



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

MX150
A/V Control Center
Owner's Manual



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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.



AVIS RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR.

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

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.

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.
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.

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.
16. To completely disconnect this equipment from the a.c. mains, disconnect the power supply cord plug from the a.c. receptacle.
17. The mains plug of the power supply cord shall remain readily operable.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.
19. Connect mains power supply cord only to a mains socket outlet with a protective earthing connection.
20. **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.**

Thank You

Your decision to own this McIntosh MX150 A/V Control Center 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

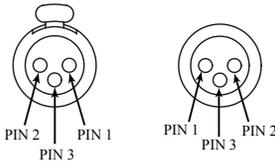
1. For additional connection information, refer to the owner's manual(s) for any component(s) connected to the MX150 A/V Control Center.
2. The Main AC Power going to the MX150 and any other McIntosh Component(s) should not be applied until all the system components are connected together. Failure to do so could result in malfunctioning of some or all of the system's normal operations. When the MX150 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.
3. Sound Intensity is measured in units called Decibels and "dB" is the abbreviation.
4. LFE (Low Frequency Effects) refers to the Dolby Digital or DTS sound channel dedicated to sound effects (such as explosions) and is usually reproduced by the Subwoofer.
5. 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. 
6. For additional information on the MX150 and other McIntosh Products please visit the McIntosh Web Site at www.mcintoshlabs.com. 
7. Zone A accepts, unbalanced/balanced Analog Signals and Digital Audio Signals. Zone B only accepts Analog Signals. When connecting source devices with audio outputs to the MX150, make sure to also connect the unbalanced/balanced outputs for each source connected to Zone A Digitally.
8. MX150 is a two Zone Product (Zone A and Zone B). This allows two different Audio/Video Sources to be available simultaneously for two separate rooms. Zone B may be used to provide an Audio/Video Output Signal for recording purposes, instead of a A/V signal to a second room. For more information contact your McIntosh Dealer or McIntosh Technical Support.
9. The MX150 Input Source Name "DVD" is equivalent to "V-Aux" on some Classic McIntosh Keypads and Remote Controls.
10. Up to two McIntosh Sensors or Classic Keypads can be wired in parallel for both Zones A and B.
11. The Zone A and Zone B IR Inputs, with 1/8 inch mini phone jacks, are configured for non-McIntosh IR sensors such as a Xantech Model 291-85D Kit. To avoid possible interaction, disable the MX150 Front Panel Sensor. Refer to Setup Mode on page 34.
12. Setup Mode operations should be performed in the order they appear in the first Setup Menu presented, as they are interactive.
13. In order to hear bass frequencies below 80Hz, your system must include either a Subwoofer or Large Front Loudspeakers.
14. The MX150 has built-in HDMI Digital Video Selection and Digital Video Processing Circuitry to convert any Composite Video, S-Video, and Component Video Signals to Digital Video with the same resolution.
15. When there is a connection between the ZA HDMI output and a TV/Monitor the Component Video 2 Output, ZA Video Outputs and ZA S-Video Outputs will be muted.
16. HDMI Cable lengths between source components and the MX150 should not exceed 25ft (8.3meters). Likewise, the HDMI Cable length between the MX150 ZA HDMI OUT and a TV/Monitor. If there is need to use HDMI Cables longer than 25ft (8.3meters) a high quality inline HDMI Buffer/Converter would be required for reliable digital signal transmission via the HDMI Connections.
17. The Remote Control Supplied with the MX150 A/V Control Center is capable of operating other components. For additional information go to www.mcintoshlabs.com.
18. When the MX150 and a PC Computer are connected to the same ethernet network, the Web Interface built into the MX150 becomes available. This allows Operational Control and Setup Mode Functions, for the MX150, to be available on the PC Computer for changes and adjustments. It requires the latest version of the Internet Browser (Internet Explorer, Firefox, etc.) to be installed on the PC. For additional information refer to "Network Setup" on page 32 in this Owner's Manual and the McIntosh Web Site at www.mcintoshlabs.com.

Connector and Cable Information

XLR Connectors

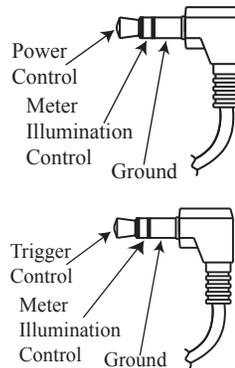
Below is the Pin configuration for the XLR Balanced Output Connectors on the MX150. Refer to the diagrams for connections:

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



PC (Power Control) and Trigger Connectors

The MX150 Power Control Out and Trigger Output Jacks send Power On/Off Signals when connected to other Components. An additional connection on the Main Power Control Jack is for controlling the illumination of the Power Output Meters on McIntosh Power Amplifiers. A 1/8 inch stereo mini phone plug is used for connection to the Power Control and Trigger Outputs on the MX150.



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

Data and Power Control Cable Part No. 170-202

Six foot, shielded 2 conductor, with 1/8 inch stereo mini phone plugs on each end.

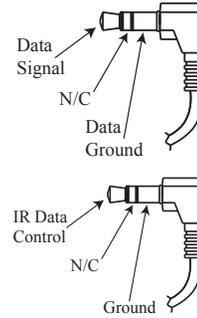
Jack Label	Voltage	Meter Illumination Control
ZA PC Out	5 Volts	Yes
ZB PC Out	5 Volts	Yes
Trigger Out 1	5 Volts	Yes
Trigger Out 2	5 Volts	Yes
Trigger Out 3	5 or 12 Volts ¹	Yes
Trigger Out 4	5 or 12 Volts ¹	Yes

¹ For Additional Information refer to Setup Mode on page 17

Data Output and IR IN Port Connectors

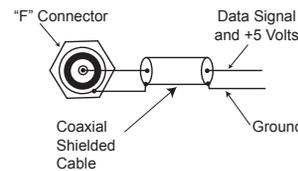
The MX150 Data Out Ports send Remote Control Signals to McIntosh Source Components. A 1/8 inch stereo mini phone plug is used for connection.

The IR IN Port also uses a 1/8 inch stereo mini phone plug and allows the connection of other brand IR Receivers to the MX150.



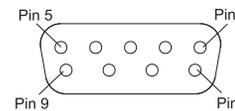
Zone A and B Sensor Connectors

The MX150 Zone A and B Sensor Connectors receive Control Signal Data from a McIntosh IR Sensor and also provides +5VDC for the Sensor Circuitry. Connections between the MX150 and the Sensor is made using a RG59U or RG6 Coax Cable (300ft max.) with "F" Connectors at both ends.



RS232 DB9 Connector Pin Layout

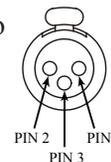
- 1. N/C
- 2. Data Out (TXD)
- 3. Data In (RXD)
- 4. N/C
- 5. Gnd.
- 6. N/C
- 7. N/C
- 8. N/C
- 9. N/C



Microphone XLR Connectors

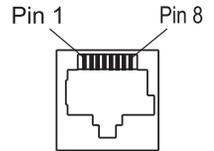
Below is the Pin configuration for the Microphone Connector on the MX150. Refer to the diagram for connections:

- PIN 1: Shield/Ground
- PIN 2: Signal
- PIN 3: +8.9VDC



Ethernet RJ45 Socket

- 1. Tranceive Data (+)
- 2. Tranceive Data (-)
- 3. Receive Data (+)
- 4. N/C
- 5. N/C
- 6. Receive Data (-)
- 7. N/C
- 8. N/C



Ethernet Cable - Straight Thru Connections

Pin Number - Wire Color	→	Pin Number - Wire Color
1. Orange/White	→	1. Orange/White
2. Orange	→	2. Orange
3. Green/White	→	3. Green/White
4. Blue	→	4. Blue
5. Blue/White	→	5. Blue/White
6. Green	→	6. Green
7. Brown/White	→	7. Brown/White
8. Brown	→	8. Brown



Ethernet Cable - Crossover Connections

Pin Number - Wire Color	→	Pin Number - Wire Color
1. Orange/White	→	1. Green/White
2. Orange	→	2. Green
3. Green/White	→	3. Orange/White
4. Blue	→	4. Blue
5. Blue/White	→	5. Blue/White
6. Green	→	6. Orange
7. Brown/White	→	7. Brown/White
8. Brown	→	8. Brown



Introduction

The MX150 A/V Control Center sets the standard of excellence in a Home Theater System. The MX150 provides superior multichannel reproduction, RoomPerfect correction, the latest in digital audio decoding and digital video conversion circuitry.

Performance Features

• HDMI Audio/Video Switching with Up-Conversion Processing

There are five HDMI Inputs and any Composite Video, S-Video, Component Video Input (Analog Video Signals) can be converted to a Digital Video Signal with the built-in Digital Video Conversion Circuitry.

• Direct Access and Phantom Input Selection

There are 12 Analog (one eight channel) and 15 Digital Audio Inputs along with 9 Analog and 5 Digital Video Inputs. Using the Remote Control, the MX150 has direct access for ten inputs along with scrolling for an additional 118 phantom inputs. All 128 Inputs can be titled and matched in level, so there are no abrupt changes in volume levels between the different Inputs. Any unused input can be “turned off” so the input selector will skip over it.

• Balanced Inputs and Outputs

Two pairs of Balanced high level Inputs and an eight channel Balanced Output are provided, permitting long cable lengths without a loss in sound quality.

• Moving Magnet Phono Input

There is a Precision Phono Preamplifier for Moving Magnet Cartridges.

• Built-in Dolby True HD and DTS-HD Master Decoders

The MX150 also provides built-in decoding of the Dolby Pro Logic IIx, Dolby Digital EX, DTS Neo6 and DTS-ES Sound Tracks.

• On-Screen and Multifunction Fluorescent Displays

A comprehensive On-Screen Display capability makes it easy to perform setup and operational adjustments using the Remote Control. The front panel display indicates input selection, volume levels, and other operating functions.

• LED Channel Status Indicators

The MX150 includes twenty-five LEDs on the front panel to indicate what type of operating signals are being received, signal processing mode and the output format chosen.

• RoomPerfect™ Automatic Measurement

The RoomPerfect Automatic Measurement System provides precise adjustment of Loudspeaker Volume Levels, Time Delay and Equalization for all eight channels. Supplied Calibrated Microphone with stand/boom allows for the multiple room measurements for precise adjustments.

• Digitally Controlled Volume and Tone Controls

A Precision Tracking Volume Control adjusts all twelve channels with tracking accuracy better than 0.5dB. The Bass and Treble circuits provide a wide range of tone shaping with no loss in traditional McIntosh sonic excellence.

• Dual Zone

The MX150 has the built-in ability to control a separate remote audio/video zone with program selection independent of Zone A, using a dedicated power amplifier and speakers.

• Fiber Optic Solid State Front Panel Illumination

The Illumination of the Glass Front Panel is accomplished by the combination of custom designed Fiber Optic Light Diffusers and extra long life Light Emitting Diodes (LEDs). This provides even Front Panel Illumination and is designed to ensure the pristine beauty of the MX150 will be retained for many years.

• Power Control, Triggers and Full Function Remote Control

The Power Control and Triggers provide convenient Turn-On/Off of components connected to the MX150. The Remote Control push-buttons provides complete control of the MX150 operating functions.

• Machined Side Panels

The sides of the MX150 are machined from thick aluminum panels with a smooth black finish.

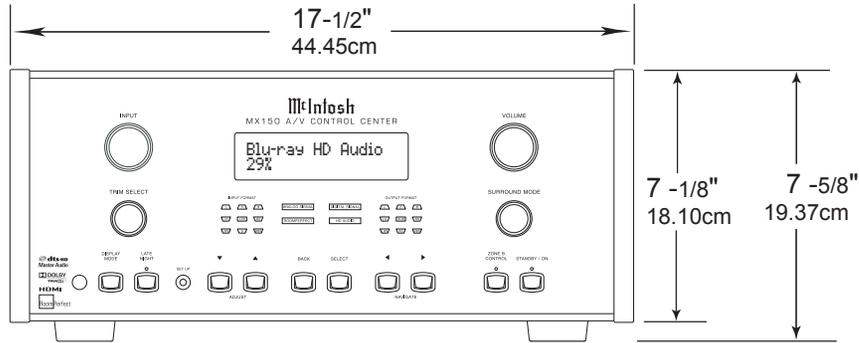
• Special Power Supply

The Power Supply has Multiple Regulators to ensure stable noise free operation even though the power line varies.

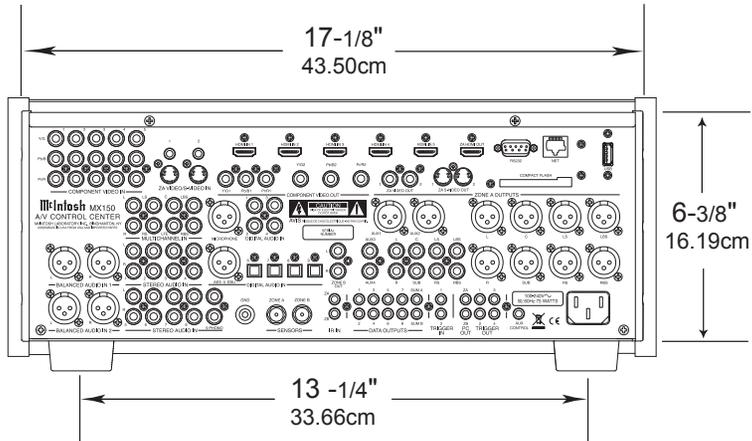
Dimensions

The following dimensions can assist in determining the best location for your MX150.

