



McIntosh Laboratory, Inc. 2 Chambers Street Binghamton, New York 13903-2699 Phone: 607-723-3512 www.mcintoshlabs.com

C53
Audio Preamplifier
Owner's Manual





Important Safety Information is supplied in a separate document “Important Additional Operation Information Guide”

Thank You

Your decision to own this McIntosh C53 Audio Pre-amplifier ranks you at the very top among discriminating music listeners. You now have “The Best.” The McIntosh dedication to “Quality,” is assurance that you will receive many years of musical enjoyment from this unit.

Please take a short time to read the information in this manual. We want you to be as familiar as possible with all the features and functions of your new McIntosh.

Please Take A Moment

The serial number, purchase date and McIntosh Dealer name are important to you for possible insurance claim or future service. The spaces below have been provided for you to record that information:

Serial Number: _____

Purchase Date: _____

Dealer Name: _____

Technical Assistance

If at any time you have questions about your McIntosh product, contact your McIntosh Dealer who is familiar with your McIntosh equipment and any other brands that may be part of your system. If you or your Dealer wish additional help concerning a suspected problem, you can receive technical assistance for all McIntosh products at:

McIntosh Laboratory, Inc.
2 Chambers Street
Binghamton, New York 13903
Phone: 607-723-3512
Fax: 607-724-0549

Customer Service

If it is determined that your McIntosh product is in need of repair, you can return it to your Dealer. You can also return it to the McIntosh Laboratory Service Department. For assistance on factory repair return procedure, contact the McIntosh Service Department at:

McIntosh Laboratory, Inc.
2 Chambers Street
Binghamton, New York 13903
Phone: 607-723-3515
Fax: 607-723-1917

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General Information





1. Refer to pages 7-8 for component(s) connection to the C53 Preamplifier.
2. Do not apply AC Power to the C53 and other Component(s) until they are connected to the C53 so operational malfunctioning does not occur.
3. 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.
4. The C53 internal Digital to Analog Converter Circuitry is designed to decode PCM, DSD and DTS Digital Signals. The Coaxial and Optical Digital Audio Inputs are for PCM Digital Signals, Dolby Signals and DTS Signals. The C53 also decodes USB and HDMI (ARC) Digital Signals. Other Digital Audio Signal Format Types will cause the Audio Outputs of the C53 to be muted and the Front Panel Information Display will indicate an error message.
5. The Audio Sound is measured in units called Decibels and “dB” is the abbreviation.
6. The McIntosh C53 is factory configured for immediate use. It can also be customized to complement the components making up your system. Refer to the C53 “Setup Mode” starting on page 13 for additional information.
7. The Remote Control Supplied with the C53 Preamplifier is capable of operating other components. For additional information go to www.mcintosh-labs.com.
8. The IR Input 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 C53. The signal from a connected External

IR Sensor will have priority over the signal from the Front Panel IR Sensor.

9. For additional information on the C53 and other McIntosh Products please visit the McIntosh Web Site at www.mcintoshlabs.com.

Trademark and License Information

The McIntosh C53 incorporates copyright protected technology that is protected by U.S. patents and other intellectual property rights. The C53 uses the following Technologies:

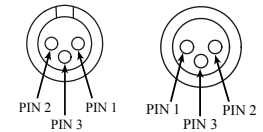
Trademark	License Information
	ASIO is a trademark and software of Steinberg Media Technologies GmbH
	Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories.
	For DTS patents, see http://patents.dts.com . Manufactured under license from DTS, Inc. DTS, the Symbol, DTS and the Symbol together, and Digital Surround are registered trademarks and/or trademarks of DTS, Inc. in the United States and/or other countries. DTS, Inc. All Rights Reserved.
	The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Connector and Cable Information

XLR Connectors

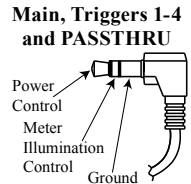
Pin configuration for the XLR Balanced Input and Output Connector. Refer to the diagrams for connections:

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



Power Control and Trigger Connectors

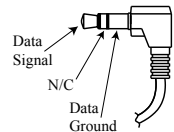
The C53 Power Control Out, Trigger and PASSTHRU Output Jacks send Power On/Off Signals (+12 volt/0 volt) when connected to other Components. An additional connection is for controlling McIntosh Power Amplifiers Output Meters. A 3.5mm stereo mini phone plug is used for connection to the Power Control (Trigger) and PASSTHRU Output.



Note: The Six Foot Cables are available from the McIntosh Parts Department. Part No. 170-202.

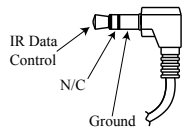
Data Port Connectors

The C53 Data Out Ports send Remote Control Signals to Source Components. A 3.5mm stereo mini phone plug is used for connection.



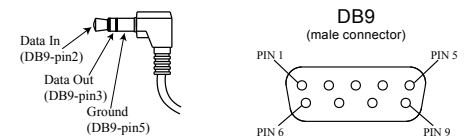
IR IN Port Connectors

The IR IN Port also uses a 3.5mm stereo mini phone plug and allows the connection of other brand IR Receivers to the C53.



RS232 Data Port Cable

The RS232 Data Cable is a 3.5mm stereo mini phone plug to a subminiature DB 9 connector:





Introduction

The McIntosh C53 Audio Preamplifier is one of the finest Preamplifiers ever created with connections for both analog and digital sources. The C53 Outputs have the ability to drive multiple Power Amplifiers. The C53 reproduction is sonically transparent and absolutely accurate. The McIntosh Sound is “The Sound of the Music Itself.”

Performance Features

• **Electromagnetic Input Switching with Level Trim Adjustment**

Digital Logic Circuits drive Electromagnetic Switches on all Inputs and operating functions for reliable, noiseless, distortion free switching. The Analog Inputs can be matched in level, preventing abrupt changes in volume levels.

• **Moving Coil and Moving Magnet Phono Inputs**

The C53 has two precision Phono Preamplifier Circuits, one for Moving Coil Phono Cartridges and the other for Moving Magnet Cartridges. Both phono inputs have selectable loading. The circuits use the latest designs providing the lowest possible noise and distortion. The close tolerance resistors and capacitors used in the RIAA Correction Equalization Circuitry provides an extremely flat frequency response.

• **Digital Audio Inputs**

The Digital Inputs decode PCM and DSD Signals from external sources. Coaxial and Optical Inputs process Digital Signals up to 192kHz with 24-Bit resolution. The Digital MCT Input Circuitry directly decodes SACD/CD signals from an external Transport component. The USB and HDMI Input for streaming audio processes Digital Signals up to 384kHz with 32Bit resolution, decodes up to DSD256 Digital

Signals and DXD 24Bit with a sampling rate up to 384kHz.

• **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 C53 Preamplifier’s Volume and Balance Control Circuitry provides an ideal rate of change with control rotation.

• **Equalizer Controls**

The eight Front Panel Equalizer Controls provide 12dB of boost or cut at their center frequencies. The C53 remembers the Equalizer Circuitry ON/OFF Setting for each input.

• **HXD[®] for Headphones**

The C53 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.

• **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 C53 to become part of a Home Theater Multichannel Sound System.

• **Remote Control with External Sensor Input**

The Remote Control provides control of the C53 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.

• **Special Power Supply**

Fully regulated Power Supplies and a special R-Core Power Transformer ensure stable noise free operation even though the power line varies.

• **Glass Front Panel with LED Illumination**

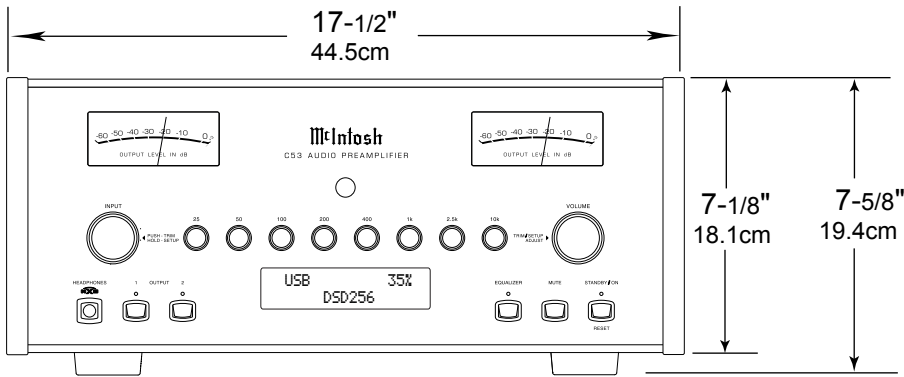
The famous McIntosh Glass Front Panel is evenly Illuminated by multiple extra long life Light Emitting Diodes (LEDs) arranged with a special orientation. The pristine beauty of the C53 will be retained for many years.

HXD[®] is a registered trademark of McIntosh Laboratory, Inc.

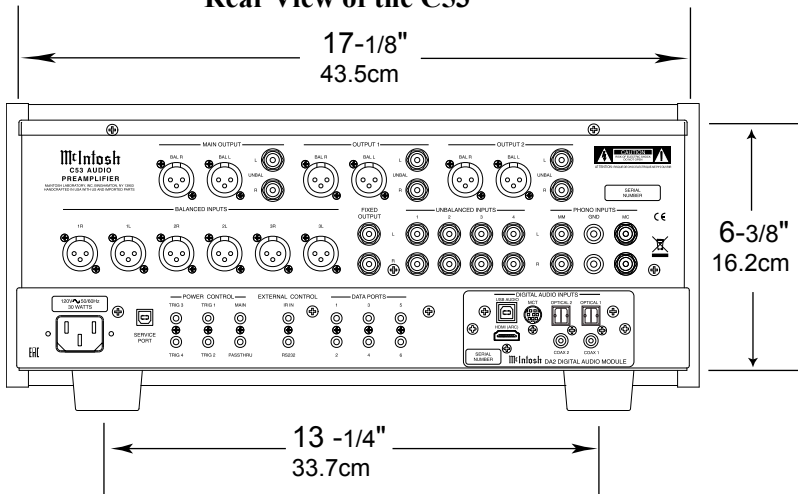
Dimensions

The following dimensions can assist in determining the best location for your C53. There is additional information on the next page pertaining to installing the C53 into cabinets.

