dB, 52dB, 58dB or 64dB

Output Impedance

200 ohms Balanced
100 ohms Unbalanced

Headphone Load Impedance (Selectable)

16 - 40 ohms, 40 - 150 ohms, 150 - 600 ohms

Headphone Voltage Gain (From Main Output)

16 - 40 ohms, 0dB
40 - 150 ohms, 6dB
150 - 600 ohms, 12dB

Headphone Output

150mW minimum from 16 ohms to 600 ohms load

Power Control and Trigger Output

12VDC, 25mA

Tube Complement

10 Tubes, Six - 12AX7A and Four - 12AT7
(per channel, viewed from top window)
High level - one 12AX7A and two 12AT7
(per channel viewed from Front Panel Window)
Four 12AX7A, two per channel

Power Requirements

Field AC Voltage conversion of the C12000 is not possible. The C12000 is factory configured for one of the following AC Voltages:

100 Volts, 50/60Hz at 75 watts
110 Volts, 50/60Hz at 75 watts
120 Volts, 50/60Hz at 75 watts
220 Volts, 50/60Hz at 75 watts
230 Volts, 50/60Hz at 75 watts
240 Volts, 50/60Hz at 75 watts
Standby Power, less than 0.5 watts

Note: Refer to the rear panel of the C12000C Controller for the correct voltage.

Overall Dimensions

Width is 17-1/2 inches (44.45cm)

Height is 6 inches (15.2cm) including feet

Depth is 19 inches (48.3cm) including the Front Panel, Knobs and Cables

Weight

C12000 Controller -

27 pounds (12.3 kg) net,

42 pounds (19.5 kg) in shipping carton

C12000 Preamplifier -

25 pounds (11.3 kg) net,

40 pounds (17.7 kg) in shipping carton

Shipping Carton Dimensions

Width is 27 inches (68.6cm)

Height is 12 inches (30.5cm)

Depth is 25 inches (63.5cm)

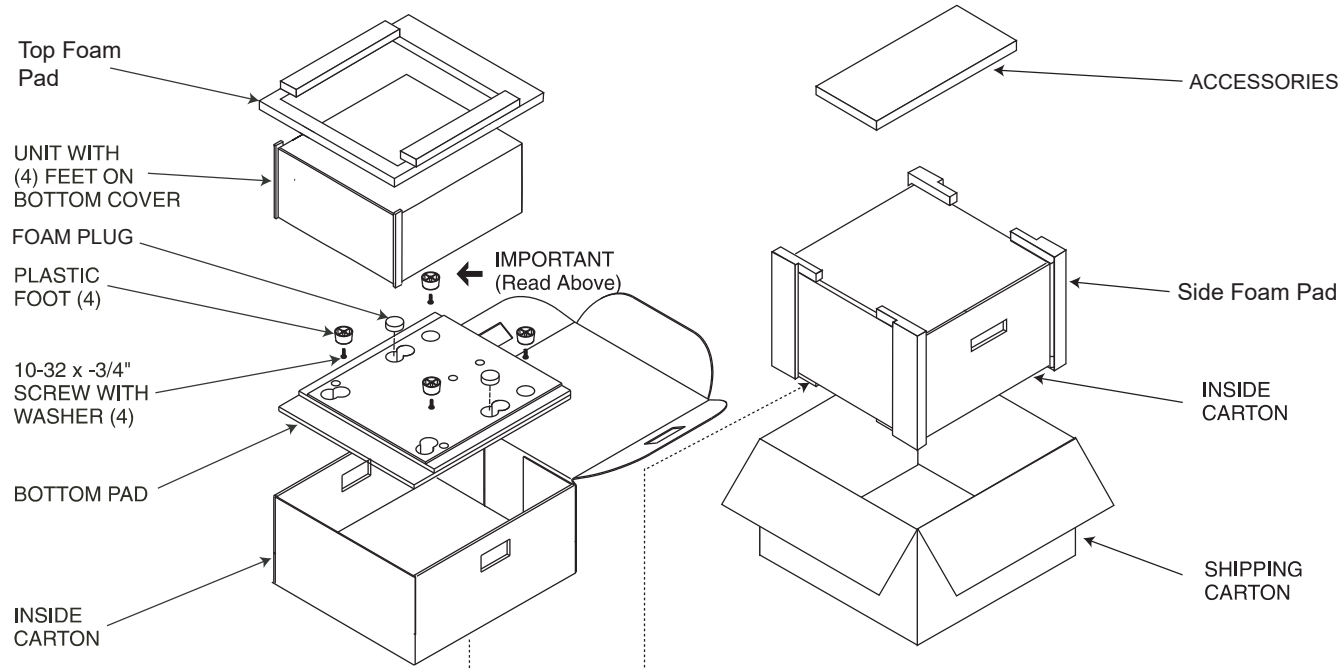
Packing Instructions

In the event it is necessary to repack the equipment for shipment, the equipment must be packed exactly as shown below. It is very important that the four plastic feet are attached to the bottom of the equipment. This will ensure the proper equipment location on the bottom pad. Failure to do this will result in shipping damage.

Use the original shipping carton and interior parts only if they are all in good serviceable condition. If a shipping carton or any of the interior part(s) are needed, please call or write Customer Service Department of McIntosh Laboratory. Refer to Page 3. Please see the Part List for the correct part numbers.

Note: The McIntosh C12000 Controller and C12000 Preamplifier use the same shipping carton. Each unit carton includes separately packaged accessories.

Quantity	Part Number	Description
1	033838	Shipping carton only
2	034669	Side foam pad
1	033836	Inside carton only
1	034414	Top foam pad
1	034576	Bottom pad
4	017937	Plastic foot
4	400159	#10-32 x 3/4" screw
4	404080	#10-7/16" Flat washer





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