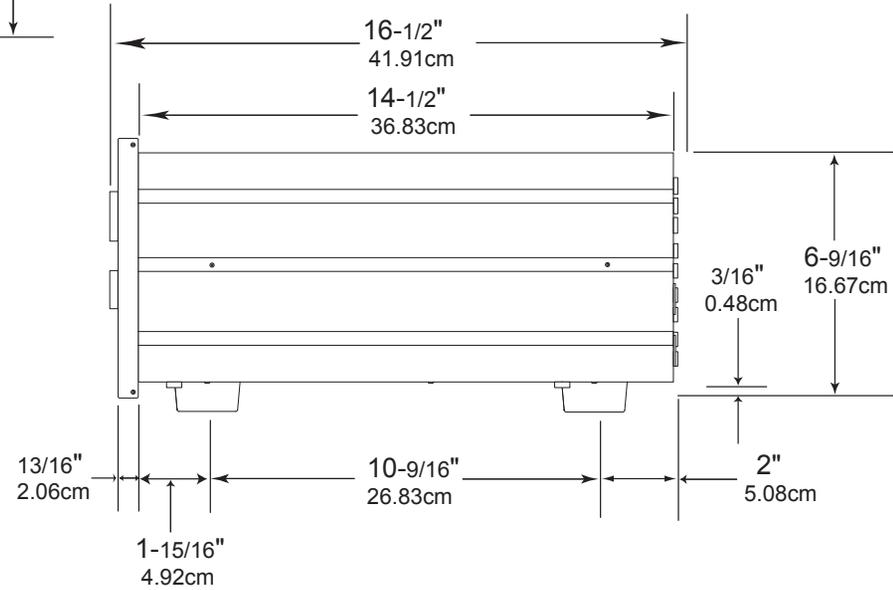
Front View of the MX150



Rear View of the MX150



Side View of the MX150





Installation

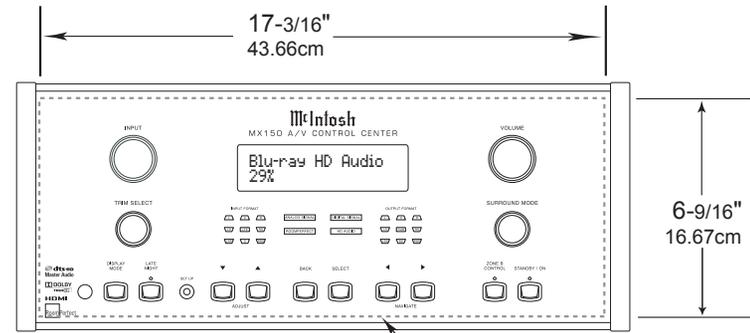
The MX150 can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in a piece of furniture or cabinet of your choice. The four feet may be removed from the bottom of the MX150 when it is custom installed as outlined below. The four feet together with the mounting screws should be retained for possible future use if the MX150 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 MX150. Cool operation ensures the longest possible operating life for any electronic instrument. Do not install the MX150 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.

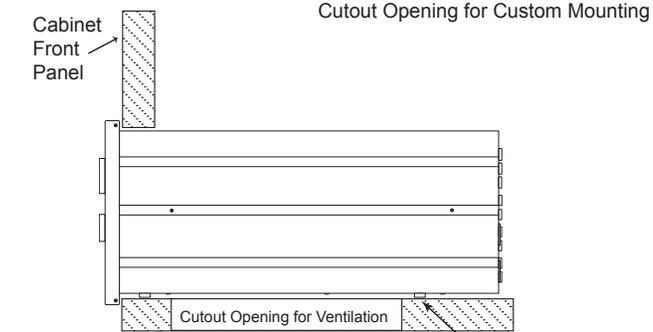
When the MX150 is placed free-standing on a flat surface, allow at least 2 inches (5.08cm) above the top and 2 inches (5.08cm) on each side, so airflow is not obstructed. Allow 19-1/2 inches (49.53cm) depth behind the front panel. Allow 1-7/16 inch (3.66cm) in front of the mounting panel for knob clearance.

A custom cabinet installation should provide the minimum spacing dimensions for cool operation. Allow at least 2 inches (5.08cm) above the top, 2 inches (5.08cm) below the bottom and 2 inches (5.08cm) on each side, so airflow is not obstructed. The Custom Cabinet should be open backed and at least 12 inches (30.48cm) away from any surface such as a wall. Be sure to cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing. Allow 1-7/16 inch (3.66cm) in front of the mounting panel for knob clearance.

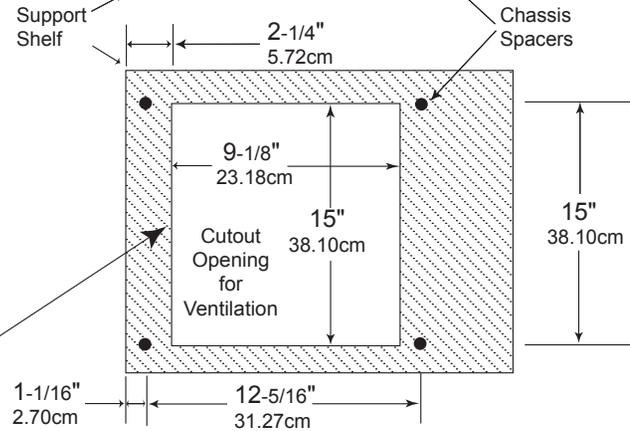
MX150 Front Panel Custom Cabinet Cutout



MX150 Side View in Custom Cabinet



MX150 Bottom View in Custom Cabinet

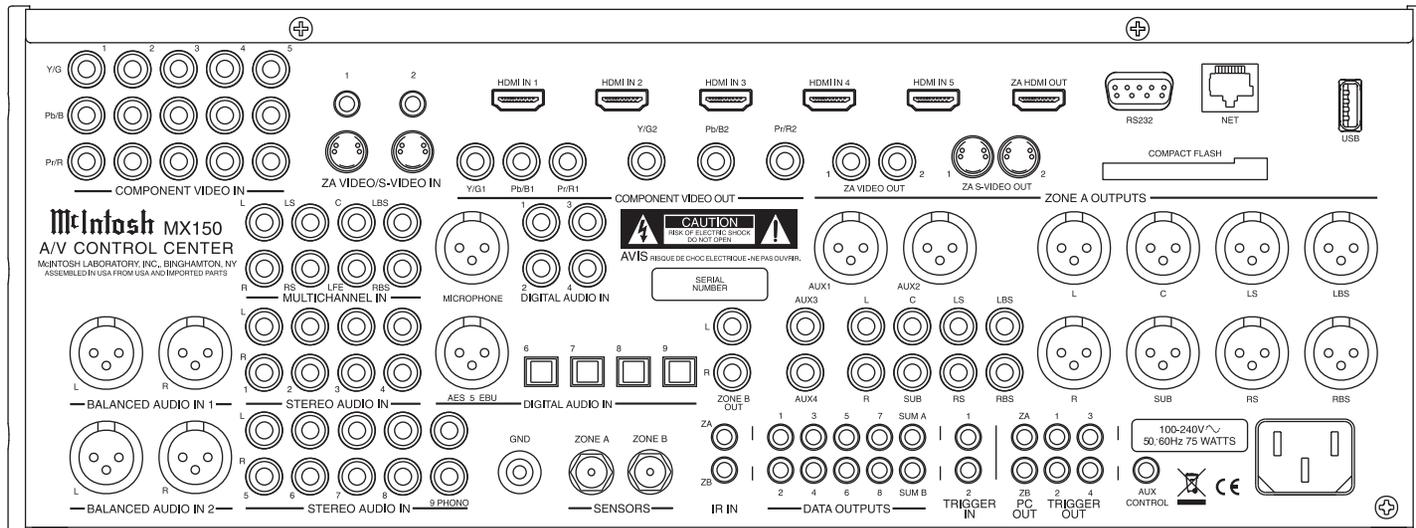


Note: Center the cutout horizontally on the unit. For purposes of clarity, the above illustration is not drawn to scale.

Rear Panel Connections

The identification of Rear Panel Connections for the MX150 A/V Control Center is located on a separate folded sheet contained in the Owner's Manual Packet. Refer to separate sheet "Mc1A" for the Rear Panel Connections.

MX150 A/V Control Center Rear Panel





MX150 Zone A Input Connections

The MX150 has the ability to automatically switch power On/Off to McIntosh Source Components via the Power Control and Trigger connections. The Data Port Connections allow for the remote operation of basic functions using the MX150 Remote Control. With an external sensor connected, remote control operation of the system is possible when the MX150 is located in a cabinet with the doors closed (Zone A).

The Zone A connection instructions below, together with the MX150 Input Connection Diagram located on the separate folded sheets “Mc2A”, is an example of a typical Home Theater 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 5.

Note: The following source component and sensor connections made to the MX150 are using the default settings starting on page 18. To make changes to the default settings proceed to Setup Mode starting on page 17.

Power Control Connections:

1. Connect a Control Cable from the MX150 TRIGGER OUT 1 Jack to the Power Control Remote In on the Turntable.
2. Connect a Control Cable from the Turntable Power Control Remote Out jack to the AM/FM Tuner Power Control In Jack.
3. Connect a Control Cable from the AM/FM Tuner Power Control Out jack to the Audio/Video Disc Player Power Control In Jack.
4. Connect a Control Cable from the Audio/Video Disc Player Control Out jack to the Music Server Power Control In Jack.
5. Connect any additional McIntosh Components in a similar manner, as outlined in steps 1 thru 4.

Data Control Connections:

6. Connect a Control Cable from the MX150 DATA OUTPUT 1 Jack to the AM/FM Tuner Data In Jack.
7. Connect a Control Cable from the MX150 DATA OUTPUT 3 Jack to the Audio/Video Disc Player Data In jack.
8. Connect a Control Cable from the MX150 DATA OUTPUT 7 Jack to the Music Server Data In jack.
9. Connect any additional McIntosh Components in a similar manner, as outlined in steps 6 thru 8.

IR In Connections:

10. Optionally, connect the Control Cable from the Zone A External Sensor to the MX150 ZA (Zone A) jack.

Note: Refer to page 4 for information on compatible Sensors and page 5 for Cable/Connection information.

Analog Audio Connections:

11. Connect Balanced Cables from the MX150 BALANCED AUDIO IN 1 Jacks to the Audio/Video Disc Player 2Channel Balanced Output Jacks.
12. Connect an Audio Cable from the MX150 STEREO AUDIO IN 2 Jacks to the VCR Analog Output Jacks.
13. Connect Audio Cables from the MX150 STEREO AUDIO IN 9 PHONO Jacks to the Turntable Out Jacks.

Digital Audio Connections:

14. Connect a Digital Coaxial Cable from the MX150 DIGITAL AUDIO IN 2 connector to the AM/FM Tuner Digital Coaxial Output Connector.
15. Connect a Digital Optical Cable from the MX150 DIGITAL AUDIO IN 7 Jacks to the Music Server Digital Audio Optical Output Connector.

Analog Video Connections:

16. Connect an Audio Cable from the MX150 COMPONENT VIDEO AUDIO IN 2 Jacks to the Music Server Component Video Output Jacks, making sure to match the “Y/G” to “Y”, “Pb/B” to “Cb” and “Pr/R” to “Cr”.

HDMI Connections:

17. Connect a HDMI Cable from the MX150 HDMI IN 1 Connector to the Audio/Video Disc Player HDMI Out 1 connector.
18. Connect a HDMI Cable from the MX150 HDMI IN 2 Connector to the Satellite Receiver.

Ground Connections:

19. Connect a Ground Cable from the MX150 GND Binding Post to the Turntable GND Binding Post.

Proceed to Zone A Output Connections on the next page

MX150 Zone A Output Connections

The MX150 has the ability to automatically switch power On/Off to a McIntosh Power Amplifier via the Power Control and Trigger connections.

The connection instructions below, together with the MX150 Zone A Output Connection Diagram located on the separate folded sheet “Mc2B”, is an example of a typical Home Theater 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 5.

Note: The following component connections made to the MX150 are using the default settings. To make changes to the default settings proceed to Setup Mode starting on page 17.

Power Control Connections:

1. Connect a Control Cable from the MX150 ZA PC (Power Control) OUT Jack to the Power Control In on Zone A Power Amplifier One.
2. Connect a Control Cable from Zone A Power Amplifier One Power Control Out to Zone A Power Amplifier Two Power Control In Jack.
3. Connect a Control Cable from Zone A Power Amplifier Two Power Control Out to Zone A Power Amplifier Three Power Control In Jack.
4. Connect a Control Cable from Zone A Power Amplifier Three Power Control Out to the Powered Subwoofer Power Control In Jack.
5. Connect any additional McIntosh Components in a similar manner, as outlined in steps 1 thru 4.

Analog Audio Connections:

6. Connect Balanced Audio Cables from the MX150 Zone A - L (Front Left Channel), C (Front Center Channel) and R (Front Right Channel) to Zone A Power Amplifier One Inputs 1, 2 and 3 respectively.

Note: Unbalanced Audio Connections may be used in place of the Balanced Connections.

7. Connect Balanced Audio Cables from the MX150 Zone A - LS (Left Surround Channel) and RS (Right Surround Channel) to Zone A Power Amplifier Two Inputs Left and Right respectively.
8. Connect Balanced Audio Cables from the MX150 Zone A - LBS (Left Back Surround Channel) and RBS (Right Back Surround Channel) to Zone A Power Amplifier Three Inputs Left and Right respectively.
9. Connect a Balanced Audio Cable from the MX150 Zone A - SUB (Subwoofer) to the Powered Subwoofer MONO Input.

HDMI Connections:

10. Connect a HDMI Cable from the MX150 ZA HDMI OUT Connector to the Zone A TV/Monitor HDMI Input connector.

When Zone B (Audio/Video in another room) on the MX150 will be utilized, proceed to page 12 for information on making the needed additional connections. If Zone B will not be utilized at this time proceed to step 11 below.

AC Power Cords Connections:

11. Connect the MX150 and any remaining components’ AC Power Cords to a live AC outlet.





MX150 Zone B Input Connections

In a typical MX150 two Zone Audio/Video System, Source Components can share the same Power Control (Trigger) and Data Port Connections. The two Zones in the MX150 also share the same Analog Audio and Component Video Connections. The additional Analog Audio and Video Connections below are for Source Components connected to Zone A via Digital Connections, as Zone B is Analog Audio/Video only.

The MX150 Zone B Input Connection Diagram (located on the separate folded sheet “Mc3A”) is an example of a typical Zone B Second Room 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 5.

Note: The following connections made to the MX150 are using the default settings. To make changes to the default settings proceed to Setup Mode starting on page 17.