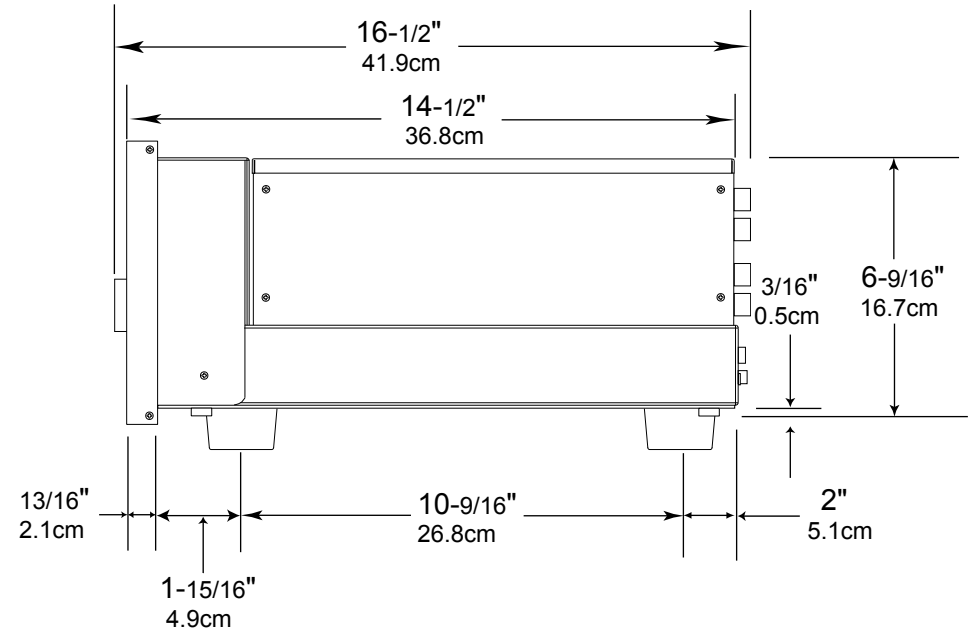
Front View of the C53



Rear View of the C53



Side View of the C53



Installation

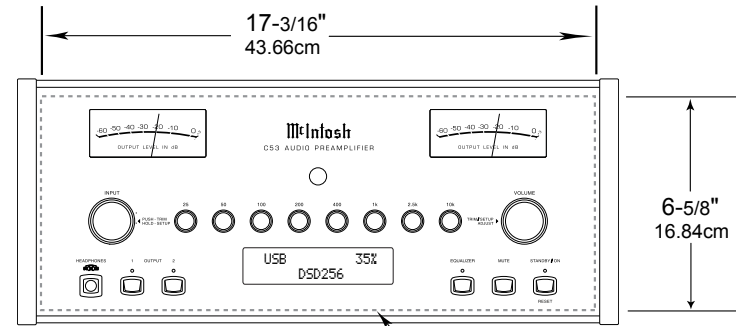
The C53 can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in a piece of furniture or cabinet of your choice. The four feet may be removed from the bottom of the C53 when it is custom installed as outlined below. The four feet together with the mounting screws should be retained for possible future use if the C53 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 C53. Cool operation ensures the longest possible operating life for any electronic instrument. Do not install the C53 directly above a heat generating component such as a high powered amplifier. 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.

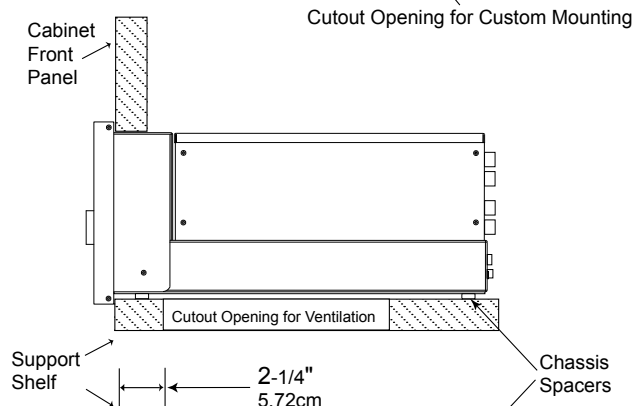
A custom cabinet installation should provide the following minimum spacing dimensions for cool operation.

Allow at least 2 inches (5.1cm) 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.

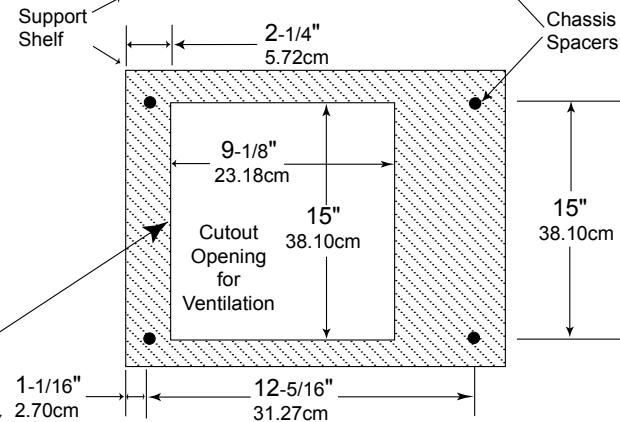
**C53 Front Panel
Custom Cabinet Cutout**



**C53 Side View
in Custom Cabinet**



**C53 Bottom View
in Custom Cabinet**

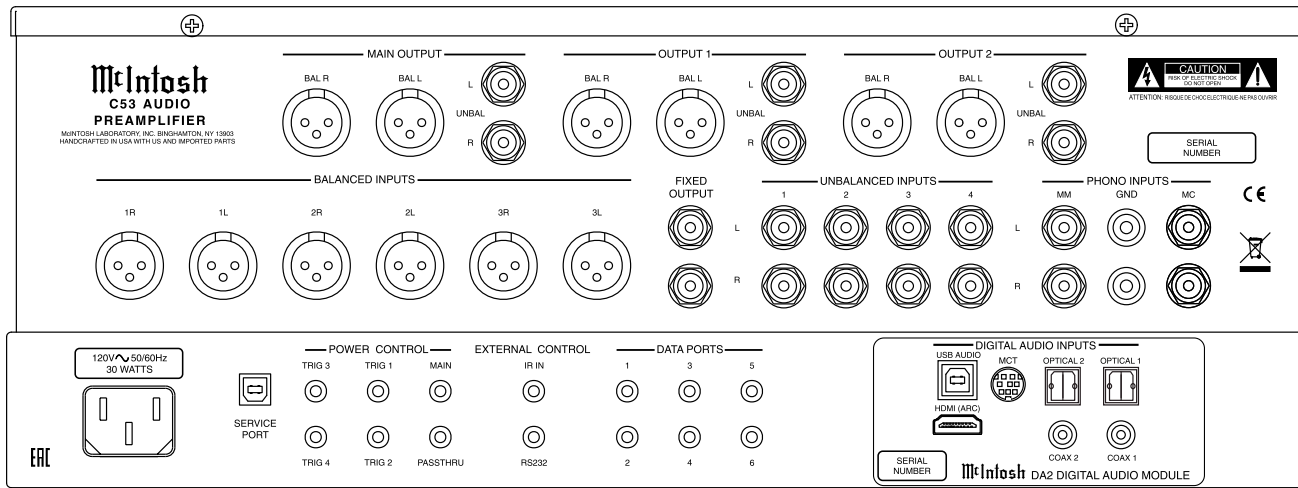


Note: Center the cutout horizontally on the unit. For purposes of clarity, the above illustration is not drawn to scale.

Rear Panel Connections

The identification of Rear Panel Connections for the C53 Audio Preamplifier is located on a separate folded sheet contained in the Owner's Manual Packet. Refer to separate sheet "Mc2B" for the Rear Panel Connections.

C53 Audio Preamplifier Rear Panel



Connecting Components

The C53 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 C53 Remote Control HR085. With an external sensor connected to the C53, remote control operation of the system is possible from another room and/or when the C53 is located in a cabinet with the doors closed.

The connection instructions below, together with the C53 Input/Output/Control Connection Diagrams located on the separate folded sheets "Mc1A/1B and Mc2A", are an example 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 3.

Notes: 1. The C53 allows renaming of the Audio Inputs Names as indicated on the Front Panel Information Display. Example, "UNBAL 1" may be changed to "TUNER" or your own personal preference. Refer to Setup "Rename Input" on page 14.

2. For convenience, an "Input Assignment Chart" on a separate sheet "Mc5A/5B" has been provided to keep track of changes.

Power Control Connections:

1. Connect a Control Cable from the C53 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 Transport Power Control In Jack.
4. Connect a Control Cable from the SACD Transport Power Control Out Jack to the Tuner Power

Control In Jack.

5. Connect a Control Cable from the Tuner Power Control Out Jack to the Media Bridge Pwr Ctrl (Power Control) In Jack.
6. Connect a Control Cable from the C53 POWER CONTROL TRIG (Trigger) 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 Triggers 1 and 2 will be active when the C53 OUTPUT 1 and/or 2 is selected by the Front Panel or Remote Control Push-buttons.*

7. Optionally, connect a Control Cable from the C53 POWER CONTROL TRIG (Trigger) 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 C53 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 to change the Data Ports Default settings for the "Tuner" Input. Refer to Setup "Data Port Assignment" on page 16.
10. Connect a Control Cable from the C53 CD DATA PORT 3 Jack to the SACD/CD Transport Data In Jack.
11. Connect a Control Cable from the C53 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 C53 IR Input Connector to the external Sensor. For additional information, refer to "General Information" note 8 on page 3.

Audio Connections:

14. Connect an Audio Cable from the C53 UNBALANCED INPUT 1 (Tuner) Jacks to the Tuner Unbalanced Output Jacks.
15. Using the "DIN Cable-Twisted Pair" cable (supplied with a MCT Transport) from the C53 MCT DIGITAL AUDIO INPUT connector to the SACD/CD Transport DIN Output connector.
16. Connect an XLR Audio Cable from the C53 BALANCED INPUT 1 connectors to the Media Bridge Balanced Output connectors.
17. Connect a Digital Coaxial Cable from the C53 DIGITAL AUDIO INPUT COAXIAL Jack to the Digital Audio Player Digital Coax Output Jack.
18. Connect the Audio Cables coming from the Turntable to the C53 MC PHONO INPUT Jacks.
Note: If the Turntable has a Moving Magnet Cartridge, connect the audio cables to the C53 MM PHONO INPUT instead of the MC Input.
19. Connect XLR Audio Cables from the C53 BALANCED OUTPUT 1 connectors (Left and Right) to the Power Amplifiers (Primary Room) Balanced (Left and Right) Inputs.
20. Optionally, connect XLR Audio Cables from the C53 BALANCED OUTPUT 2 connectors (Left and Right) 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 20.

Optional "PassThru" Connections:

22. Connect XLR Audio Cables from the A/V Processor, Front Channels (Left and Right) Balanced Output connectors to the C53 BALANCED INPUT 2 connectors.
Note: Refer to Setup "PASSTHRU" on page 17 to activate the BALANCED 2 Input.
23. Connect a Control Cable from the C53 PASSTHRU Jack to A/V Processor Power Control Zone ZA Jack.

Optional USB Connection:

24. Connect a USB cable with (type A to type B) connectors from the C53 USB DIGITAL AUDIO INPUT connector to an available USB connector on the computer.

Optional HDMI (ARC) Connection:

25. Connect a HDMI cable with connectors from the C53 HDMI (ARC) DIGITAL AUDIO INPUT connector to an available HDMI (ARC) connector on the TV/Monitor.

Ground Connections:

26. Connect the Ground Cable coming from the Turntable to the C53 PHONO INPUT GND Binding Post.

AC Power Cord Connections:

27. Connect the C53 to a live AC Outlet using the supplied Power Supply Cord.



LEDs illuminate during the time a remote command is sent and when programming the remote control

Select the DEVICE to issue a remote control command to

SETUP Push-button is used as a "Shift Key" to select a function with blue color nomenclature

Selects AM Tuner Operating Functions, select Output 1 when used with the SETUP/shift Push-button and Track Selection on certain McIntosh CD Players

Press the Trim Push-button and then the LEVEL UP Push-button to select and adjust various functions. MENU is used with McIntosh Models displaying choices on a video screen

Activates the TRIM Mode. GUIDE is used with McIntosh Models displaying instructions on a video screen

Press the Trim Push-button and then the LEVEL DOWN Push-button to select and adjust various functions. INFO is used with McIntosh Models displaying information on a video screen

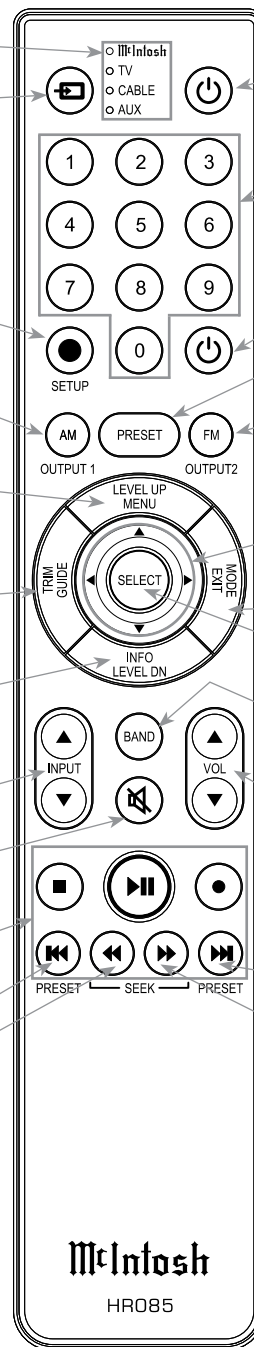
Scrolls through the available INPUTS

Mutes the audio

Selects transport functions of STOP, PLAY/PAUSE, RECORD, BACK for the previous-selection, FAST-REVERSE, FAST-FORWARD and NEXT for the next selection

Selects Previous Tuner Station PRESET

Tuner scans Down the dial to SEEK the next Station



Press to Power the Preamplifier ON

Use to select tuner presets, direct access an AM/FM Station Frequency, disc tracks or any numbered operation

Press to Power the Preamplifier OFF

Direct access to stored Tuner PRESETS when used with the numeric Push-buttons (0 thru 9)

Selects FM Tuner Operating Functions, select Output 2 when used with the SETUP/shift Push-button and Track Selection on certain McIntosh CD Players

Use ▲ and ▼ to tune Up or Down the AM/FM Dial, use ► and ◀ for the next or previous HD Radio Program (where applicable)

EXIT the TRIM Menu and is used with McIntosh Models displaying information or choices on a video screen

Used to SELECT/Enter the indicated choice

Press to change broadcast bands on a connected Tuner. Select certain functions on a variety of McIntosh Models

Adjusts the VOLUME level up or down


Selects Next Tuner Station PRESET

Tuner scans Up the dial to SEEK the next Station

Note: Push-buttons whose function is not identified above are for use with other McIntosh Products.

How to use the Remote Control

The supplied C53 Remote Control (HR085) is capable of directly controlling the functions of contemporary McIntosh Source Components connected to the C53 via the Data Ports.

- Notes:*
1. If at any time the C53 seems unresponsive to the HR085 Remote Control Commands, press the  DEVICE Push-button to select **McIntosh** first.
 2. For additional information on using the HR085 Remote Control with the McIntosh Model, please refer to the "How to Operate" starting on page 22.
 3. For additional information on assigning the Data Ports, refer to "How to Setup" on page 13.

Trim

Press the TRIM Push-button until the desired Trim function (Balance, Trim Level, etc.) appears on the C53 Front Panel Display, then press the LEVEL Up or Down Push-button to adjust the Trim setting.

Note: Press the TRIM Push-button to recall the last Trim function selected. For additional information on using the Trim Functions refer to "How to Operate" pages 22-24.

Output Selection

Press the BLUE (Setup) Push-button followed by the AM (Output 1) or FM (Output 2) Push-button, to control the Rear Panel Audio OUTPUTS 1, 2 (ON or OFF) and Power Control TRIG 1 / TRIG 2.

Note: For additional information on assigning the Outputs (1 and 2) and Power Control Triggers (1 and 2) refer to page 16.



Front Panel Displays, Controls, Push-buttons and Jack

INPUT Control used to select a source for listening and recording. The control is also used to enter the TRIM or SETUP Modes and select the various functions

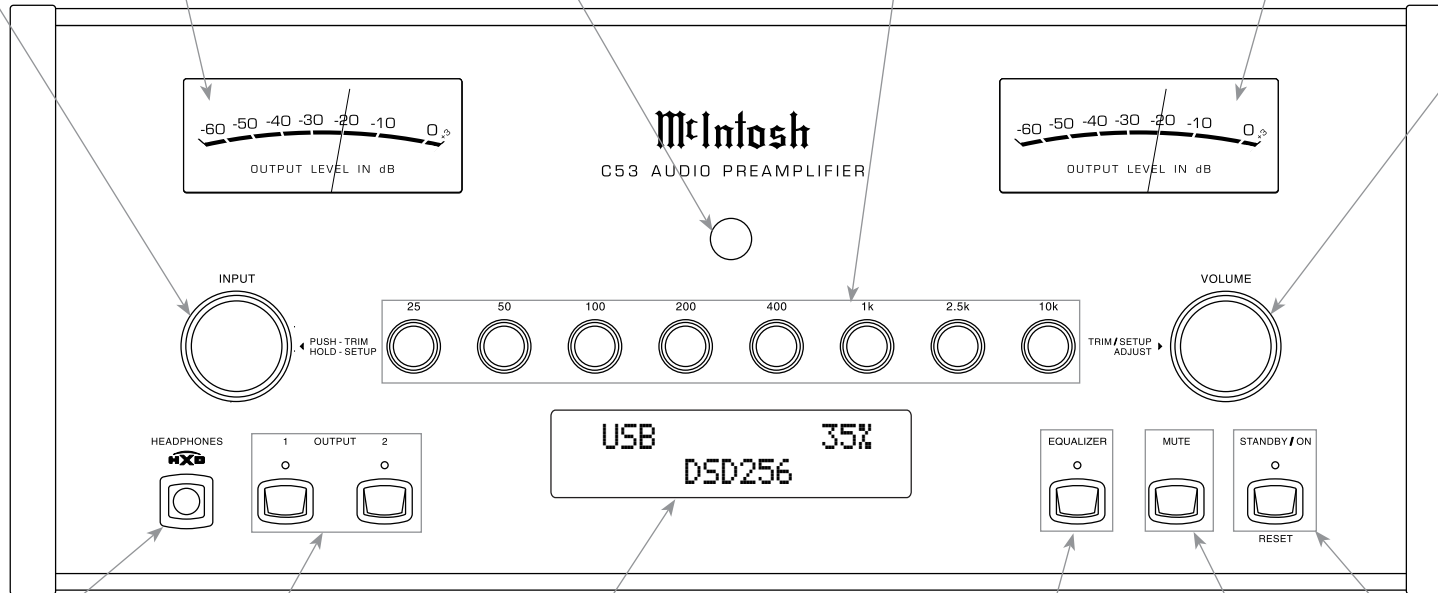
IR Sensor receives commands from a Remote Control

Meter indicates the Right Channel Output of the Preamplifier

Meter indicates the Left Channel Output of the Preamplifier

EQUALIZER Controls increase or decrease the volume levels at the Center Frequencies of 25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1,000Hz, 2,500Hz and 10,000Hz

VOLUME Control allows adjustment of the listening level for both channels. Also used to change the various TRIM and SETUP Functions



Connection for low impedance dynamic headphones, for private listening

INFORMATION DISPLAY indicates the Sources, Volume, other Audio Settings, Operational Functions and Setup Mode Settings

MUTE Push-button mutes the audio from the Loudspeakers and Headphones

OUTPUT 1 and 2 Push-buttons with indicators, switch the Preamplifier Outputs 1 and 2 On or Off

EQUALIZER Push-button with indicator, when de-activated the audio signal bypasses the Equalizer Controls

STANDBY/ON Push-button with indicator, switches the C53 ON or OFF (Standby) and resets the microprocessors

How to Operate the Setup Mode

Your McIntosh C53 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 C53 Front Panel Illustration on the previous page while performing the following steps.

Note: If the C53 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 C53. The C53 will go through a brief startup initialization with the Front Panel Information Display indicating the last used source and volume setting. This is followed by the volume setting indication starting at zero and then increasing to the last used volume setting. Refer to figure 1.



Figure 1

2. Press and hold in the INPUT Control until the Front Panel Information Display indicates “C53 V1.00 - S/N: AHH_____” (or higher Firmware version). Refer to figure 2.



Figure 2

3. Rotate the INPUT Control to select the next Setup Mode Menu item, “SETUP: Inputs, (Hold INPUT)”. 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 and hold in the INPUT Control and the Front Panel Display will revert back to its normal display. Refer to figure 1.

Default Settings

The Default Settings Chart below indicates the Function Name, Default Setting and the Page Number for additional information.

Default Settings		
Function Name	Setting	Page No.
C53	V_ _ _	13
DA2	V_ _ _	13
INPUTS	On / Rename	13-15
OUTPUTS (1 & 2 & Headphones)	Switched	15
POWER CONTROL TRIGGERS	Various Settings	16
DATA PORTS (1 thru 4)	All Data	16
PASSTHRU	OFF	17
HDMI CEC (Consumer Electronic Control)	Control Command	17
HDMI CEC Power	Power On or Off	17
Lip Synchronize Mode (Video and Audio)	Activate or Deactivate	18
Digital Gain (for HDMI, Optical 1 & Optical 2)	Input Comparison	18
Comm Port Baud Rate	115200 Baud	18
Remote Control Codes	Normal	19
IR Sensor	Enabled	19
Power Mode	Enabled	19
Factory Reset	Default Settings	20

Firmware Version

The C53 functionality is controlled by internal software that is known as Firmware. There are two Firmware Identification Numbers for the C53. The first Firmware Number is for the Main Circuitry of the C53 and can be identified at any time by utilizing the

Setup Mode.

1. Press and hold in the INPUT Control 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.

To view the second Firmware Number, which is for the Digital Audio Circuitry of the C53, perform the following steps:

3. Press and hold in the INPUT Control to enter Setup Mode.
4. Rotate the INPUT Control until the Front Panel Information Display indicates “DA2 Firmware, V1.00” (or higher Digital Audio Firmware version). Refer to figure 4.



Figure 4

5. To exit the Setup Mode, press the INPUT Control.

Input Settings

The C53 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 UNBAL 3 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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2.

Input Settings, con't

2. Rotate the INPUT Control until “SETUP: Inputs, (Hold INPUT)” appears on the Information Display. Refer to figure 3 on page 13.
3. Press and hold in the INPUT Control until “SETUP: UNBAL 3, On/Name (Hold INPUT)” appears on the Display. If necessary rotate the INPUT Control to select the UNBAL 3 Input. Refer to figure 5.



Figure 5

4. To switch the UNBAL 3 Input Off, rotate the VOLUME Control Counterclockwise until the display indicates “SETUP: UNBAL 3, Off”. Refer to figure 6.