Sensor Connections:

1. Connect a RG59U or RG6U Cable from the MX150 Zone B SENSOR “F” Connector to the Zone B External Sensor “F” Connector.

Note: Without a Sensor connected, Zone B Control (source selection and volume adjustment) is only possible from the MX150 Front Panel.

Analog Audio Connections:

2. Connect an Audio Cable from the MX150 STEREO AUDIO IN 1 Jacks to the AM/FM Tuner unbalanced Output Jacks.
3. Connect an Audio Cable from the MX150 STEREO AUDIO IN 5 Jacks to the Music Server Analog Output Jacks.
4. Connect an Audio Cable from the MX150 STEREO AUDIO IN 4 Jacks to the Satellite Analog Output Jacks.

Analog Video Connections:

5. Connect Component Video Cables from the MX150 COMPONENT VIDEO IN 1 Jacks to the Audio/Video Disc Player Component Video Output Jacks, making sure to match the “Y/G” to “Y”, “Pb/B” to “Pb/Cb” and “Pr/R” to “Pr/Cr”.
6. Connect Component Video Cables from the MX150 COMPONENT VIDEO IN 3 Jacks to the Satellite Component Video Output Jacks, making sure to match the “Y/G” to “Y”, “Pb/B” to “Pb/Cb” and “Pr/R” to “Pr/Cr”.

MX150 Zone B Output Connections

The MX150 has the ability to automatically switch power On/Off to McIntosh Power Amplifiers via the Power Control and Trigger connections.

The connection instructions below, together with the MX150 Zone B Output Connection Diagram located on the separate folded sheet “Mc3B”, is an example of a typical Zone B Second Room 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 5.

Note: The following component connections made to the MX150 are using the default settings. To make changes to the default settings proceed to Setup Mode starting on page 31.

Power Control Connections:

1. Connect a Control Cable from the MX150 ZB PC (Power Control) OUT Jack to the Power Control In on Zone B Power Amplifier.
2. Connect any additional McIntosh Components in a similar manner, as outlined in step 1.

Analog Audio Connections:

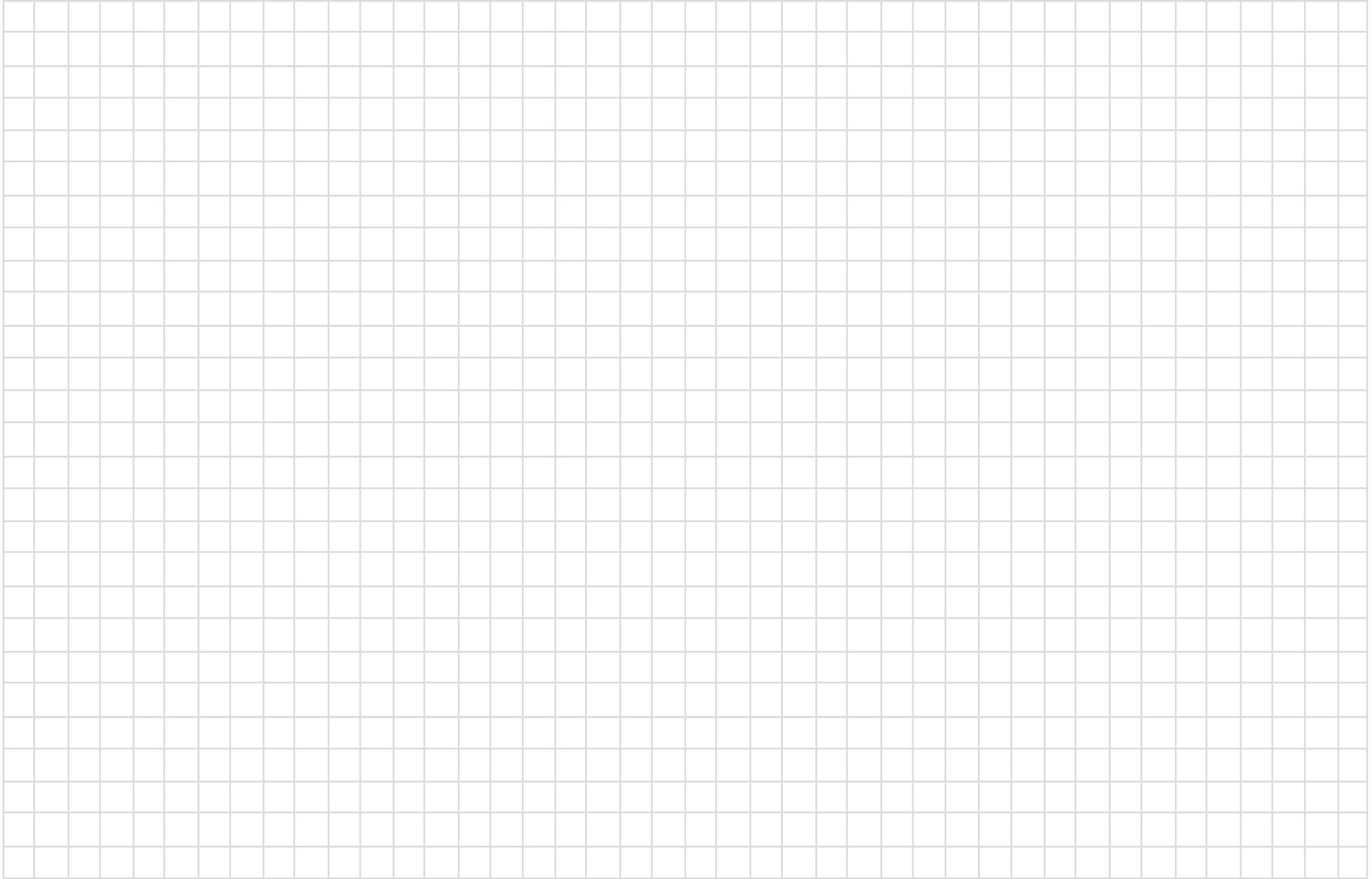
3. Connect Audio Cables from the MX150 Zone B OUT - L (Left Channel) and R (Right Channel) to Zone B Power Amplifier Left and Right respectively.

Analog Video Connections:

4. Connect Component Video Cables from the MX150 COMPONENT VIDEO OUT RCA Jacks to the Zone B TV/Monitor Video Input Jacks, making sure to match the “Y/G1” to “Y”, “Pb/B1” to “Pb/Cb” and “Pr/R1” to “Pr/Cr”.

AC Power Cords Connections:

5. Connect the MX150 and any remaining components’ AC Power Cords to a live AC outlet.



LED illuminates during the time a remote command is sent to the MX150

Turns AC Power ON or OFF to McIntosh Components when connected to ACC Power Control Jack, refer to "How to use the Remote Control" Acc On/Off information

Selects a Disc Player, Music Server or Recorder Function. Seek Stations Up or Down the AM/FM Dial. Select AM/FM Station Presets and performs various functions on a variety of McIntosh Components

Displays On Screen Functions on the McIntosh Music Server and a variety of other McIntosh Components

Adjusts the volume level up or down

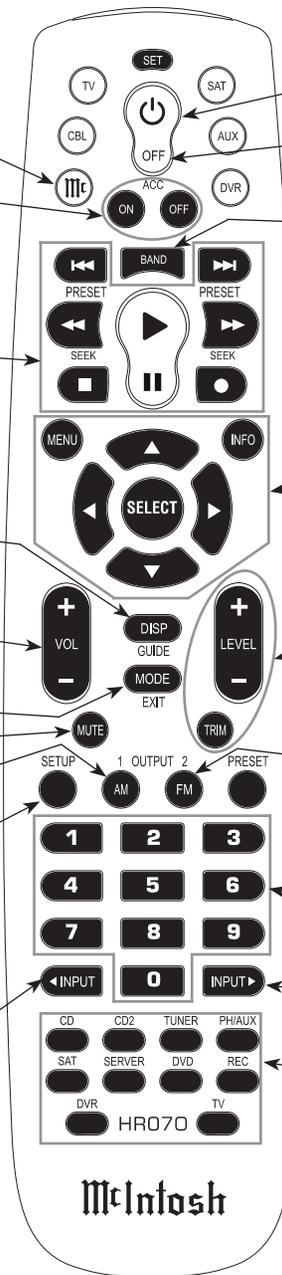
Press MODE to switch between Stereo and Mono Modes. Also allows exiting out of the setup mode

Mutes the audio

Selects AM Tuner Operating Functions and Disc Selection on certain McIntosh Disc Players

Activates the Setup Mode, used to return to previous Menu and/or exit the Setup Mode

Use to scroll thru available inputs for Zone A and B; and phantom Inputs for Zone A



Press to Power the MX150 ON

Press to Power the MX150 OFF

Press to either change Bands or Review Presets Stations with an external McIntosh Tuner connected, and select certain functions on a variety of McIntosh Components

Selects On Screen Functions on a variety of McIntosh Components

Press TRIM and then the LEVEL Push-buttons to select and adjust various functions

Selects FM Tuner Operating Functions and Track Selection on certain McIntosh CD Players

Use to select tuner presets, disc tracks or any numbered operation

Use to scroll thru available inputs for Zone A and B; and phantom Inputs for Zone A

Selects one of the ten available Audio Sources

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

How to use the Remote Control

The supplied HR070 Remote Control is capable of directly controlling the functions of contemporary McIntosh Source Components connected to the MX150 via the Data Ports.

Note: If at any time the MX150 seems unresponsive to HR070 Remote Control Commands press the  Push-button first.

Input Source Selection

Press the appropriate Source Push-button to select the desired program source. Sources may also be selected by pressing the ◀INPUT▶ push-buttons.

Notes: The MX150 has 128 Inputs (118 Phantom) and are accessible for Zone A using the ◀INPUT▶ Push-buttons.

Mute

Press the MUTE Push-button to mute the audio in all channels. The word MUTE will appear on the Front Panel Information Display. To un-mute the audio, press the MUTE Push-button again.

Disc, Server and Recorder Functions

Use these push-buttons to operate a DVD Player, CD Player, CD Changer, Music Server or Recorder.

Numbered Push-buttons

Press Push-buttons 0 through 9 to access tuner station presets, tracks on discs or selections on a Music Server.

Disc and Track

Use the AM (disc) and FM (track) Push-buttons when a Disc Player or Music Server is being used.

Tuner Push-buttons

Press the AM or FM Push-button to select the desired broadcast band. Press and release the SEEK ▶▶ Up or ◀◀ Down Push-button to seek the next available station. Press and hold a Channel SEEK ▶▶ Up or ◀◀ Down Push-button to seek continuously from station to station.

Volume

Press the Up▲ or Down▼ VOLUME Push-button to raise or lower the listening volume level.

Note: The Record Signals present at REC OUTPUTS are not affected by volume changes.

Pause

Press the Pause ■■ Push-button to perform various functions on a variety of McIntosh Components. It will also pause the playing of a disc or tape player.

Trim

Press the TRIM Push-button until the desired Trim function (Bass, Trim Levels, Treble, etc.) appears on the Front Panel Information display, then press the LEVEL Up▲ or Down▼ Push-button to adjust the Trim setting.

Press and release the LEVEL + (▲) or -(▼) Push-button to recall the last Trim Function Selected and its current setting. Additional pressing of the push-buttons will allow adjustment of the Trim Setting.

Note: For additional information on the Trim Functions refer to page 38.

Acc On/Off

Press ACC ON Push-button to switch Power On or press the ACC OFF Push-button to switch Power Off

to McIntosh Components when connected to a Trigger Control Jack. Refer to page 33 (Trigger Output Setup) for additional information.

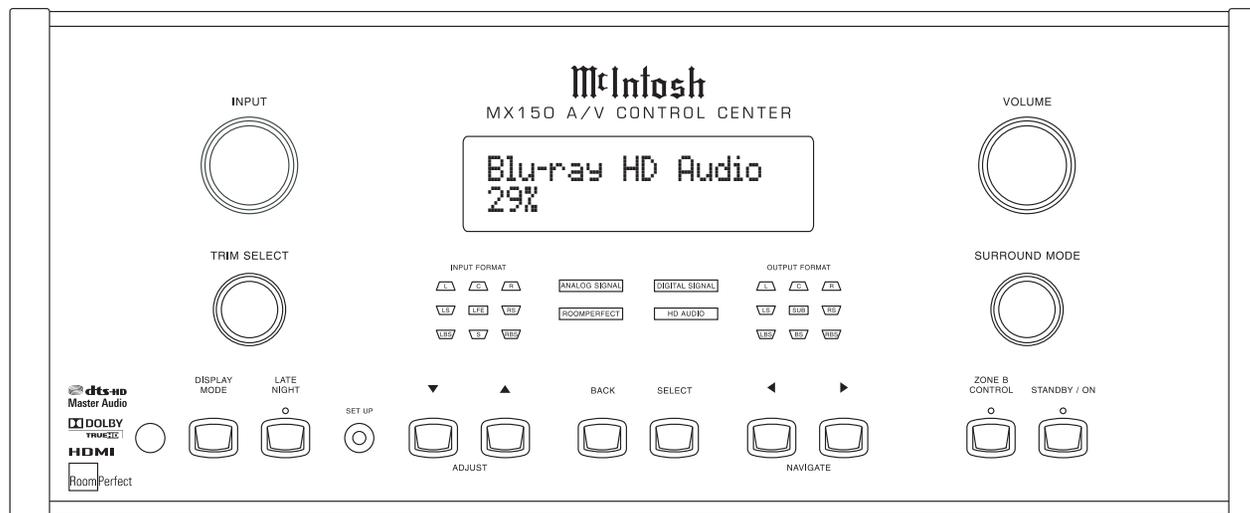
Enhanced Remote Control Operation

The MX150 offers an Enhanced Remote Control Operation. For additional information refer to page 41.



Front Panel Display, Controls, and Push-buttons

The identification of the MX150 A/V Control Center Front Panel Display, Controls, and Push-buttons is located on a separate folded sheet contained in the Owner's Manual Packet. Refer to separate sheet "Mc1B".



Introduction to the MX150 Setup Mode

Your McIntosh MX150 has been factory configured with default operating settings allowing for immediate use. Refer to pages 18-21 for a listing of the default settings. Changes to the default settings are accomplished with the built-in Setup Feature using On Screen Menus. Follow the sequence listed in the INSTALLER MENU and the other SETUP Menus, as some of these adjustments are interactive.