Figure 6

5. Exit the SETUP Mode by several presses of the INPUT Control.

In the following example, the UNBAL 3 Input will be switched On.

Notes: 1. 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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2, on page 13.
7. Rotate the INPUT Control until “SETUP: Inputs, (Hold INPUT)” appears on the Information Display. Refer to figure 3, on page 13.
8. Press and hold in the INPUT Control until “SETUP: UNBAL 3, Off” appears on the Display. If necessary rotate the INPUT Control to select the UNBAL 3 Input. Refer to figure 6.

9. To switch the UNBAL 3 Input On, rotate the VOLUME Control until the display indicates “SETUP: UNBAL 3, On / Rename”
10. Exit the SETUP Mode by several presses of the INPUT Control.

RENAME INPUT:

In the following example, the BALANCED 1 (BAL 1) Input will be renamed to match up with the component connected (refer to page 8, step 16). The C53 Default Input Names (UNBAL 1, BAL 1, COAX 1, etc.) as indicated on the Front Panel Display can be customized to a different name up to ten 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 BAL 1 Input will be renamed to “MEDIA BRDG”.

11. Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2, on page 13.
12. Rotate the INPUT Control until “SETUP: Inputs, (Hold INPUT)” appears on the Information Display. Refer to figure 7.



Figure 7

13. Press and hold in the INPUT Control until “SETUP: BAL 1, On/Name (Hold INPUT)” appears on the Display. If necessary rotate the INPUT Control to select the BAL 1 Input. Refer to figure 8.



Figure 8

14. Press and hold in the INPUT Control until “RENAME: BAL 1, >BAL 1 <” appears on the

Display. The character “B” is flashing to indicate it is ready to be changed. Refer to figure 9.



Figure 9

15. Rotate the VOLUME (ADJUST) Control to change the character “B” to “M”. Refer to figure 10.



Figure 10

16. Rotate the INPUT Control until the character “A” is flashing, then rotate the VOLUME (ADJUST) Control to change the character “A” to “E”. Refer to figure 11.



Figure 11

17. Rotate the INPUT Control until the character “L” is flashing, then rotate the VOLUME (ADJUST) Control to change the character “L” to “D”. Refer to figure 12.



Figure 12

18. Rotate the INPUT Control until the “_” empty space to the right of character D is flashing, then rotate the VOLUME (ADJUST) Control to change the “_” empty space to character to “I”. Refer to figures 13 and 14.



Figure 13



Figure 14

19. Repeat steps 15 thru 18 until the new name of “RENAME: BAL 1, MEDIA BRDG” is indicated on the Front Panel Display. Refer to figures 13 thru 20.



Figure 15



Figure 16



Figure 17



Figure 18



Figure 19



Figure 20

20. To save the new name, press and hold in the INPUT Control until “SETUP: MEDIA BRDG , ON / Name (Hold INPUT)” appears on the Front Panel Information Display. Refer to figure 21.



Figure 21

21. Exit the SETUP Mode by several presses of the INPUT Control.

Note: For convenience, an “Input Assignment Chart” on a separate sheet “Mc5A/5B” has been provided to keep track of changes.

Output Settings

The Output Settings provide the ability to change how the C53 Output 1, Output 2 and Headphones function. OUTPUT 1 and 2:

By default OUTPUT 1 and 2 are set to go On/Off by using the Front Panel OUTPUT 1 and 2 Push-buttons or by using 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 OUTPUT 1 and 2 Push-button settings, perform the following:

1. Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until “SETUP: Outputs, (Hold INPUT)” appears on the Information Display. Refer to figure 21.



Figure 21

3. Press and hold in the INPUT Control until “SETUP: OUTPUT 1, Switched” appears on the Display. Refer to figure 22.



Figure 22

4. Rotate the VOLUME (ADJUST) Control to change from the “Switched” setting to “Unswitched”. Refer to figure 23.



Figure 23

5. In a similar manner, perform steps 3 and 4 to change the OUTPUT 2 setting. Refer to figures 24 and 25.



Figure 24



Figure 25

The C53 Default Setting for using Headphones is to automatically mute all the Output Connectors when the Headphone Cable Plug is inserted into the C53 Front Panel HEADPHONES Jack. There are two available settings:

- Mute All Outputs
- Mute No Outputs

6. Rotate the INPUT Control until “SETUP: HEADPHONES, Mute All Outputs ” appears on the Information Display. Refer to figure 26.



Figure 26

7. Rotate the VOLUME (ADJUST) Control to change the current HEADPHONES setting from “SETUP: HEADPHONES, Mute No Outputs”. Refer to figures 27.

SETUP: HEADPHONES
Mute No Outputs

Figure 27

- Exit the SETUP Mode by several presses of the INPUT Control.

Power Control Triggers

The C53 has four Power Control Triggers Connections. When the C53 Is On, the Triggers are either activated or deactivated. Trigger 1, 2, 3 and 4 settings can be set for a variety of selected Inputs and different Internal Operation Functions. These settings will control the Operational Power to the components connected to the various C53 Trigger Output Connectors. Perform the following steps to setup the Trigger Functions:

- Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
- Rotate the INPUT Control until “SETUP: Triggers, (Hold INPUT)” appears on the Information Display. Refer to figure 28.

SETUP: Triggers
(Hold INPUT)

Figure 28

- Press and hold in the INPUT Control, “SETUP: TRIGGER 1, Main” appears on the Information Display. Refer to figure 29.

SETUP: TRIGGER 1
Main

Figure 29

Rotating the INPUT Control allows selection of “SETUP: TRIGGER 2, Main”, “SETUP: TRIGGER 3, Main” or “SETUP: TRIGGER 4, Main”.

- Rotate the INPUT Control to return the “SETUP: TRIGGER 1, Main”.
- Rotate the VOLUME Control and the Information Display will now indicate “SETUP: TRIGGER 1, Output 1”. Refer to figure 30.

SETUP: TRIGGER 1
Output 1

Figure 30

- Then rotate the VOLUME Control again and the Information display will now indicate “SETUP: TRIGGER 1, Output 2” followed by “SETUP: TRIGGER 1, Input (Hold INPUT)”. Refer to figure 31.

SETUP: TRIGGER 1
Input (Hold INPUT)

Figure 31

- Now Press and hold in the INPUT Control again, “SETUP: TRIGGER 1, BAL 1: OFF” appears on the Information Display. Refer to figure 32. BAL 1 is one of the C53 Input Sources.

SETUP: TRIGGER 1
BAL 1: OFF

Figure 32

- To active the “BAL 1” Source, rotate the VOLUME Control so the Information Display indicates “SETUP: TRIGGER 1, BAL 1: ON”. Refer to figure 33.

SETUP: TRIGGER 1
BAL 1: ON

Figure 33

- The other inputs that can be assigned for TRIGGER 1 include the following:

BAL 2, BAL 3, UNBAL 1, UNBAL 2, UNBAL 3, UNBAL 4, MM PHONO, MC PHONO, COAX 1, COAX 2, OPTI 1, OPTI 2, USB, MCT, HDMI(ARC).

- The other TRIGGERS can be selected by first returning to “SETUP: TRIGGER 1, Input (Hold INPUT)”, refer to figure 31. Then rotate the INPUT Control to select TRIGGER 2, TRIGGER 3 or TRIGGER 4.
- Then repeat steps 8 and 9 to select the desired the desired inputs for TRIGGER 2, TRIGGER 3 or TRIGGER 4.

Data Ports

Data Ports Connections between the C53 and a McIntosh Source Component allow for basic function control of the source component using the C53 supplied HR085 Remote Control. By default, all of the four Data Ports are set to send the same Data to the selected source. To dedicate a given Data Port for only one source component (example, source component connected to the BAL 1 Input will be assigned to Data Port 1) perform the following Steps:

1. Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: Data Ports, (Hold INPUT)" appears on the Information Display. Refer to figure 34.



SETUP: Data Ports
(Hold INPUT)

Figure 34

3. Press and hold in the INPUT Control until "SETUP: DATA PORT 1, All Data" appears on the Display. Refer to figure 35.



SETUP: DATA PORT 1
All Data

Figure 35

4. Rotate the VOLUME (ADJUST) Control to select "BAL 1" Input. Refer to figure 36.



SETUP: DATA PORT 1
BAL 1

Figure 36

5. In a similar manner, perform steps 3 and 4 to assign any additional Data Ports.
6. Exit the SETUP Mode by several presses of the INPUT Control.

Passthru

When the C53 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 C53 and onto its associated Power Amplifier(s). The Setup Mode allows selection of the specified C53 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 2 Input Connectors on the C53. Refer to pages 7 and 8 for additional connection information.

Note: The Phono and Digital Inputs are not assignable as a Passthru Input.

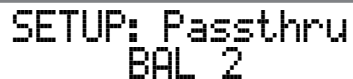
1. Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: Passthru, OFF" appears on the Information Display. Refer to figure 37.



SETUP: Passthru
OFF

Figure 37

3. Rotate the VOLUME (ADJUST) Control to select "BAL 2" Input. Refer to figure 38.



SETUP: Passthru
BAL 2

Figure 38

4. Exit the SETUP Mode by several presses of the INPUT Control.

HDMI (ARC) and (CEC)

The C53 HDMI Input Connector has (ARC) Audio Return Channel Circuitry, allowing the Audio Selection and Control Command of HDMI TV/Monitor Devices. To deactivate the Consumer Electronics Control (CEC) of the HDMI Devices connected to TV/Monitor HDMI inputs, perform the following steps:

1. Press and hold in the INPUT Control to change the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: HDMI CEC, ON" which is the default setting, appears on the Information Display. Refer to figure 41.



SETUP: HDMI CEC
ON

Figure 41

3. To deactivate the Consumer Electronics Control (CEC) of the HDMI Devices connected to the TV/Monitor, rotate the VOLUME Control until "SETUP: HDMI CEC, OFF" appears on the Information Display. Refer to figure 42.



SETUP: HDMI CEC
OFF

Figure 42

To prevent the (CEC) Circuitry from switching AC Power Off to the C53, change the C53 "SETUP: HDMI CEC PWR, ON" to "SETUP: HDMI CEC PWR, OFF". Refer to figures 43 and 44:



SETUP: HDMI CEC PWR
ON

Figure 43



SETUP: HDMI CEC PWR
OFF

Figure 44

Lip Sync Mode (ARC)

The C53 HDMI Input Connector (ARC) Audio Return Channel Circuitry, also has another control function. When listening and viewing a TV/Monitor HDMI Input Signal, the ARC circuitry provides a synchronized Video and Audio TV/Monitor Signal. To switch Off the AUTO Synchronised Video and Audio TV/Monitor Signal, perform the following steps:

1. Press and hold in the INPUT Control to change the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until “SETUP: Lip Sync Mode, Auto” which is the default setting, appears on the Information Display. Refer to figure 45.

Figure 45

3. To deactivate the (CEC) Consumer Electronics Control of the Lip Sync Mode, rotate the VOLUME Control until “SETUP: Lip Sync Mode, Manual” appears on the Information Display. Refer to figure 46.