To assist in navigating the various On Screen Menus please refer to the set of MX150 Setup separate folded sheets contained in the Owner's Manual Packet.

Note: One of the MX150 Zone A Video OUTPUTS must be connected to the video input of a Monitor/TV for viewing the On Screen Menus.

1. Press the STANDBY/ON Push-button on the Front Panel or press the  (Power) Push-button on the Remote Control to switch On the MX150. Refer to figures 1 and 7. The Front Panel Information Display will first indicate "McIntosh MX150" followed by "Initializing, Please wait..." and then the last source selected and volume level setting. Refer to figures 2, 3 and 4. The LED above the Front Panel

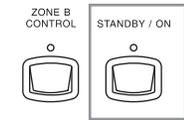


Figure 1



Figure 2

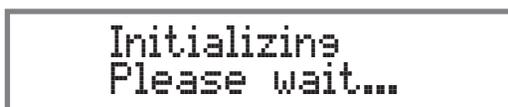


Figure 3



Figure 4

2. Press and release the MX150 Front Panel SETUP Push-button to enter the Setup Mode. The words "Installer Menu" will appear on the Front Panel Information Display and the Installer Menu (main menu) will appear on the Monitor/TV Screen. Refer to figures 5 and 6.



Figure 5

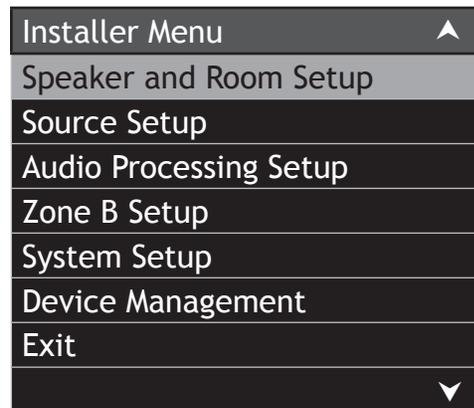


Figure 6

3. Navigating thru and making changes to the Setup Menus is performed by using the HR070 Remote Control directional Up▲ or Down▼, Left◀ or Right▶, SELECT and the SETUP Push-buttons.

The Front Panel ADJUST ▲(up) or ▼(down), BACK, SELECT, and NAVIGATE ◀ (left) or ▶ (right) Push-buttons may also be used.

4. Access the desired Setup Menu or Device Management (Menu) by pressing the Up▲ or Down▼ directional push-buttons. The desired Menu item will be highlighted with black color text and light gray background. Pressing the SELECT Push-button will then activate the highlighted Menu Item.
5. Return to the Installer Menu by either selecting the "Back" Menu choice or by pressing the SETUP Push-button on the Remote Control. To exit the SETUP Mode press the SETUP Push-button again.
6. Proceed to page 22 to enter information about the Loudspeakers used in Zone A.

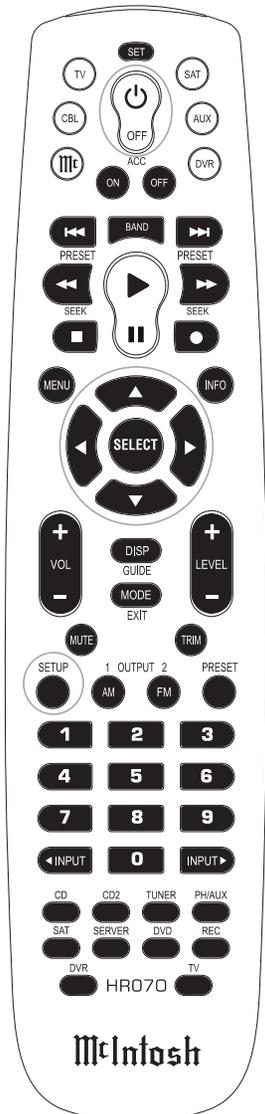


Figure 7



MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Speaker Configuration					
	Size (Front and Surround)	M			
			Bass perform	M	23
			Bass cutoff	80Hz	23
			Bass order	4th LiRi	23
			Nat. roll-off	No	23
			Gain offset	0.0dB	23
	Size (Subwoofer)	Sub 80			
			Sub - Hi F perform	Sub 80	23
			Sub - Hi F cutoff	80Hz	23
			Sub - Hi F order	4th LiRi	23
			Gain offset	0.0dB	23
	Aux 1/2 and 3/4 (Output Selection)	-			
			Aux - perform	-	29
			Aux - cutoff	-	29
			Aux - order	-	29
			Gain offset	0.0dB	29
Level Offsets					
	All Loudspeakers	0.0dB			25
Distance Settings					
	All Loudspeakers	0 inches			29
Zone A Source					
	Input Name	CD			
			Video In	None	29
			Audio In	Digital 1 Coax	29
			Audio Mode	Stereo	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	None	29
			RC SRC button	CD	29

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Zone A Source					
	Input Name	CD2			
			Video In	HDMI 3	29
			Audio In	Balanced 1	29
			Audio Mode	Music	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	3	29
			RC SRC button	CD2	29
	Input Name	TUNER			
			Video In	None	29
			Audio In	Digital 2 Coax	29
			Audio Mode	Stereo	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	1	29
			RC SRC button	TUNER	29
	Input Name	PHONO			
			Video In	None	29
			Audio In	Phono	29
			Audio Mode	Stereo	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	None	29
			RC SRC button	PH/AUX	29
	Input Name	SAT			
			Video In	HDMI 1	29
			Audio In	HDMI 1	29
			Audio Mode	Movie	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	None	29
			RC SRC button	SAT	29

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Zone A Source					
	Input Name	SERVER			
			Video In	Component 2	29
			Audio In	Digital 7 Opt.	29
			Audio Mode	Music	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	7	29
			RC SRC button	SERVER	29
	Input Name	DVD Blu-ray			
			Video In	HDMI 3	29
			Audio In	HDMI 3	29
			Audio Mode	Music	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	3	29
			RC SRC button	DVD	29
	Input Name	REC			
			Video In	S-Video 1	29
			Audio In	Stereo 2	29
			Audio Mode	Music	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	3	29
			RC SRC button	REC	29
	Input Name	DVR			
			Video In	HDMI 4	29
			Audio In	Digital 8 Opt.	29
			Audio Mode	Movie	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	3	29
			RC SRC button	REC	29

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Zone A Source					
	Input Name	TV			
			Video In	None	29
			Audio In	Stereo 7	29
			Audio Mode	Movie	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	None	29
			RC SRC button	TV	29
	Input Name	Multichannel			
			Video In	HDMI 3	29
			Audio In	Multichannel	29
			Audio Mode	Music	29
			Volume Offset	0.0dB	29
			Lipsync offs.	0ms	29
			Data output	3	29
			RC SRC button	Input ¹	29
Audio Processing					
	Audio Mode				
		Use Audio M.	Yes		29
		Audio Mode	Movie		29
		Used	Yes		29
		Preferred Voicing	Neutral		29
		Preferred Stereo Mode	DPLIIx		29
	Dolby				
		PLIIx Width	3		29
		PLIIx Dimensio	0		29
		PLIIx Panorama	Off		29
		DD&DD+ Dynamics	Max		29
		True HD Dynamics	Auto		29
	DTS				
		NEO6	0.3		29
		Neo6 wide	Off		29

¹ The Multichannel Input is accessible by using the Front Panel Input Control (Zone A and B) or the Input (◀▶) Push-buttons on the Remote Control (Zone A)



MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Audio Processing					
	Advanced Audio Setup				
		Max Volume	59%	29	
		Use startup vol	No	29	
		RP Bypass	No	29	
		Lipsync	0ms	29	
		HDMI Audio Out	Silent	29	
		Mch. AD LFE Gain	0dB	29	
Zone B Setup					
		Power	Independent	30	
		Volume Mode	User	30	
		Video Output	Zone B	30	
		Max volume	59%	30	
		Startup Src	Use Last	30	
	Input Name	CD			
		Video In	None	30	
		Audio In	Stereo 8	30	
		Data output	None	30	
		RC button	CD	30	
	Input Name	CD2			
		Video In	Component 1	30	
		Audio In	Balanced 1	30	
		Data output	3	30	
		RC button	CD2	30	
	Input Name	TUNER			
		Video In	None	30	
		Audio In	Stereo 1	30	
		Data output	1	30	
		RC button	TUNER	30	

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Zone B Setup					
	Input Name	PHONO			
		Video In	None	30	
		Audio In	Phono	30	
		Data output	None	30	
		RC button	PH/AUX	30	
	Input Name	SAT			
		Video In	Component 3	30	
		Audio In	Stereo 4	30	
		Data output	None	30	
		RC button	SAT	30	
	Input Name	SERVER			
		Video In	Component 2	30	
		Audio In	Stereo 5	30	
		Data output	7	30	
		RC button	SERVER	30	
	Input Name	DVD Blu-ray			
		Video In	Component 1	30	
		Audio In	Balanced 1	30	
		Data output	3	30	
		RC button	DVD	30	
	Input Name	REC			
		Video In	Component 4	30	
		Audio In	Stereo 2	30	
		Data output	None	30	
		RC button	REC	30	
	Input Name	DVR			
		Video In	Component 5	30	
		Audio In	Stereo 6	30	
		Data output	None	30	
		RC button	DVR	30	

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
Zone B Setup					
	Input Name	TV			
			Video In	None	30
			Audio In	Stereo 7	30
			Data output	None	30
			RC button	TV	30
	Input Name	Multichannel			
			Video In	Component 1	30
			Audio In	Balanced 1	30
			Data output	3	30
			RC button	Input ¹	30
System Setup					
	Video System Setup				
		Analog Out	NTSC		32
		Component Out	YPbPr		32
		Component In 1	YPbPr		32
		Component In 2	YPbPr		32
		Component In 3	YPbPr		32
		Component In 4	YPbPr		32
		Component In 5	YPbPr		32
	Serial Setup				
		Baudrate	9600		32
		Hw Handshake	No		32
		Feedback	0		32
	Network Setup				
		Mode	Manual IP		32
		IP	192.168.1.222		32
		Mask	255.255.255.0		32
		GW	192.168.1.1		32
	Trigger Input Setup				
		Triggers 1 / 2 and 2 / 2			
		Voltage	12V		33
		Action	No Action		33

MENU	SELECTION	SETTING	ADJUSTMENT	SETTING	PAGE
System Setup					
	Trigger Output Setup				
		Triggers 1 / 4			
		Voltage	12V		33
		Duration	Level		33
		Extra Dur.	+0ms		33
		Action	Zone A/B on		33
		Triggers 2 / 4 thru 4 / 4			
		Voltage	12V		33
		Duration	Level		33
		Extra Dur.	+0ms		33
		Action	No Action		33
	General Setup				
		OSD Feedback	User		34
		OSD Position	Bottom		34
		OSD Background	Solid		34
		VFD Feedback	User		34
		Startup source	Use Last		34
		Front IR sens	On		34
		Power Saving	Yes		34
		Amp Lights	On		34
		Enhanced RC ctrl	Off		34

¹ The Multichannel Input is accessible by using the Front Panel Input Control (Zone A and B) or the Input (◀ ▶) Push-buttons on the Remote Control (Zone A)



Speaker Configuration

Before proceeding with Speaker and Room Setup it is advisable to read “Introduction to the MX150 Setup Mode” on page 17. Also refer the MX150 Default Settings pages 18 thru 21. Follow the sequence listed in the INSTALLER MENU and the other SETUP Menus, as some of these adjustments are interactive.

Note: To assist in navigating the various On Screen Menus please refer to the set of MX150 Setup separate folded sheets contained in the Owner’s Manual Packet.

A Home Theater System can include a variety of Loudspeakers with various low frequency (bass) performance capabilities. These capabilities refer to the Loudspeaker’s ability for reproducing low frequencies to within -3dB of the intensity it reproduces the mid-range frequencies. The MX150 has six different preset Loudspeaker Capabilities settings plus one custom setting. These settings are for the Left Front, Center Front, Right Front, Right Surround, Right Back Surround, Left Back Surround and Left Surround Loudspeakers. If you are unsure as to the low frequency performance capabilities of your Loudspeakers, contact the Loudspeaker Manufacture, McIntosh Dealer or select the XS setting. Refer to the chart below:

MX150 Setting	Setting Description
-	No Loudspeaker connected to this channel
XXL	Loudspeaker response down to 20Hz (-3dB), reproduces Low Frequencies from all channels set to L, M, S, or XS. It also reproduces the LFE information when there is no Subwoofer
XL	Loudspeaker response down to 20Hz (-3dB), reproduces Low Frequencies from all channels set to L, M, S, or XS when there is no Subwoofer. It also reproduces the LFE information when there is no Subwoofer
L	Loudspeaker response down to 40Hz (-3dB)

MX150 Setting	Setting Description
M	Loudspeaker response down to 80Hz (-3dB)
S	Loudspeaker response down to 100Hz (-3dB)
XS	Loudspeaker response down to 120Hz (-3dB)
Custom	Manual setting of Low Frequency Cutoff and Curve Shape (Bass Order)

1. Press and release the SETUP Push-button on the Remote Control to enter the Setup Mode. Refer to figure 8. The words “Installer Menu” will appear on the Front Panel Information Display and the Installer Menu (main menu) will appear on the Monitor/ TV Screen. Refer to figures 9 and 10.
2. Press the SELECT Push-button for the “Speaker and Room Setup” Menu. Refer to figure 11.
3. Press the SELECT Push-button again to select the “Speaker Configuration” Menu. Refer to figure 12.
4. Using the Down▼ Push-button scroll down thru the default menu settings. Refer to figures 12 thru 14. Compare these settings to the actual Loudspeaker Capabilities making up your Home Theater System. If the settings do not agree with the menu choices, then changes will need to be made.

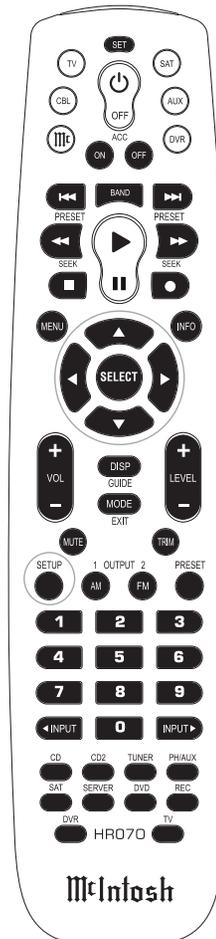


Figure 8

Installer Menu

Figure 9

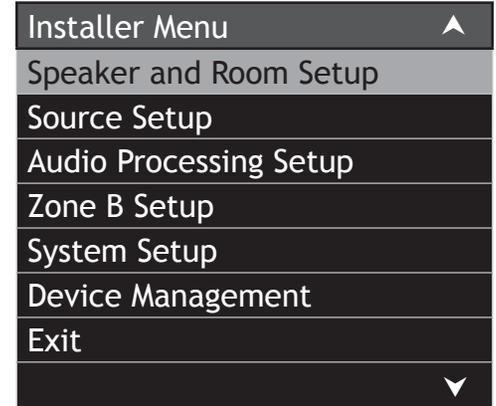


Figure 10

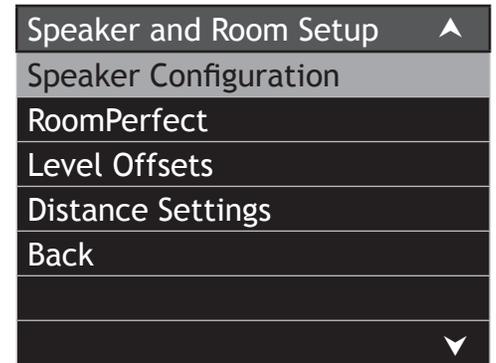


Figure 11

5. To makes changes use the ▲(up) or ▼(down) Push-buttons to highlight the “EDIT/SELECT” menu item, then press the SELECT Push-button. In the following example the Left Front Loudspeaker setting will change from M to L.
6. Use the Up▲ or Down▼ Push-buttons to highlight the “L” menu item (Left Front Loudspeaker),

Speaker Configuration ▲	
L	M
C	M
R	M
RS	M
RBS	M
LBS	M
Back ▼	

Figure 12

Speaker Configuration ▲	
LBS	M
LS	M
SUB	Sub 80
AUX1 L	-
AUX2 R	-
AUX3 L	-
Back ▼	

Figure 13

Speaker Configuration ▲	
AUX2 R	-
AUX3 L	-
AUX4 R	-
Edit/Select	
Verify Current Setup	
Back ▼	

Figure 14

then press the SELECT Push-button. Refer to figure 15. Press the SELECT Push-button again. Refer to figure 16.

7. The “Select Perf.” Menu will appear, then use the

L ▲	
Bass perform	M
Bass cutoff	80Hz
Bass order	4th LiRi
Gain offset	0.0dB
Back	
▼	

Figure 15

Select Perf. ▲	
-	
XXL	
XL	
L	
M	
S	
XS	
Custom	
Back ▼	

Figure 16

Up▲ or Down▼ Push-buttons to highlight the “L” (for large) menu item for the Left Front Loud-speaker. Then press the SELECT Push-button. Refer to figures 16 and 17.

L ▲	
Bass perform	L
Bass cutoff	40Hz
Bass order	4th LiRi
Nat. roll-off	No
Gain offset	0.0dB
Back ▼	

Figure 17

8. Return to the “Speaker Configuration” Menu by pressing the SETUP Push-button. Scroll down to “Save Changes” by using the Down▼ Push-button and then press the SELECT Push-button to save the change. Refer to figure 18. If no changes are to be saved, press the SETUP Push-button. The “Confirm Exit” will appear On-Screen and select “Yes”. Refer to figure 19 on the next page.

Note: Once changes have been saved, any additional changes will first require selecting the “Edit/Select” again.

Speaker Configuration ▲	
AUX1/2 (L/R)	-
AUX3/4 (L/R)	-
Load Config	
Create New Config	
Save Changes	
Abort (no changes saved) ▼	

Figure 18

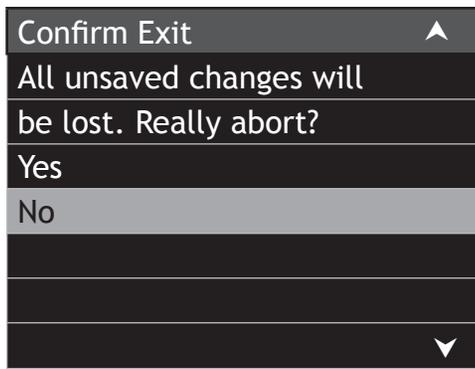


Figure 19

At this time, using the procedures outlined in steps 6 thru 8, enter any changes necessary so the “Speaker Configuration” settings agree with the Loudspeakers in your Home Theater System. Then make sure to save the new settings.

Note: With the exception of using Loudspeakers set to XXL or XL in the MX150 Speaker Configuration Menu, the correct setting for subwoofer is 80Hz (default setting). For additional information contact your McIntosh Dealer.

9. To verify all channels in the Home Theater System are functioning, use the ▼(down) Push-buttons to highlight the “Verify Current Setup” option in the “Speaker Configuration” Menu. Refer to figure 14 on page 23. Then press the SELECT Push-button. Refer to figure 19A.
10. At this time a test signal should be heard from the Front Left Loudspeaker (if necessary, increase the Volume Setting). If for some reason no sound is heard, check the Loudspeaker, Power Amplifier and all cabling for the Front Left Channel until sound is heard before proceeding. Test the rest of the Loudspeakers in the system by pressing the SELECT Push-button for each Loudspeaker, one

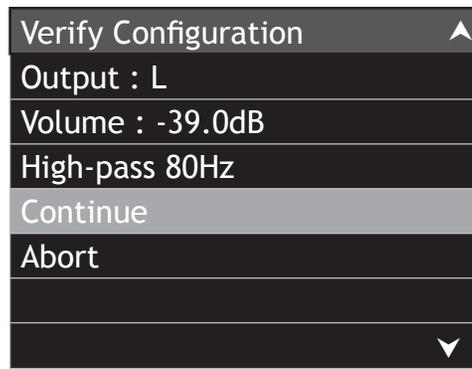


Figure 19A

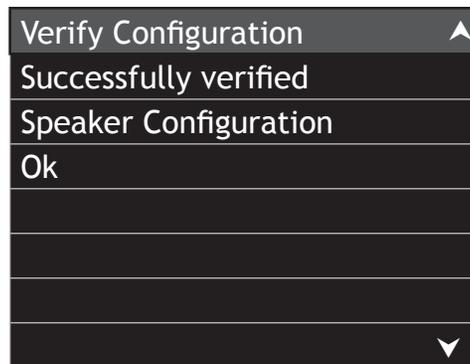


Figure 19B

at a time, until sound is heard from all channels. Referring to figure 19B press the SELECT Push-button.

11. Return to the “Speaker and Room Setup” Menu by pressing the SETUP Push-button. After having completed “Speaker Configuration”, it is now time to activate the RoomPerfect Mode. If for some reason RoomPerfect Mode will not be used, proceed to “Level Offsets” at this time

RoomPerfect

The RoomPerfect Measure and Adjustment Process uses multiple measurement locations in the listening room to achieve the best possible acoustical results. The Focus Position (location in the room) is typically where one would be during serious viewing and listening. The Room Positions are other locations in the room where non critical viewing and listening occurs.

Notes: 1. Assemble the supplied Microphone Holder/Stand/Boom Adapter and connect the Microphone to the MX150 MICROPHONE Connector on the Rear Panel using the supplied cable.

2. Set the trim controls on the MX150 to the flat setting position and the volume control to the normal listening volume level.
3. It might be advisable to temporarily switch off the room/house heating/cooling system while the Room Perfect measurement process is occurring. If there are open windows, they should be closed. All of these steps will allow lower testing volume levels and more accurate measurements.
4. The following steps along with the various On-Screen Menus illustrated in this Owner’s Manual, are for the first time RoomPerfect is run. The next time RoomPerfect is run some of the On-Screen Menus will change to reflect the already stored settings.

1. Press the SETUP Push-button to enter the Setup Mode. Using the Up▲ or Down▼ Push-buttons to highlight “Speaker and Room Setup” and press the SELECT Push-button. Refer to figure 20.
2. Then using the Remote Control select “RoomPerfect”. Refer to figure 21.
3. Press the SELECT Push-button and the “RoomPerfect Guided Setup” will appear. Press the SELECT Push-button again and “Starting Guide Setup,

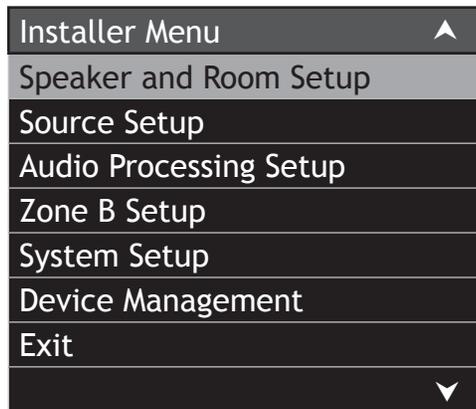


Figure 20

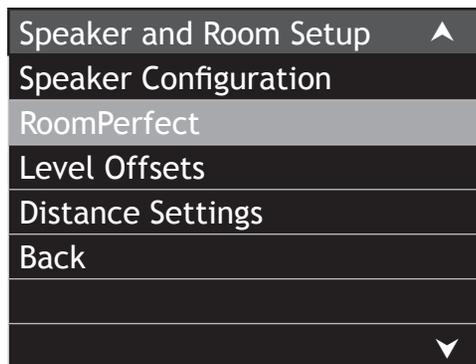


Figure 21

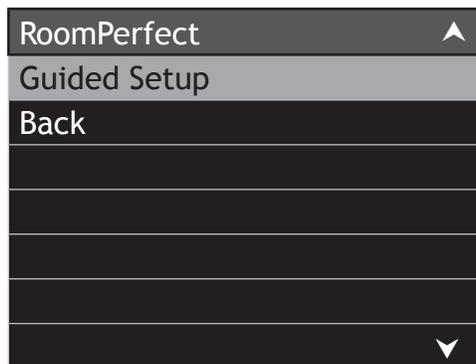


Figure 22

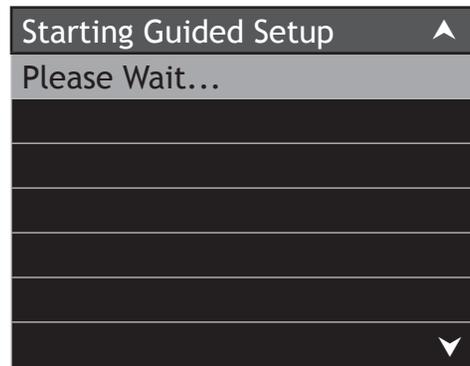


Figure 23

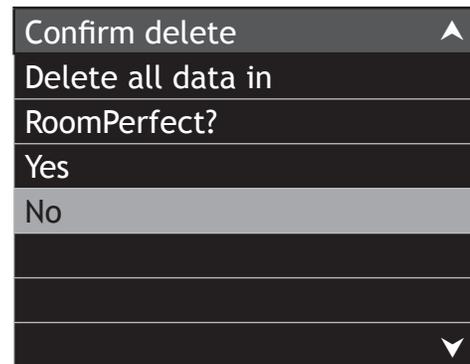


Figure 24

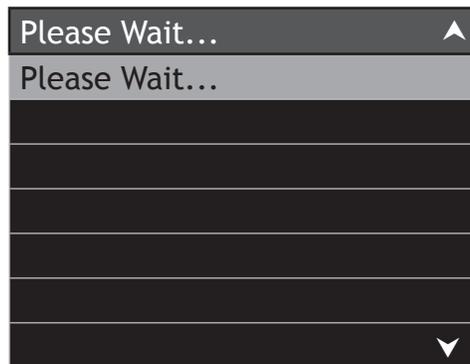


Figure 25

- please wait” will appear. Refer to figures 22 and 23. After a brief moment, Figure 24 will appear, select yes and figure 25 appears briefly.
- At this time place the microphone in the focus location with the front of the microphone pointing towards the loudspeakers (center location between the Left and Right Loudspeakers). The height of the microphone should be at ear level. Refer to figure 26.

Note: The Microphone Stand Boom Adaptor allows the microphone to be placed over objects such as a chair or table.

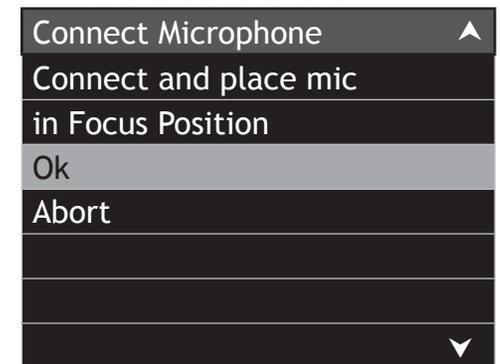


Figure 26

- Press the SELECT Push-button and the “Volume Calibration measuring” will appear. Refer to figure 27. The MX150 will send out to each of the loudspeakers, one at a time, a test tone to obtain a measurement level making sure it is above the background noise level in your room. Several minutes after testing, figure 28 (on page 26) will appear on-screen. Select “Save Current” and press the SELECT Push-button. When figure 29 (on page 26) appears On-Screen, select continue and press the SELECT Push-button.