Figure 46

Digital Gain

The C53 offer Digital Gain Adjustments for the HDMI, OPTICAL 1 (OPT1) and OPTICAL 2 (OPT2) Inputs. The change in gain of a specific Digital Input, will produce a change in playback volume of the music. To change the gain for the HDMI Input perform the following steps:

1. Press and hold in the INPUT Control to change the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until “SETUP: Digital Gain (Hold INPUT)” which is the default setting, appears on the Information Display. Refer to figure 47.

Figure 47

3. Press the INPUT Control to first select the HDMI Digital Gain Setting of which the default is +15 dB with 1dB Gain Steps. Refer to figure 48.

Figure 48

4. The gain can be reduced by rotating the Volume Control counterclockwise to reduce the gain downway from +15 dB all the way to 0dB. Refer to figures 49 & 50.

Figure 49

Figure 50

The OPT1 and OPT2 Inputs adjustments operate differently then how the past HDMI Digital Gain adjustment operates. Perform the following steps:

5. Press and hold in the INPUT Control to change the SETUP MODE. Refer to figure 2 on page 13.
6. Rotate the INPUT Control until “SETUP: Digital Gain (Hold INPUT)” which is the default setting, appears on the Information Display. Refer to figure 47.

Figure 47

7. Press the INPUT Control and then rotate the INPUT Control Clockwise to select the OPT1 0 dB Gain or OPT2 0 dB and the gain is adjustable with 1dB Gain steps. Refer to figure 51. 0 dB is the default setting for the Optical 1 and Optical 2.

Figure 51

8. The gain can for OPT1 1 or OPT2 2 Inputs can be increased by rotating Volume Control clockwise to increase the gain from 0 dB with an increase all the way up to +15 dB from 0 dB. Refer to figures 52 & 53.

Figure 52

Figure 53

Comm Port Baud Rate

The C53 may be remotely controlled from other equipment connected to the Rear Panel RS232 Jack. The speed at which the C53 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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: RS232, 115200 Baud" appears on the Information Display. Refer to figure 54.



SETUP: RS232
115200 Baud

Figure 54

3. Rotate the VOLUME (ADJUST) Control to select the desired Baud Rate Speed.
4. Exit the SETUP Mode by several presses of the INPUT Control.

Remote Control Codes

The Remote Control included with the C53 utilizes the NORMAL McIntosh Control Codes. The Second Set of Control Codes the C53 will respond to is referred to as the ALTERNATE Codes. The Alternate Codes are used when the C53 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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: IR Codes, Normal" appears on the Information Display. Refer to figure 48.



SETUP: IR Codes
Normal

Figure 48

3. Rotate the VOLUME (ADJUST) Control to the Alternate Codes. Refer to figure 49.



SETUP: IR Codes
Alternate

Figure 49

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/us/Products/pages/ProductDetails.aspx?CatId=preamplifiers&ProductId=C53>

5. Exit the SETUP Mode by several presses of the INPUT Control.

IR Sensor

The C53 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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until "SETUP: Front IR, Enabled" appears on the Information Display. Refer to figure 50.



SETUP: Front IR
Enabled

Figure 50

3. Rotate the VOLUME (ADJUST) Control to select "Disabled". Refer to figure 51.



SETUP: Front IR
Disabled

Figure 51

4. Exit the SETUP Mode by several presses of the INPUT Control.

Power Mode

The C53 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 user activity (includes changes to any of the Operation Functions such as source selection, volume adjustment, etc.) or absence of an audio signal. If it is desirable to disable the Auto Off Feature perform the following steps:

1. Press and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until “SETUP: Auto Off, Enabled” appears on the Information Display. Refer to figure 52.

SETUP: Auto-Off
Enabled

Figure 52

3. Rotate the VOLUME (ADJUST) Control to select “Disabled”. Refer to figure 53.

SETUP: Auto-Off
Disabled

Figure 53

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 and hold in the INPUT Control to enter the SETUP MODE. Refer to figure 2 on page 13.
2. Rotate the INPUT Control until “FACTORY RESET, (Hold INPUT)” appears on the Information Display. Refer to figure 54.

FACTORY RESET
(Hold INPUT)

Figure 54

3. Press and hold in the INPUT Control until “FACTORY RESET, In Progress!” appears on the Information Display, then release the INPUT Control. Refer to figures 55 and 56.

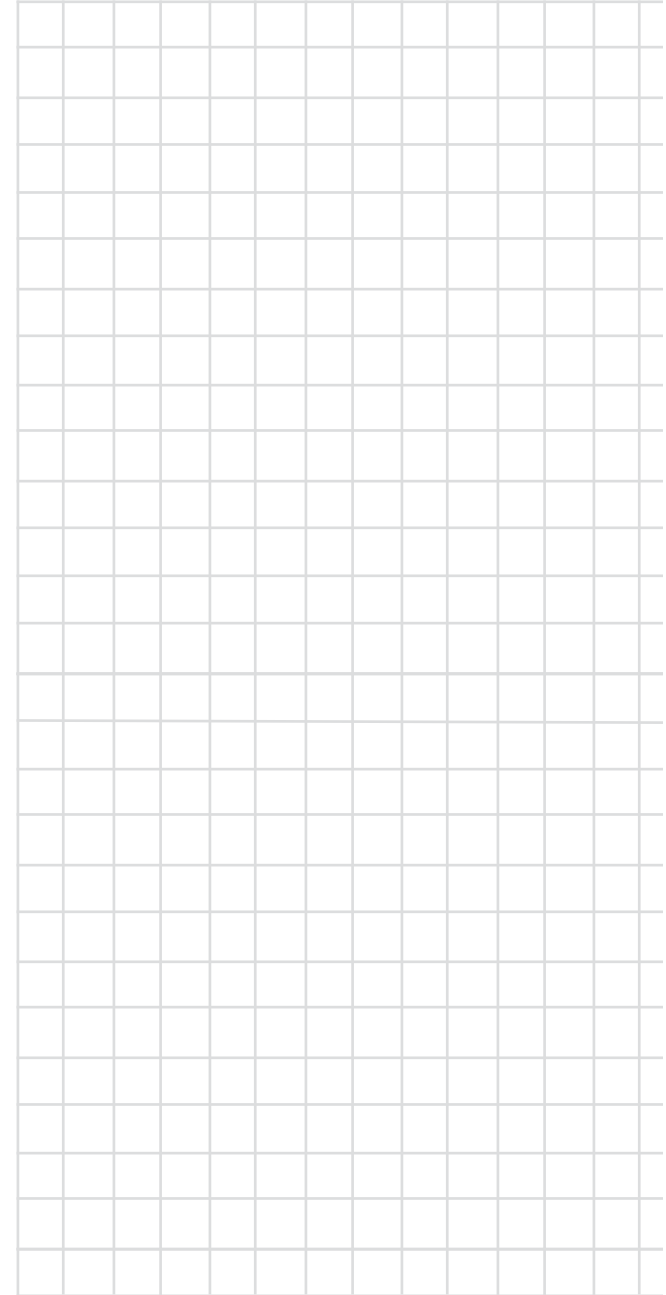
FACTORY RESET
In Progress!

Figure 55

FACTORY RESET
Completed!

Figure 56

4. Press the Front Panel STAND/BY Push-button to switch the C53 on.







How to Operate the C53

Power On and Off

The Red LED above the STANDBY/ON Push-button lights to indicate the C53 is in Standby mode. To switch ON the C53, press the STANDBY/ON Push-button on the Front Panel or the (Power - Green) Push-button on the Remote Control. The C53 will go through a brief startup initialization with the Front Panel Information Display indicating the last used source and volume setting. This is followed by the volume setting indication starting at zero and then increasing to the last used volume setting. Refer to figures 60, 61, 62 and 63. To switch OFF the C53 press the STANDBY/ON Push-button on the Front Panel or the (Power - Red) OFF Push-button on the Remote Control.

Note: For an explanation of the Remote Control Push-button functions, refer to pages 10 and 11.



Figure 61

Source Selection

Rotate the INPUT Control to select the desired source or press the INPUT Up▲ or Down▼ Push-button on the Remote Control. Refer to figures 60, 62 and 63.



Figure 62

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. Refer to figures 60 and 63.

Trim Functions

The C53 has nine different Trim Selections with Adjustments. The Trim Selections include Balance, Input Trim Level, Equalizer Mode, Mono/Stereo Mode, Amplifier Meter Lights, Display Brightness, Phono Cartridge (MC & MM) Loading (when the Input is

Selected) and when Headphones are connected, HXD Mode. The Trim Settings are stored in memory independently for each Input Source Selected, except the Meter Illumination and Display Brightness settings of On or Off, which are the same for all inputs.

Note: Selection and Adjustment of all Trim Functions may be performed by pressing the Front Panel INPUT Trim Control and then rotating it to select the desired Trim Function. Then use the VOLUME Adjust Control to change the setting. Remote Control TRIM Push-Button together with the LEVEL UP / LEVEL DN Push-button may also be used. Refer to figures 60 and 63.

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 Con-



Figure 64

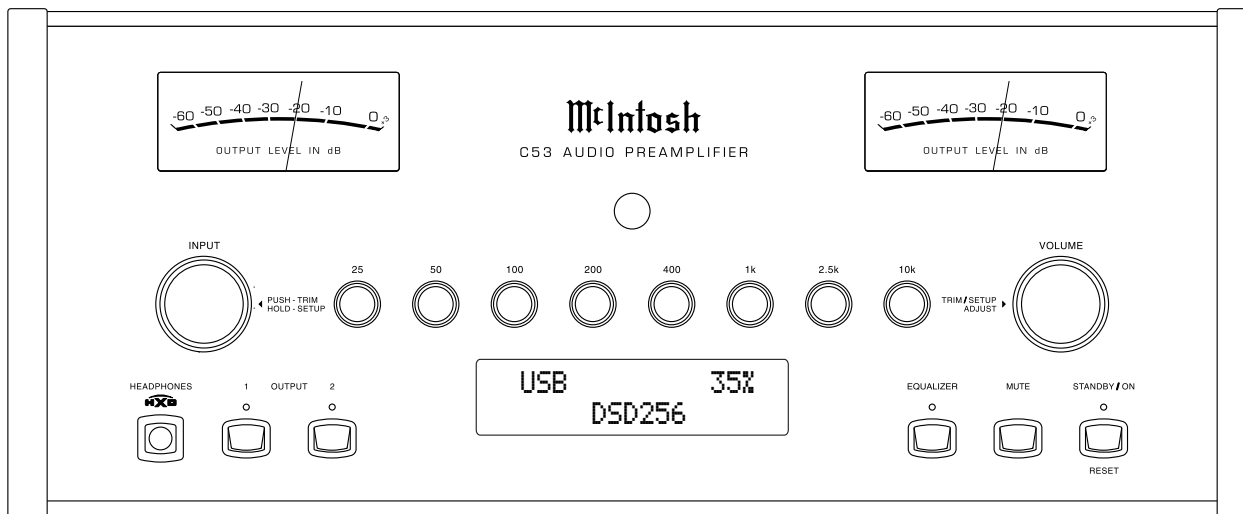


Figure 60

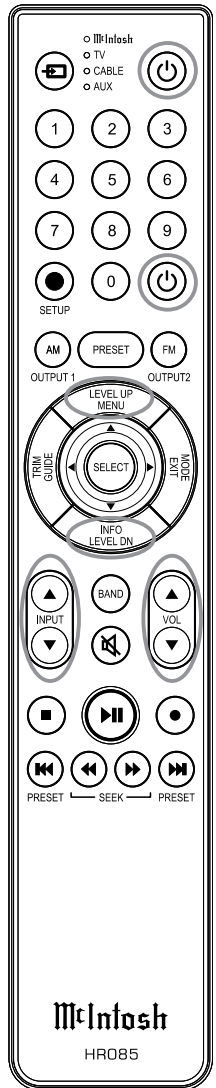


Figure 63

trol until “L BALANCE R” appears on the Front Panel Information Display. Refer to figure 64.