RoomPerfect, con't

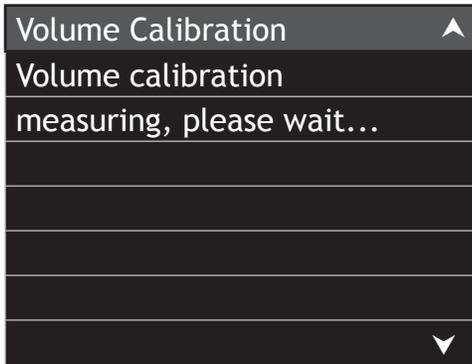


Figure 27

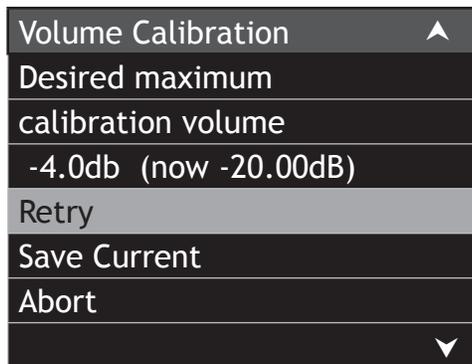


Figure 28

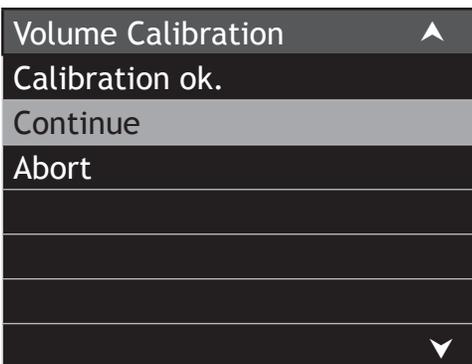


Figure 29

Note: The Desired maximum calibration volume (-4.0db) level and the current (now -20.00dB) volume indications in figure 28 will probably be different in your room. The size of your room, loudspeaker distance from the microphone position and the efficiency of the loudspeakers all effect the readings. If the test signal was too loud, reduce it by using the Volume Control by 10dB (the example in figure 28 would now read -30.00dB). Select "Retry" then "Save Current". If for some reason the volume level needs to be higher, a "Measuring Error" will appear on the screen refer to figure 30.

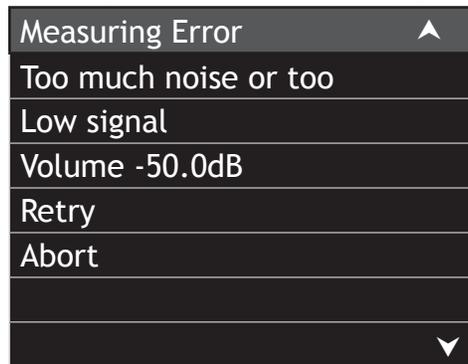


Figure 30

6. Measure the distance from the microphone location (Focus Position) to each of the Loudspeakers. Refer to figures 31 and 32. Using the Down▼ Push-button, highlight the "L" Loudspeaker Position and press the SELECT Push-button. Then use the Up▲ or Down▼ Push-buttons to enter the distance measurement. Use the Left ◀ Directional Push-button to highlight the "L" followed by the Down▼ Push-button to highlight the "L" Loudspeaker Position and enter the distance. When all the active Loudspeakers Distance measurements have been entered select "Continue" and press the

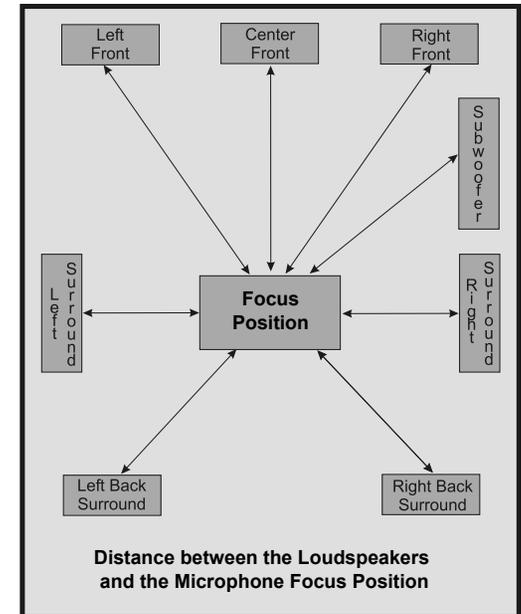


Figure 31

Distance Settings	
Unit	in
Position	Focus 1
L	0 in
C	0 in
R	0 in
RS	0 in
RBS	0 in
LBS	0 in
LS	0 in
SUB	0 in
Continue	

Figure 32

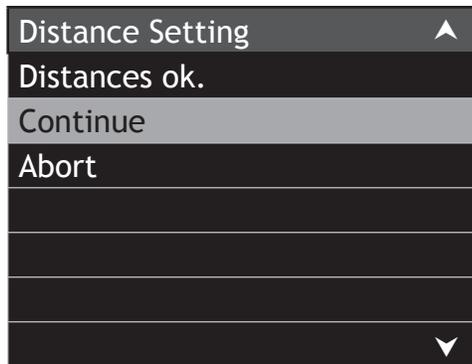


Figure 33

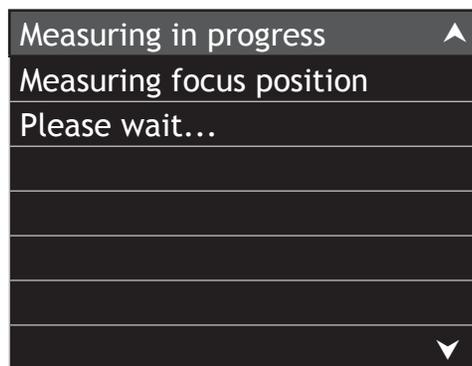


Figure 34

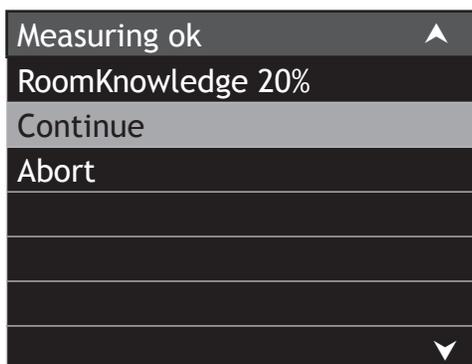


Figure 35

SELECT Push-button. Refer to figure 33.

Note: The distance measurements may also be entered in centimeters. Referring to figure 32, use the Directional Push-buttons and the Select Push-button to change the "Unit" setting from inches to centimeters.

7. Figure 34 will appear On-Screen "Measuring in progress" and each of the Loudspeaker will be measured one at a time. After all of the Loudspeakers have been measured, figure 35 will appear on screen. Press the SELECT Push-button to continue.

Note: The actual RoomKnowledge percentages appearing On-Screen will be different for your system and room than those illustrated in this Owner's Manual.

8. Relocate the microphone to another place in the room and press SELECT to continue. Refer to figures 36 and 37.

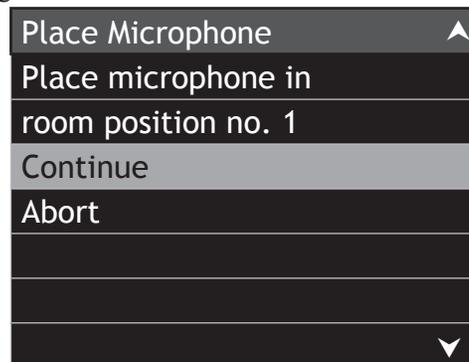


Figure 36

Note: It is advisable to change the elevation of the Microphone (relative to the floor) Up or Down by a foot (30.5cm) or more, along with changing the direction the microphone is pointing to when instructed to position the microphone in a new location. This will help to ensure better results.

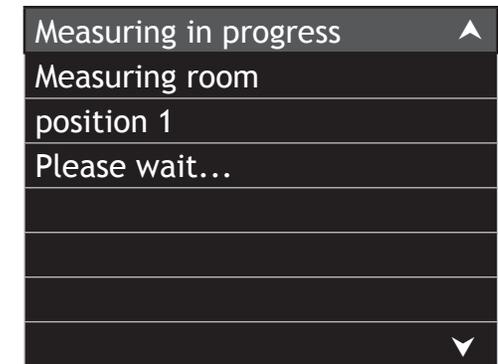


Figure 37

9. At the end of the "Measuring Room Position 1" figure 38 will appear. For the best sonic results, it is important to continue measuring additional room positions, until the RoomKnowledge Data is at least 90%. Relocate the microphone to a second room position and press SELECT to continue. Refer to figures 39 and 40 (on the next page). Depending on the room itself and the objects in the room, it might take many different room positions for the measurements to reach a RoomKnowledge score over 90%.

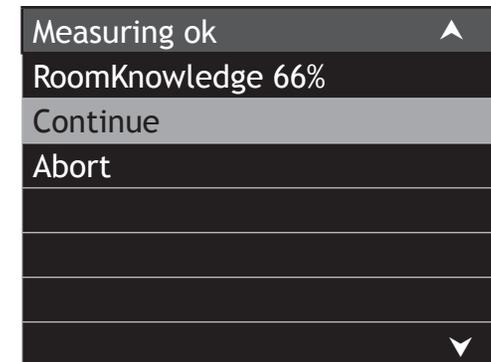


Figure 38

RoomPerfect, con't

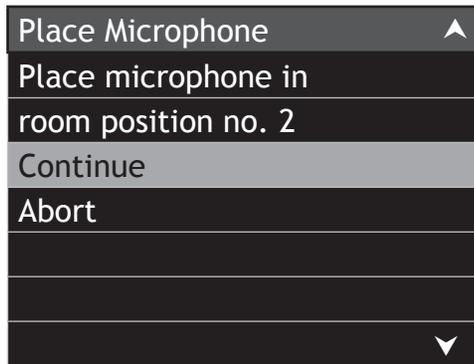


Figure 39

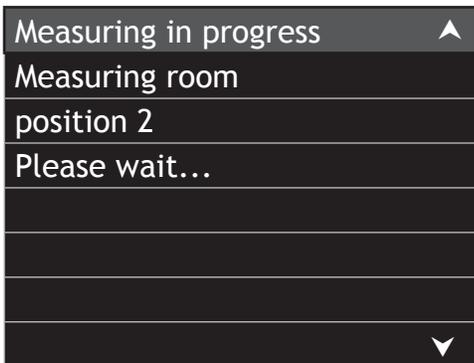


Figure 40

10. When the second room position measurements have been completed, the RoomKnowledge Data is now at 93%. Refer to figure 41.
11. With the menu choice NO highlighted, press the SELECT Push-button to continue. Refer to figure 42.
12. It will take several minutes to calibrate the filters for each of the Loudspeakers in the system. Refer to figure 43. When the filters have been set, the On-Screen will indicate “RoomPerfect calibration”. Refer to figure 44. Press the SELECT Push-button to exit RoomPerfect. Press the SETUP Push-button to return to the previous Menu or

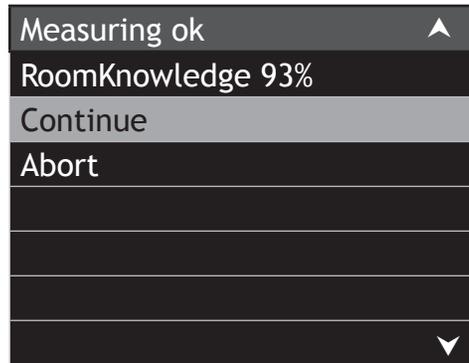


Figure 41

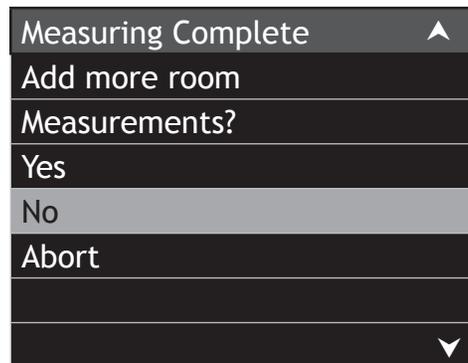


Figure 42

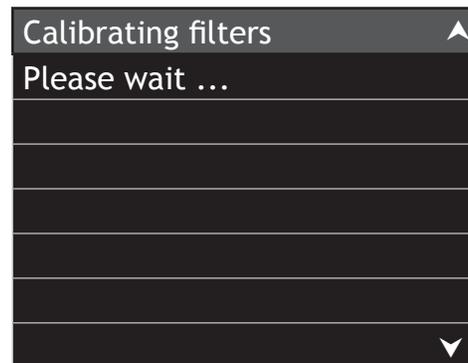


Figure 43

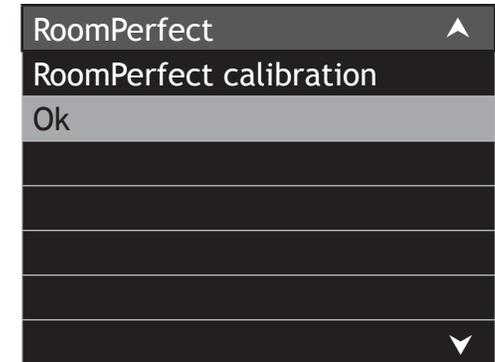


Figure 44

press the SETUP Push-button several times to exit the Setup Mode.

Note: When the RoomPerfect Calibration has been completed, the MX150 Front Panel “ROOMPERFECT” indicator will be illuminated.

Additional Setup Options

For the vast majority of MX150 Owners the Default Settings, Suggested Component Connections, Speaker Configuration and RoomPerfect Room Corrections are all one needs to perform for full enjoyment of your Home Theater System.

The MX150 has an almost infinite number of additional options available to allow complete customization of a Home Theater System. The navigation and selection methods previously illustrated also apply to the remainder of Setup Mode Settings.

Usually, your McIntosh Dealer and/or a Custom Installer uses these additional capabilities to customize your Home Theater System.

When working with these additional Setup Options please refer to the set of MX150 Setup separate folded sheets contained in the Owner’s Manual Packet.

INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
Speaker and Room Setup					
	Speaker Configuration				
		Aux1/2 (L/R)	Sub80-Sub800, Custom	Rear Panel XRL Connectors, Variable High Pass Output of the Front Left and Right Channels, Link-Riley or Butterworth curves, Output Level Trim	2
		Aux3/4 (L/R)	Sub80-Sub800, Custom	Rear Panel RCA Connectors, Variable High Pass Output of the Front Left and Right Channels, Link-Riley or Butterworth curves, Output Level Trim	2
	Level Offsets	L, C, R, LS, RS, LBS, RBS, SUB	±12dB	For manual adjustment when RoomPerfect is not used	2
	Distance Setting	L, C, R, LS, RS, LBS, RBS, SUB	0-2168 inches or 0-5532 Centermeters	For manual adjustment when RoomPerfect is not used	2
Source Setup					
	Zone A Source Setup				
		Edit	Name, Video In, Audio In, Advanced	Rename a given Input, Assign analog/digital Rear Panel connections to an Input, Default Audio Mode when Input is selected, Volume Offset, Lipsync Offset, Data jack Output and Remote Control Push-button	3
		Create New	Phantom Input (up to 119)	same options as in Edit Mode	3
		Delete	Remove a Input	remove un-used inputs	3
		Arrange	Rearrange the Input order	place frequently used inputs next to one another	3
Audio Processing Setup					
	Audio Mode Setup ¹				
		Use Audio Mode	Yes, No	Switch off the implementation of pre-assigned Audio Mode for each Input	4
		Audio Mode	Movie, Music, Games, Stereo, No Processing, Custom 1-16 settings	Sets a global Audio Mode for all Inputs when "Use Audio Mode" is switched Off	4
		Used	Yes, No	Remove the current Audio Mode from selections	4
		Select Preferred Voicing	Neutral, Music, News, Movie, Action, Action+Movie	When RoomPerfect is Active, one of the five overall frequency response curves can be activated	4

¹The menus in the Audio Mode Setup are interactive and are also dependent on the number of Loudspeakers selected in the Speaker Configuration Menu



INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
Audio Processing Setup					
	Audio Mode Setup ¹				
		Select Preferred Stereo Mode	DPLIIx Movie, Neo:6 Cinema, Party, Pure Stereo, no Post Processing	When the audio input signal is two channel, select from five different choices for processing the signal	4
		Arrange Multichannel List	DPLIIx Movie, Dolby Digital EX, No Post Proc., Stereo	When the number of output channels is greater than the number of input channels, the order of the type of signal processing used	4
	Voicing Setup				
		Location:	Internal Storage, USB	The device used to store Voicing Sets	4
		Select Voicing Set	choose from default or custom	Overall frequency response curves	4
		Currently Used Set:	default_voicing		4
		Delete Voicing Set	remove from storage a voicing set		4
	Dolby Setup				
		PLIIx Width	0-7	Varies the Front Center Channel Sound Stage Width	4
		PLIIx Dimension	-3 to +3	Varies the depth of the Front Sound Stage	4
		PLIIx Panorama	On, Off	Increases the size of the Front to Surround Loudspeaker Sound Stage	4
		DD&DD+ Dynamics	Min, Normal, Max	Used to reduce, make no-change or increase the range of sound from loud to quiet	4
		TrueHD Dynamic	Auto, Off	Reduces dynamic range without loss of information or is switched Off	4
	DTS Setup				
		Neo6 Cgain	0.0-1.0	Varies the Front Center Channel Sound Stage Width	4
		Neo6 wide	On, Off	Increases the size of the Front to Surround Loudspeaker Sound Stage	4
	Advanced Audio Setup				
		Max Volume	0-99%	Zone A maximum volume	4
		Use startup vol	No, Yes	Last volume setting or preset startup volume	4
		Startup Volume	0-99%	Sets Zone A startup volume	4

¹The menus in the Audio Mode Setup are interactive and are also dependent on the number of Loudspeakers selected in the Speaker Configuration Menu

INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
Audio Processing Setup					
	Advanced Audio Setup				
		RP Bypass	No, Yes	Bypasses the audio signal around RoomPerfect Correction; Bypass is available as a Trim Function and as an option in the User Menu	4
		Lipsync	0-400ms	Delays the audio signal to be in synchronization with the video signal	4
		HDMI Audio Out	Silent, Off, On	Silent-mode sends a zero bit audio stream to the TV/Monitor, Off-mode sends no audio bit stream, On-passes the source component's audio bit stream to the TV/Monitor	4
		Mch. AD LFE Gain	0dB, +10dB	Affects the Analog Multichannel Sub Input only, corrects reduction in output level from some DVD Players	4
Zone B Setup					
	Power		Independent, Follow Zone A	Zone B switches On/Off independently or switches On/Off when Zone A switches On/Off	5
	Volume Mode		User, Fixed, Wakeup	Retains the last volume setting, allows for a fixed volume setting (used to provide an output for recording purposes), Zone B wakes up to the same volume setting when switched On	5
	Set Volume		0-99%	Used to set Zone B Output Level when Zone B Volume Mode is set to Fixed or Wakeup	5
	Video Output		Zone B, Independent, Zone A	Zone B Input Control select video source, external control (via RS232 connection) can select a different video source than the selected audio source, same video source as selected for Zone A	5
	Max volume		0-99%	Zone B maximum volume	5
	Startup Screen		Use last, or any currently available Input	Allows which input Zone B wakes up to	5
	Edit Zone B Sources				
		Name:	a-z, A-Z, 0-9, plus additional characters	Customize the Input Source Name	5
		Video In	None, Component 1-5	Zone B component video input source	5



INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
Zone B Setup					
	Edit Zone B Sources				
		Audio In	None, Balanced 1-2, Stereo 1-8, Phono	Zone B analog audio input source	5
		Data Out	None, Data Port 1-8	Assign a data port output different from Zone A	5
		RC Button	Remote Control direct access Push-buttons	Assign a Remote Control Push-button different from Zone A	5
System Setup					
	Video Setup				
		Analog Out	NTSC, PAL	Sets the Composite and S-Video video output signal standard	6
		Component Out	YPbPr, RGB	Sets the type of video output signal	6
		Component In 1	YPbPr, RGB	Sets the type of video input signal	6
		Component In 2	YPbPr, RGB	Sets the type of video input signal	6
		Component In 3	YPbPr, RGB	Sets the type of video input signal	6
		Component In 4	YPbPr, RGB	Sets the type of video input signal	6
		Component In 5	YPbPr, RGB	Sets the type of video input signal	6
	Serial Setup				
		Baudrate	9600, 19200, 38400, 57600 or 115200	Sets kilobit speed for RS232 Data Port	6
		HW Handshake	No, Yes	Use Hardware Handshake for the RS232 Data Port	6
		Feedback	0, 1, 2	Set the degree of feedback from the control device connected to the RS232 Data Port	6
	Network Setup				
		Mode	Manual IP, Automatic (DHCP), disable	Enter manually (the IP address, subnet Mask and Gateway), or Automatic setup with network using Dynamic Host Configuration Protocol, disable network connections	6
		IP	192.168. 1.222	IP Address	6
		Mask	255.255.255. 0	Subnet Mask	6
		GW	192.168. 1. 1	Gateway	6

Note: For MX150 WEB Interface perform the following; first connect MX150 to the PC Computer Ethernet Network, second enter Setup Mode, third select "System Setup" → "Network Setup", fourth select Automatic (DHCP), fifth select save, sixth copy the IP address shown On-Screen to the address line (after http://) of the WEB Browser.

INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
System Setup					
	Trigger Input Setup				
		Trigger 1/2, 2/2			
		Voltage	12V or 5V	Sets the required input voltage level to complete an action	6
		Action	No action, Zone A Source, Zone B Source, Zone A (On/Off), Zone A On, Zone B (On/Off), Zone B On,	No action when voltage is present; switches to preselected source for Zone A; switches to preselected source for Zone B; toggles Zone On when voltage is present and next time voltage is present Zone Off; Zone On when voltage is present and Off when voltage is not present	6
	Trigger Output Setup				
		Trigger 1/4, 2/4			
		Voltage	12V	Sets the required output voltage level to complete an action	6
		Duration	Level, 5 Seconds, 1 second, 100 ms	Level (constant voltage) or voltage for a specified time	6
		Extra Durartion	0 ms to 2 minutes	Additional specified time	6
		Action	No action, Zone A Source, Zone B Source, Zone A On, Zone On, Trigger Input 1, Trigger Input 2, ACC Power, Zone A/B On	Take no action; when the preset source for Zone A is selected; when the preset source for Zone B is selected; when Zone A is On; when Zone B is On; when Trigger Input 1 is active; when Trigger Input 2 is active; when the Remote Control ACC On/Off is used; Zone A or Zone B is On	6
		Trigger 3/4, 4/4			
		Voltage	12V or 5V	Sets the required output voltage level to complete an action	6
		Duration	Level, 5 Seconds, 1 second, 100 ms	Level (constant voltage) or voltage for a specified time	6
		Extra Dutrartion	0 ms to 2 minutes	Additional specified time	6
		Action	No action, Zone A Source, Zone B Source, Zone A On, Zone On, Trigger Input 1, Trigger Input 2, ACC Power, Zone A/B On	Take no action; when the preset source for Zone A is selected; when the preset source for Zone B is selected; when Zone A is On; when Zone B is On; when Trigger Input 1 is active; when Trigger Input 2 is active; when the Remote Control ACC On/Off is used; Zone A or Zone B is On	6



INSTALLER MENU	SUB MENU	SELECTION	OPTION(S)	DESCRIPTION	SETUP SHEET NO.
System Setup					
	General Setup				
		OSD Feedback	User, Volume, None	User mode displays various On-Screen Information, Volume mode displays volume setting only, None displays no On-Screen Information	7
		OSD Position	Bottom, middle, top	Changes location of On-Screen Information	7
		OSD Background	Solid, Transparent	Changes the background behind the On-Screen Information from black to transparent	7
		VFD Feedback	User, Volume, Off, All	MX150 Front Panel Information Display Automatically indicates info when there are Input, Surround Mode and Signal changes. User setting indicates Input, Volume and Surround Mode Changes. Volume setting indicates Input and Volume changes. All setting indicates Input, Surround Mode, changes to the incoming Signal, and Volume changes. Off switches Off the Front Panel Information Display.	7
		Startup source	Use last, CD, CD2, Tuner, Phono, SAT, Server, DVD Blu-ray, REC, DVR, TV, Multichannel	When switched On either listen to the last source selected before the MX150 was switched Off or same selected sourced when switched On	7
		Front IR Sensor	On, Off	Disables the Front Panel IR Sensor	7
		Power Saving	Yes, No	Reduces the startup initialization time, however MX150 will consume more power when in the standby mode	7
		Amp Lights	On, Off	Switches On or Off the meter illumination to McIntosh Power Amplifiers with the feature, requires power control connection between units	7
		Enhanced Remote Control	Off, On	When feature is Off, the Remote Control works with standard McIntosh functioning, when On more functioning is performed On-Screen with certain standard McIntosh functioning disabled	7
Device Mangement	Refer to page 44 for additional information				





How to Operate the MX150

The McIntosh MX150 has been factory configured for default operating settings, allowing for immediate enjoyment of superb video and high fidelity audio without the need for further adjustments. If you wish to make changes to the factory default settings, refer to the SETUP Section of this Owner's Manual starting on page 17.

Note: It is advisable to perform "Speaker Configuration" and "RoomPerfect" starting on page 22, to ensure the best audio performance.

Power On and Off

Press the STANDBY/ON Push-button on the Front Panel or press the (Power On) Push-button on the Remote Control. Refer to figures 50 and 54. The LED located above the STANDBY Push-button will start to flash On/Off and the Front Panel Information Display will indicate "McIntosh MX150" followed by "Initializing Please wait ...". Refer to figures 51 and 52. When the Initialization process is over, the display



Figure 51



Figure 52



Figure 53

will indicate "CD" with a volume level of "0%", which is the factory default setting. Refer to figure 53. The next time the MX150 is switched On, the last source selected at the desired volume will be active (unless the default setup settings have been changed).

Note: If the MX150 A/V Control Center is not going to be used for an extended period of time, please remove the AC Power Cord from the AC Outlet.

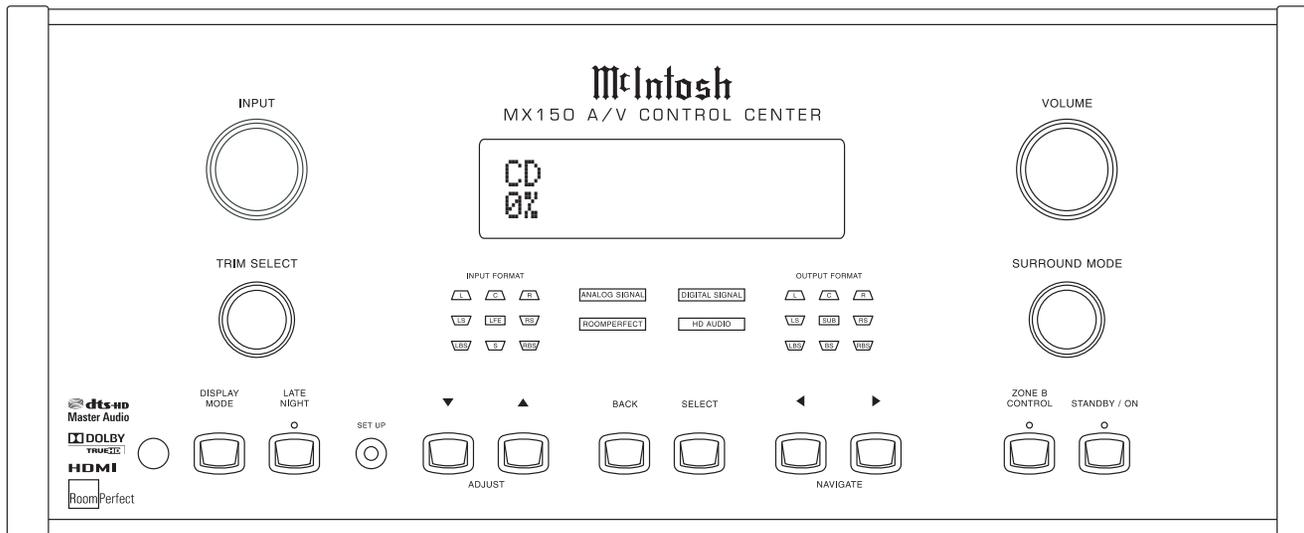


Figure 50

Input Selection

The INPUT Control selects the desired source and is indicated on the top line of the Front Panel Information Display. Refer to figure 50. The selection of the sources may also be accomplished by pressing the appropriate push-button on the Remote Control. Refer to figure 54. Using the MX150 INPUT Control, any one of the ten default Inputs (CD, Tuner, DVD-Blu-ray, etc.) may be selected along with one default Phantom Input (Multichannel). The Remote Control has ten dedicated direct access push-buttons along with INPUT .