Note: The Front Panel INPUT Trim and VOLUME Adjust Controls may also be used.



Figure 65



Figure 66

2. Press the LEVEL UP / DOWN Push-buttons on the Remote Control to emphasize the Right Channel (refer to figure 65) or the Left Channel (refer to figure 66).

The Front Panel Display indicates the Balance changes are from 0 to 50 dB. After approximately 4 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 C53 Volume Control when switching between different sources.

The C53 allows the adjustment of levels for each of the Source Inputs for the same relative volume. To adjust

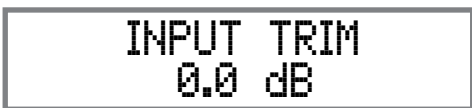


Figure 67

the Trim Level for the currently selected Input Source perform the following steps:

1. Select “INPUT TRIM, 0.0 dB” as indicated on the



Figure 68



Figure 69

Front Panel Information Display. Refer to figures 60, 63 and 67.

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 ± 6.0 dB in half dB steps. Refer to figures 68 and 69.

After approximately 6 seconds the Information Display returns to indicate the Source Selection and Volume Level.

EQUALIZER MODE

The built-in eight band Frequency Equalizer provides more precise adjustment of sound than standard Bass and Treble Controls. By default, the Equalizer is Off for all Input Sources and the Equalizer Circuitry is bypassed. Any Input Source may be assigned to have the Equalizer On when selected. To activate the Equalizer for a given Input Source, perform the following steps:

Note: The audio signal present at the FIXED OUT Jacks is unaffected by the Equalizer settings.

1. Select the desired Input Source.
2. Select “EQUALIZER, Off” as indicated on the Front Panel Information Display. Refer to figure 70.



Figure 70

3. Set the EQUALIZER On for the desired Input by using the Front Panel Volume Control or the Remote Control Push-buttons. Refer to figure 71.



Figure 71

After approximately 5 seconds the Information Display returns to indicate the Source Selection and Volume Level.

PHONO ADJUSTMENTS

First select the Phono MC or Phono MM Input for the type of Phono Cartridge installed on the Turntable currently used. Then press and rotate the INPUT Control to display the active type of load setting for the Phono Cartridge Selected. Refer to figures 72 (Moving Coil Cartridge) or 73 (Moving Magnet Cartridge).



Figure 72



Figure 73

Then rotate the VOLUME Control to adjust the Phono Cartridge load value. After approximately 6 seconds, the Alphanumeric Display returns to indicate the Source Selection and Volume Level.

MONO/STEREO MODE

By default, the Stereo Mode is active for all Input Sources however, any Input Source may be assigned to the Mono Mode of operation. To change Stereo Mode to Mono for a given Input Source, perform the same



How to Operate the C53, con't

type of steps by using the Front Panel Controls or the Remote Control Pushbuttons as done for EQUALIZER Settings:

Note: The audio signal present at the FIXED OUT Jacks is affected by the Stereo/Mono setting.

1. Select the desired Input Source.
2. Select “MONO / STEREO, _____” as indicated on the Front Panel Information Display. Refer to figure 74.



Figure 74

3. To select MONO Mode adjust the TRIM LEVEL. Refer to figure 75.



Figure 75

After approximately 6 seconds the Information

Display returns to indicate the Source Selection and Volume Level.

METER ILLUMINATION

The Meter Illumination of McIntosh Power Amplifiers, when connected to the C53 (refer to pages 7-8), may be switched On or Off by performing the same type of operational steps for adjusting the EQUALIZER and MODE Selection:

1. Select “METER LIGHTS, On” as indicated on the Front Panel Information Display. Refer to figure 76.



Figure 76

2. Switch Off the Meter Illumination by using the Front Panel INPUT/VOLUME Controls or Remote Control Push-buttons. Refer to figure 77.

After approximately 6 seconds the Information Display returns to indicate the Source Selection and Volume Level.

INFORMATION DISPLAY ILLUMINATION

The Brightness Level of the C53 Front Panel Information Display can be adjusted from bright to dim by performing the same type of operational steps for adjusting the EQUALIZER, MODE, etc:

1. Select “DISPLAY, BRIGHTNESS” as indicated on the Front Panel Information Display. Refer to figure 78.



Figure 78

2. Reduce the Brightness level by adjusting the TRIM LEVEL. Refer to figure 79.



Figure 79

After approximately 6 seconds the Information Display returns to indicate the Source Selection and Volume Level.

Mute

Press the MUTE Push-button, on the C53 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 Infor-

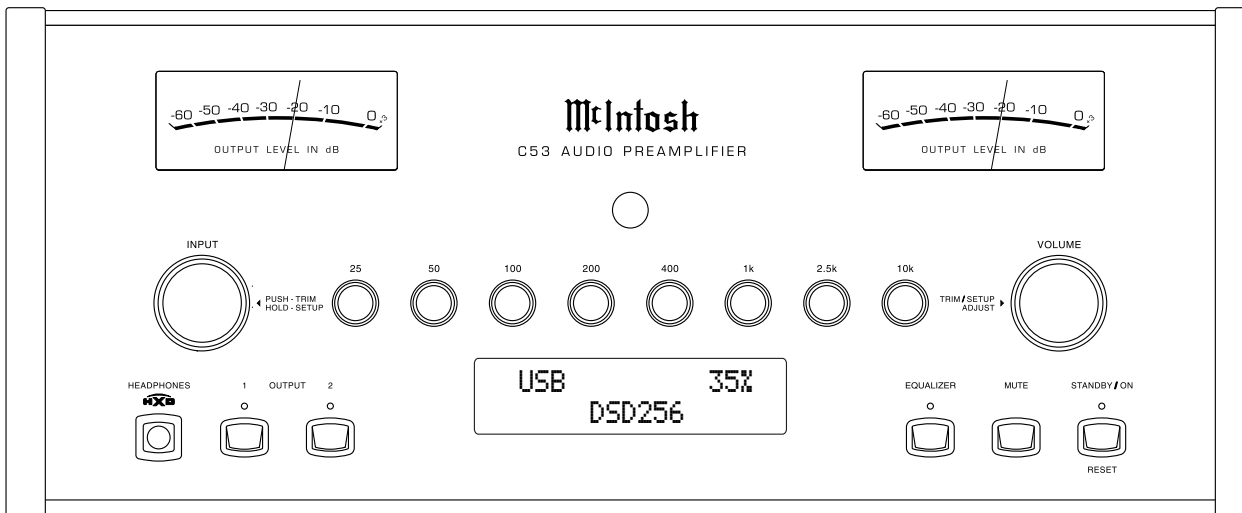


Figure 60

mation Display will indicate the Source Name and the word MUTE in place of the actual volume setting.



Figure 80

Refer to figure 80.

Pressing the Mute Push-button a second time or adjusting the Volume Control (either the Front Panel or Remote Control) will unmute the C53.

Equalizer Controls

The C53 Equalizer has eight Frequency Controls which will raise or lower by 12 dB, the amplitude of the band of frequencies centered at the frequency marked above the controls. The center frequencies of these controls are at 25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1,000Hz, 2,500Hz and 10,000Hz. Both Left and Right Channels are affected. At the center detent or flat position of the controls, the tone circuit components are removed from the signal path.

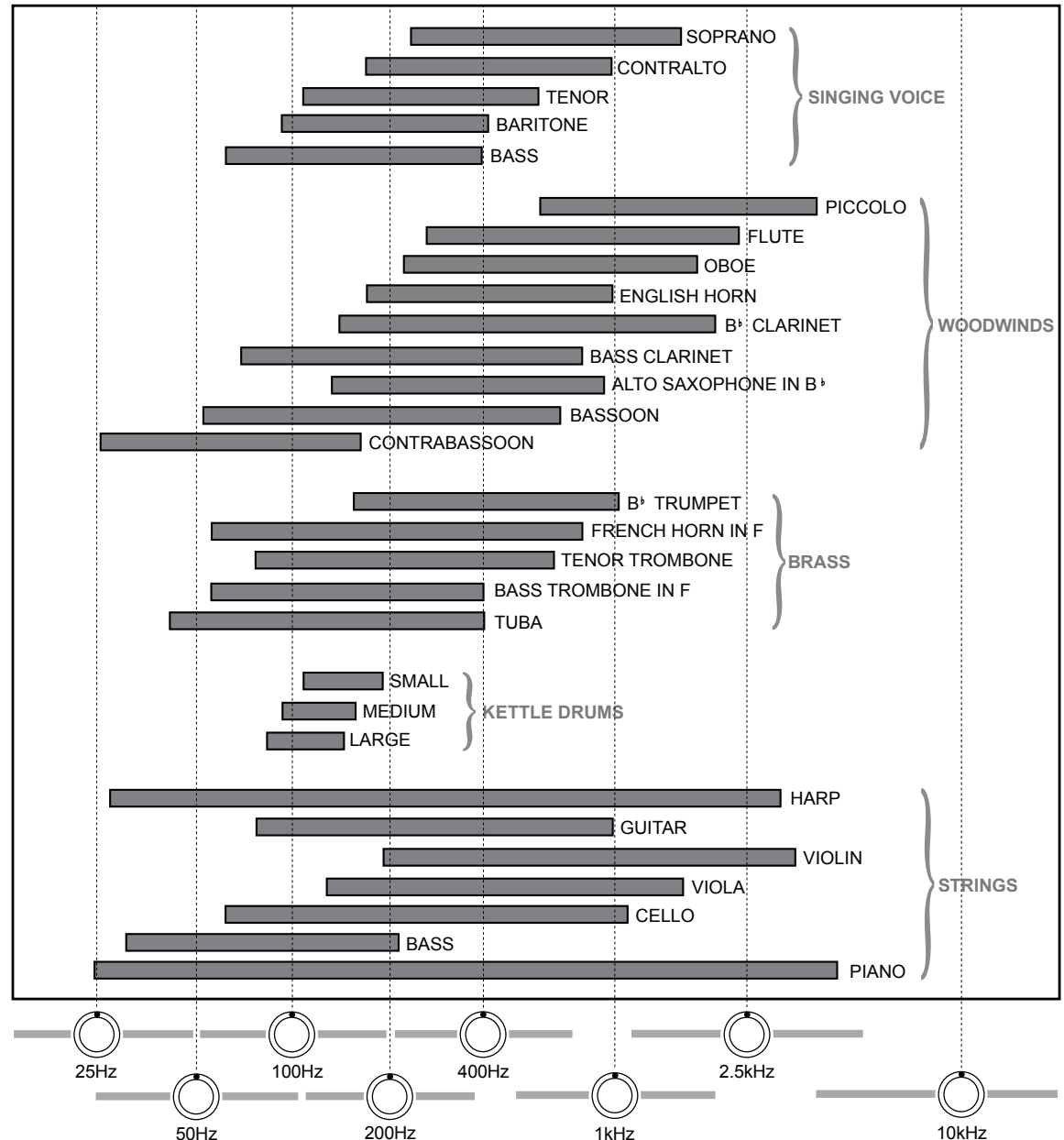
The illustration to the right shows the fundamental frequency range of acoustical musical instruments and the human voice. It also shows the range of adjustment of frequencies for each of the Equalizer Controls of the C53 at the +6 dB and -6 dB points.

Note. The audio signal present at the FIXED OUT Jacks is unaffected by the Equalizer Circuitry.

Output 1 and 2

Press the Front Panel OUTPUT 1 or OUTPUT 2 Push-button or use the Remote Control and press the SETUP/BLUE Push-button followed by the OUTPUT 1 or OUTPUT 2 Push-button, to send audio to separate Power Amplifiers connected to the rear panel OUTPUT 1 or 2 Jacks. It also activates the POWER CONTROL TRIGGER 1 or 2 Jacks on the rear panel of

Fundamental Frequencies of Acoustical Musical Instruments and the Human Voice



How to Operate the C53, con't

the C53. To stop the Audio and Power Control Signals from going to the separate Power Amplifiers, press the same Push-button(s) a second time.

Trim

Momentarily press the Front Panel INPUT Control to activate the C53 Trim Functions. Rotate the INPUT Control to select the desired Trim Function and then use the VOLUME (adjust) Control to change the Trim setting. Refer to figure 60 on page 22. The Remote Control TRIM and LEVEL UP / DOWN Push-buttons may also be used. Approximately 6 seconds after Trim Function Selection and/or adjustments have stopped, the C53 will switch the Trim Mode Off.

Passthru

Refer to Passthru Information in the C53 Setup Section on page 17 to activate the function and select the desired Input on the C53.

The C53 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 Alpha-numeric Display will indicate "PASSTHRU". Refer to figure 81.



Figure 81

The C53 OUTPUT 1 and 2 are active when in the Passthru Mode. The other Front Panel Controls and Push-buttons are deactivated as long as the Passthru Mode is active.

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 all of the Power Amplifier Output Connections (1 and 2) to automatically mute.

When headphones are connected to the C53 Front Panel Jack, an additional TRIM function becomes available. McIntosh's HXD brings the acoustical depth and spatiality of music normally heard with loudspeakers, to your headphones. Momentarily press the INPUT Control, then rotate it to select "HEADPHONE HXD, On". To deactivate the HXD Mode rotate the VOLUME Adjust Control until the Front Panel Display indicates "HEADPHONE HXD, Off". Refer to figures 82 and 83.



Figure 82



Figure 83

Note: The Headphone Output is optimized for impedances ranging from 100 to 600 ohms.

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.

Optical and Coaxial Digital Inputs

When a Digital Input (Optical or Coaxial Connec-

tion) on the C53 is selected, the Front Panel Information Display indicates the sampling frequency when a signal is present.

Refer to figure 84. During the time there is no Digital Signal present the display will indicate "_____". Refer to figure 85.

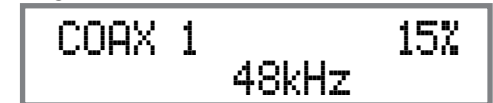


Figure 84



Figure 85

USB Input Operation and Driver Installation

The C53 USB Input provides the capability to playback music from a computer, when the computer is connected to the rear panel USB connector.

Note: The USB Input is for direct connection to a computer only. To playback music from an USB Drive, connect the USB Drive to another USB Port on the computer and select the USB Drive with the Media Playback Program.

The C53 USB Input is compatible with PC Computers using Microsoft®, Windows 7 (SP1), Windows 8.1 and Windows 10. It is also compatible with Apple® Macintosh® Computers using OS-10.6.8 or later.

When using a PC Computer with Windows, a special McIntosh USB Audio Software Driver needs to be installed on the PC Computer. The driver needs to be installed before connecting the C53 USB Input to the USB Port on the computer.

Note: If an Apple Macintosh computer is used with the C53, no additional driver is required.

The McIntosh USB Audio Windows Driver is available for download from the McIntosh Web Site: <http://www.mcintoshlabs.com/support/product-support>

Refer to figure 92.

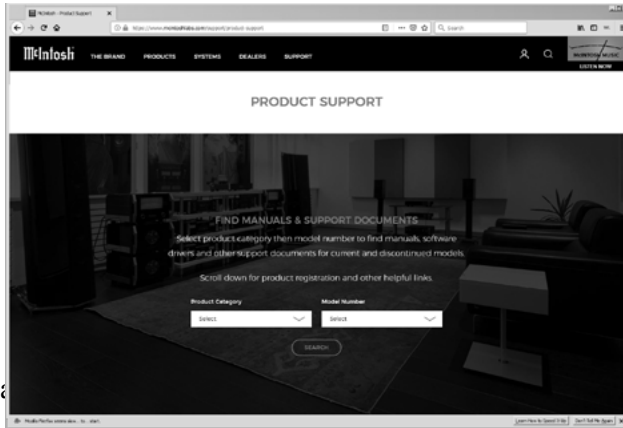


Figure 92

“C53”. Click on “SEARCH” then select McIntosh-HD USB Audio Windows Drive D v1.0 and download the PC Windows Driver. Follow the instructions below to install the McIntosh C53 Driver:

Refer to figure 93.



Figure 93

Purpose: To Install the McIntosh USB Audio Windows Driver for use with McIntosh Products with an USB-Digital Audio Input.

- Requirements:**
1. A PC Computer with a functioning USB Port.
 2. Windows 7 (SP1 or greater), Windows 8 (8.1) or Windows 10 Operating System.
 3. An USB Cable with Type A to Type B Connectors.

Installing the Software

It is important to first install the downloaded software on your computer before connecting the McIntosh Product to the computer. The USB Driver is included in the downloaded software package.

Note: Before installing this software, please check to see if the McIntosh Product(s) with the USB-Digital Audio Input has the latest firmware version, if not update the firmware first.

1. Unzip the downloaded McIntosh Windows USB Driver Software Package.
2. Install the unzipped McIntosh Windows USB Driver Software.

USB Connection

Connect the USB Cable with Type A to Type B connectors between the PC Computer and the McIntosh Product with the USB-Digital Audio Input.

An Icon will appear On-Screen indicating Windows has found new hardware. Refer to figures 94 and 95.

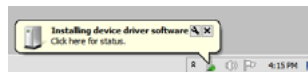


Figure 94

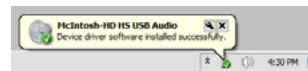


Figure 95

Windows Sound Settings

For proper operation of the McIntosh Product via the Computer USB Connection, it is required to make changes to Windows Sound Settings:

1. From the Windows START button, click on “CONTROL PANEL” followed by selecting “SOUND”. Refer to figure 96.
2. Referring to figure 97, first select “McIntosh-HD HS

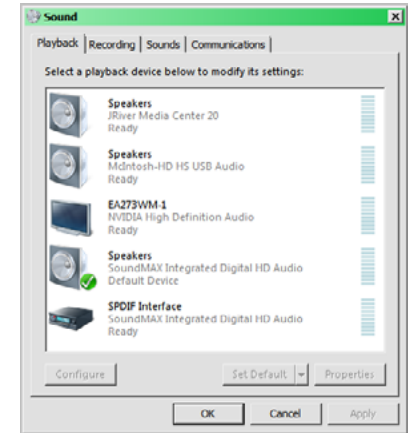


Figure 96

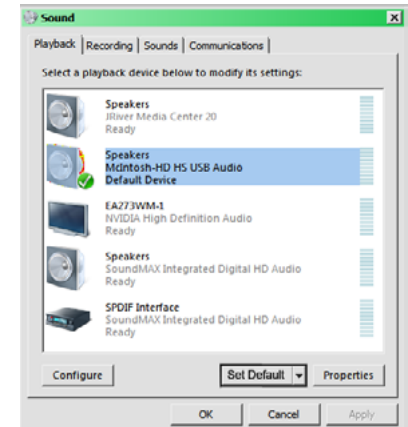


Figure 97

Control Panel Settings

To activate the McIntosh-HD USB Audio Control Panel, click on the “McIntosh Icon” (located in the Windows notification area on the right side of the Task Bar) or click on the Windows “Show hidden icons”, then select the “McIntosh Icon”. Refer to figures 98 - 101.

- Notes:
1. It is not necessary for the McIntosh-HD USB Audio Control Panel to be running, unless it is desired to make changes to the default settings.
 2. The McIntosh-HD USB Audio Control Panel displays the current Sampling Rate, Bit-Rate and Buffer Size for the music streaming from the computer into the C53.
 3. When the Media Stream Program on the computer is set to output in the “ASIO” format, the McIntosh -HD USB Audio Control Panel allows for changing the settings parameters on the fly.

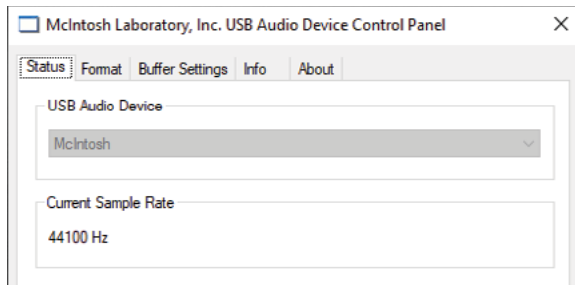


Figure 98

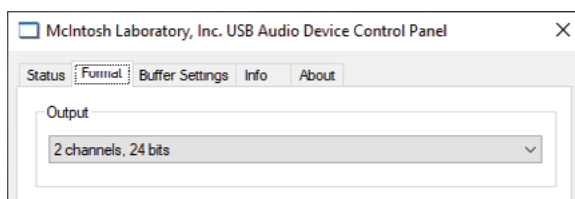


Figure 99

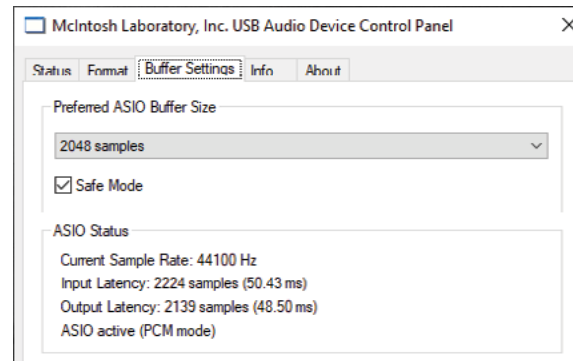


Figure 100

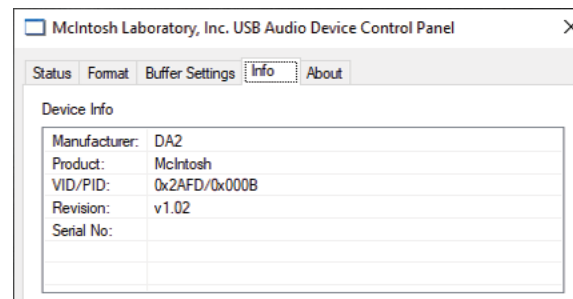


Figure 101

USB Music Playback

When the USB When the Input is selected on the McIntosh C53, the Front Panel Display indicates the Sampling Rate (refer to figures 102 and 103 for PCM Signals).

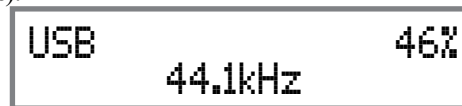


Figure 102

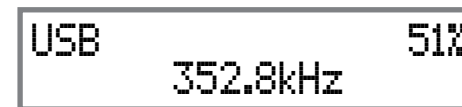


Figure 103

Figures 104 and 105 indicate a Sampling Rate of 128 or 256 times the Sampling Rate of a CD Disc for the incoming DSD Digital Audio Signal.



Figure 104



Figure 105

The Sampling Rate and the Bit Rate are determined by the original recording, the Application Output Format (when available) and the McIntosh-HD Control Panel Settings.

Note: In general, when the original music is recorded at a higher Sampling Rate, the result is usually more detail in the music. However, this higher rate results in consuming larger amounts of storage space. The Sample Rate usually should be set to match the Sample Rate of the music recording being played back.

There are many third party Applications (besides Applications like Windows Media Player) for steaming music from the computer to McIntosh C53 USB Input. An example of just one of the available applications is “JRiver Media Center”.

Reset of Microprocessors

In the unlikely event the controls of the C53 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 C53 back On, press the STANDBY/ON Push-button.

Note: This can be performed with the C53 On or in the Standby Mode.

Specifications

Frequency Response

+0, -0.5dB from 20Hz to 20,000Hz
 +0, -3dB from 15Hz to 100,000Hz

Total Harmonic Distortion

0.005% from 20Hz to 20,000Hz

Rated Output

2.5V Unbalanced, 5V Balanced (Main)
 450mV (Fixed Output)

Maximum Voltage Output

8V RMS Unbalanced, 16V RMS Balanced

Sensitivity (for rated output)

High Level, 450mV Unbalanced, 900mV Balanced
 Phono MM, 4.5mV
 Phono MC, 0.45mV

Signal To Noise Ratio (A-Weighted)

High Level - 100dB (Below rated output)
 MM Phono - 82dB (Below 5mV input)
 MC Phono - 80dB (Below 0.5mV input)

Input Impedance

High Level - 22K ohms Unbalanced
 44k ohms Balanced
 Phono MM - 50 to 800pF, in 50pF steps;
 47K ohms
 Phono MC - 25, 50, 100, 200, 400 or 1,000 ohms;
 100pF

Maximum Input Signal

High Level, 5V Unbalanced, 10V Balanced
 Phono MM, 80mV
 Phono MC, 8mV

Equalizer Controls

25Hz, 50Hz, 100Hz, 200Hz, 400Hz, 1,000Hz,
 2,500Hz and 10,000Hz

Voltage Gain

High Level to Fixed Output: 0dB
 High Level to Main Output: 15dB
 Phono MM to Record Output: 40dB
 Phono MC to Record Output: 60dB

Output Impedance

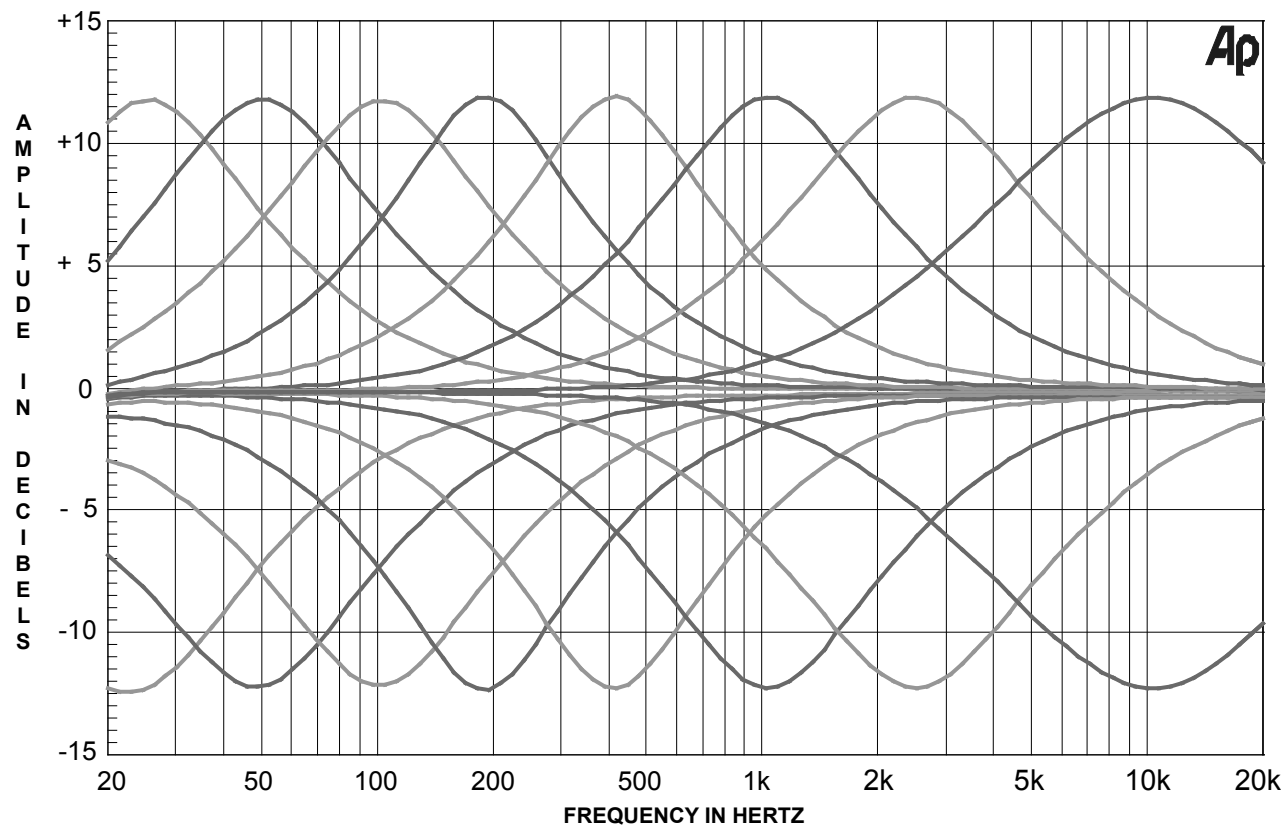
100 ohms Unbalanced
 200 ohms Balanced

Headphone Load Impedance

100 ohms to 600 ohms

Digital Input Sample Rates

Optical: PCM - 16Bit, 24Bit - 32kHz to 192kHz
 Coaxial: PCM -16Bit, 24Bit - 32kHz to 192kHz
 MCT: PCM, SACD, -16Bit, 24Bit - 32kHz to 192kHz
 USB: PCM - 16Bit, 24Bit, 32Bit - 32kHz to 384kHz
 DXD - DXD352.8kHz, DXD384kHz
 DSD - DSD64, DSD128, DSD256
 HDMI: PCM 24bit, 44.1kHz - 192kHz
 DTS
 Dolby Digital



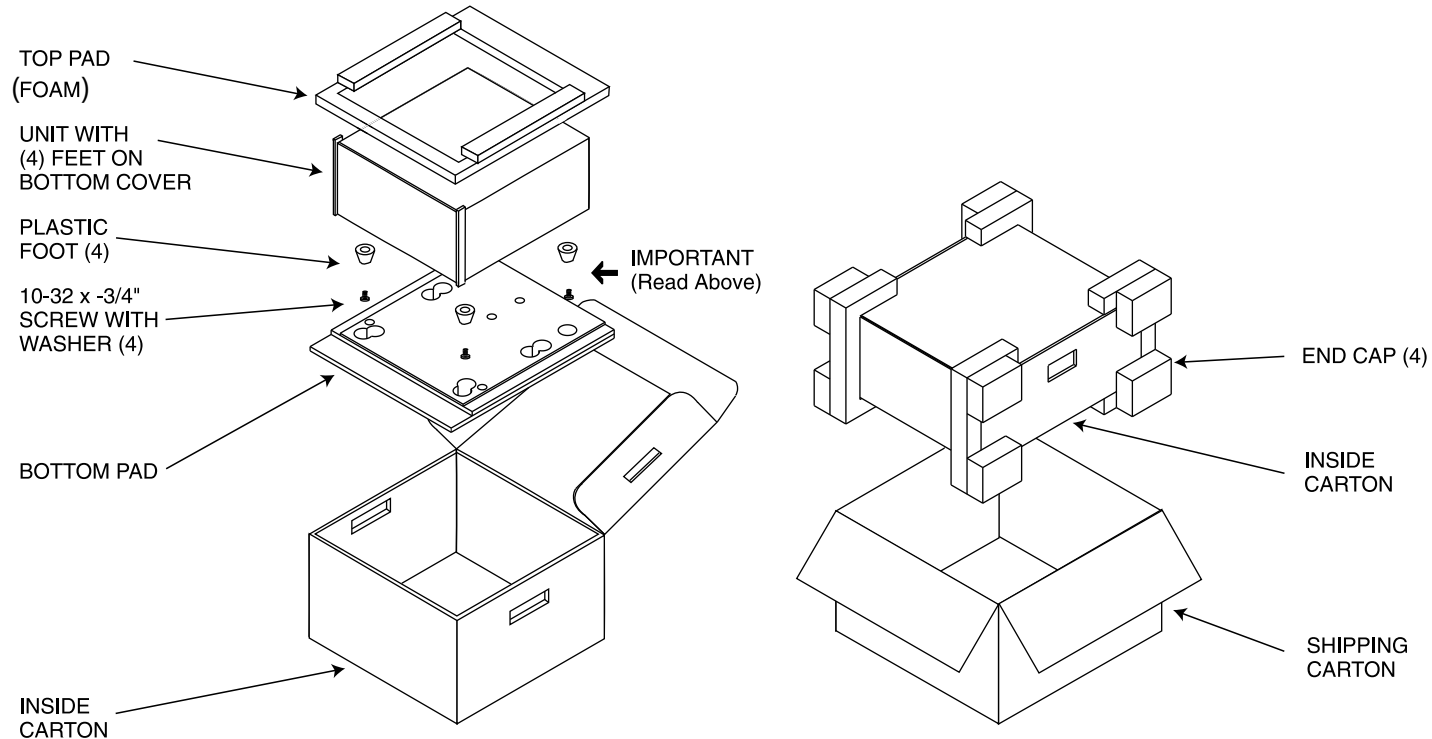
Packing Instructions

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 2. Please see the Part List for the correct part numbers.

Quantity	Part Number	Description
1	033888	Shipping carton only
4	033887	End cap
1	033697	Inside carton only
1	034414	Top pad (foam)
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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