Note: The MX150 has ten direct access pre-assigned Inputs and up to 117 assignable Phantom Inputs (one input is pre-assigned). Each Input has its own name and other settings assigned to it. These Inputs are made from the Analog Audio Input Connections (eleven, two-channel and one, eight-channel), there are also 15 Digital Audio Inputs Connections. There are 9 Analog and 5 Digital Video Input Connections.

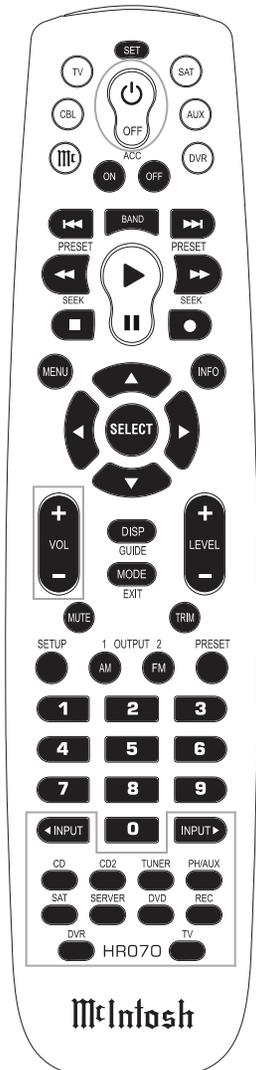


Figure 54

Volume Control

Adjust the VOLUME Control to select the desired listening level. The Volume Control adjusts all eight channels simultaneously, and level is indicated from 0 to 99% on the bottom line of the Front Panel Information Display. The Remote Control may also be used to adjust the listening level by using the VOL+/- Push-button.

During the time VOLUME Control is rotated or the Remote Control VOL+/- Push-button is depressed, an On-Screen Display Overlay will appear showing the Volume Level % and a horizontal display bar. Refer to figure 55. When the MUTE Push-button is pressed,

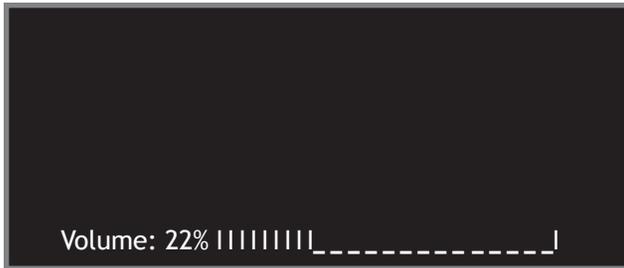


Figure 55

the Front Panel Information Display will indicate the word "Muted" in place of the volume % and the On-Screen Display will replace the word "Volume:" with "(Muted)". Refer to figure 56. Pressing the MUTE Push-button a second time, the listening volume level



Figure 56

will be restored and the displays will again indicate the Volume %.

Front Panel Status

The three sets of front panel LEDs indicate the status of Input Format, Operating/Decoding Modes and the Output Format.

Note: If a Digital Input is selected and the Digital Source Component is not producing an output signal, none of the Front Panel Status LEDs will illuminate.

Input Format

A. If the input signal source is Eight Channel, the front panel INPUT FORMAT LEDs L, C, R, RS, RBS, LBS, LS and LFE will illuminate. Refer to figure 57.

B. If a Digital Input Signal Source is 2 Channel Surround Encoded, the front panel INPUT FORMAT LEDs L, R and S will illuminate.

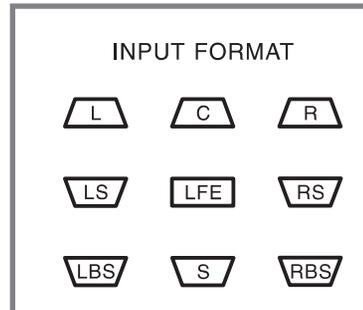


Figure 57

Note: The "S" indicator will only illuminate on some surround encoded program material.

C. If the Analog Input Signal Source is Stereo, the INPUT FORMAT LEDs L and R will illuminate.

D. If an Analog Input Signal Source is Mono, both channels will be receiving the mono signal and the INPUT FORMAT LEDs L and R will illuminate.

Operating Mode Displays

E. The ANALOG SIGNAL Display will illuminate when the audio input signal is analog. Refer to figure 58.

F. The DIGITAL SIGNAL Display will illuminate when the audio input signal is Digital.

G. The HD AUDIO Display will illuminate when the audio input signal is Digital High Definition such as Dolby True HD or DTS Master HD.

H. The ROOMPERFECT Display will illuminate when RoomPerfect Correction Circuitry is Active.

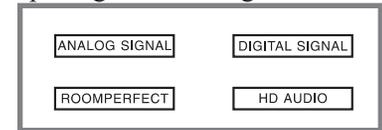


Figure 58

Output Format:

I. The OUTPUT FORMAT LEDs indicate the SURROUND MODE selected and the active audio channels. Refer to figure 59.

Note: The following example of the illuminated LED is based upon a 7.1 channel system. If your system is configured as something other than 7.1 (e.g. no Center Loudspeaker or a single BackSurround Loudspeaker) then the number of LEDs illuminated will be different.

J. NO PROCESSING mode for a two channel (Stereo) Input will cause the L, R and SUB

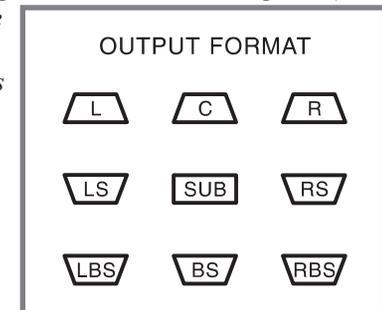


Figure 59



LEDs to illuminate.

K. DPLIIx (MOVIE) or NEO: 6 (CINEMA) mode will cause the L, C, R, RS, RBS, LBS, LS and SUB to illuminate.

L. DPLIIx (MUSIC) mode will cause the L, C, R, RS, RBS, LBS, LS and SUB to illuminate.

M. DPLIIx (GAME) mode will cause the L, C, R, RS, RBS, LBS, LS and SUB to illuminate.

Trim Select

The MX150 TRIM Push-button together with the LEVEL +/- Push-button on the Remote Control, provide the means for adjusting eight different Audio Functions and two Display Functions. Refer to figure 60. The Front Panel Information Display indicates the function and the adjustment. During the time a Trim function is accessed and an adjustment is made, an On-Screen Display Overlay will appear on the TV/Monitor.

Notes: 1. The MX150 Front Panel TRIM Control together with the ADJUST ▼ (Down) and ▲ (Up) Push-buttons may be used instead of the Remote Control.

2. Changes made to

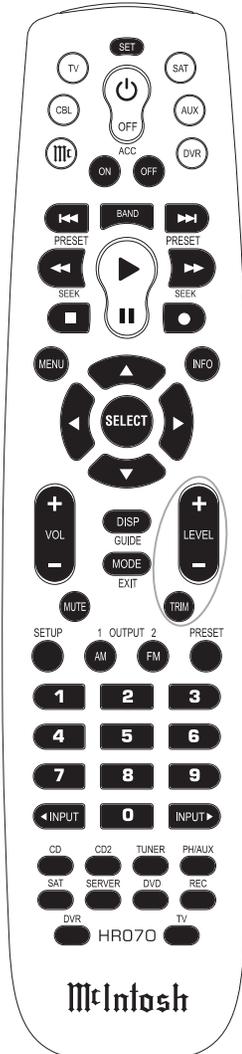


Figure 60

“RoomPerfect” and “Voicing” Trim Settings are retained in memory, all other Trim Adjustments return to default setting when changing Inputs and switching the MX150 On/Off.

RoomPerfect

During the previously run RoomPerfect Correction Process (refer to Setup on page 24) two room correction response curves were generated. One for the Focus 1 listening location and a second curve for a large listening area, known as Global. To change from the Focus 1 location to Global Area perform the following steps:

1. Press the TRIM Push-button until “RoomPerfect: Focus 1” appears on the Front Panel Display. Refer to figure 61.



Figure 61

2. Press the LEVEL +/- Push-button until “RoomPerfect Global” appears on the Front Panel Display. Refer to figure 62.



Figure 62

Voicing

Some music recordings, movie sound tracks and other audio programs might require slight equalization modifications to restore musical balance from the flat response (neutral). The MX150 has built in five different equalization variations to select from to restore musical balance:

- Music - A slight reduction in midrange frequencies
- Movie - A gentle roll off at high frequencies
- Action - A slight boost in low frequencies

- Action + Movie - A slight boost in low frequencies and a gentle roll off in high frequencies
- News - A reductions of low frequencies and a slight boost of high frequencies

To change from the Neutral setting to one of the five voicing curves perform the following steps:

1. Press the TRIM Push-button until “Voicing:” appears on the Front Panel Display. Refer to figure 63.



Figure 63

2. Press the LEVEL +/- Push-button until the desired voicing curve name appears on the Front Panel Display.

Center, Subwoofer and Surrounds Trim Levels

The Volume Levels of the Center, Subwoofer and Surround Loudspeakers can be adjusted up or down by 10dB relative to the Left and Right Front Loudspeakers. To change the volume level perform the following steps:

1. Press the TRIM Push-button until the desired Loudspeaker name appears on the Front Panel Display. Refer to figures 64, 65 and 66.



Figure 64



Figure 65



Figure 66

2. Press the LEVEL +/- Push-button until the desired increase or decrease in volume level for the Loudspeaker is achieved.

Bass and Treble

The MX150 allows for changing the tonal response for any of the inputs via the Bass and Treble Adjustments. The tonal response can be adjusted up or down by 10dB from the flat setting. To change the Bass and/or Treble volume level perform the following steps:

1. Press the TRIM Push-button until the “Bass:” or “Treble:” is indicated on the Front Panel Display. Refer to figures 67 and 68.



Figure 67



Figure 68

2. Press the LEVEL +/- Push-button until the desired increase or decrease in tonal response is achieved.

Lipsync

There may be times when a particular Audio/Video Program has a synchronization difficulty between the Video and Audio information. This usually becomes noticeable when a person is talking and the movement of their lips is delayed from the sound you are hearing. The MX150 has the ability to add delay the sound in 10 milliseconds (ms) increments up to 400ms. To

change the delay perform the following steps:

Note: When the Lipsync problem is with a single source component or between several components in a system the MX150 Setup Mode allows storing the correction into memory. Refer to page 29 “Zone A Source Setup” or “Advanced Audio Setup” on page 31.

1. Press the TRIM Push-button until “Lipsync:” is indicated on the Front Panel Display. Refer to figure 69.



Figure 69

2. Press the LEVEL + Push-button until the audio is in sync with the video.

Front Panel Information Display Brightness

The Front Panel Information Display has four Brightness Levels (25%, 50%, 75% and 100%) and may be changed by performing the following:

1. Press the TRIM Push-button until “VDF Level:” is indicated on the Front Panel Display. Refer to figure 70.



Figure 70

2. Press the LEVEL +/- Push-button until the brightness is at the desired level.

Note: The Front Panel Information Display may also be switched Off by changing the Setup Mode “VFD Feedback” setting. Refer to page 34.

Power Amplifier Meter Lights

The MX150 can control the Illumination of Meters in

McIntosh Power Amplifier(s) with Remote Meter Illumination Control Circuitry. To switch Off the Meter Illumination perform the following:

1. Press the TRIM Push-button until “Amp lights:” is indicated on the Front Panel Display. Refer to figure 71.



Figure 71

2. Press the LEVEL +/- Push-button until the Meter-Illumination is Off.

Surround Mode

The MX150 provides five different default Surround Modes and up to sixteen assignable Custom Surround Modes. The MX150 Signal Processing Circuitry first looks at the incoming audio signal and determines if the signal is two channel or multichannel (more than two channels). The incoming signal will be processed depending on the MX150 Surround Mode setting. When the MX150 is in the “No Processing” Surround Mode, the incoming signal format determines how the signal will be processed. For example, if the incoming signal is a Dolby Digital 5.1 signal the MX150 will decode it into 5.1 audio. The chart below shows the default processing applied:

Surround Mode Name	2 Channel Input Signal	Multichannel Input Signal
No Post Processing	No Post Processing	No Post Processing
Movie	DLPIIx Movie	No Post Processing
Music	DLPIIx Music	No Post Processing
Stereo	No Post Processing	Stereo
Games	DLPIIx Game	No Post Processing

In the first example, the selected Input is Tuner with a 2-Channel signal present. Pressing the Front Panel DISPLAY MODE Push-button twice, the Information Display indication is illustrated in figure 72. Chang-



Figure 72

ing the Surround Mode to “Music” and Dolby Prologic IIx will be applied to the audio signal coming from the Tuner. Refer to figure 73.

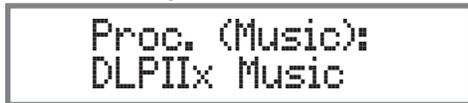


Figure 73

The second example has the DVD-Blu-ray Input selected and a Multichannel signal present. Figure 74 illustrates when the Surround Mode is set to “No

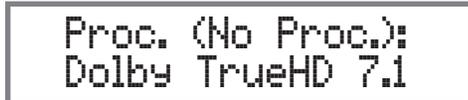


Figure 74

Processing”. The incoming signal format is Dolby TrueHD 7.1 and the MX150 will decode the Dolby Digital Signal into 7.1 channels of audio.

Note: Any changes made using the Surround Mode Control only apply until a different Input is selected or power is switched Off. The next time a given Input is selected, the default Surround Mode Processing will apply.

In the Setup Mode, the default Surround Mode settings for each Input may be changed. Refer to “Audio Setup Mode” on starting on page 29. Up to 16 Custom Surround Mode choices can be added, and the default settings for both 2-channel and Multichannel signal types can be changed.

Note: The “Pure Stereo” Surround Mode, one of the additional options, bypasses RoomPerfect room correction and bass management circuitry. The Left and Right Front Loudspeakers are then expected to reproduce full range sound.

Display Mode

The Display Mode Function indicates the operational status of the MX150 on the Front Panel Information Display and On-Screen on a TV/Monitor. With DVD Blu-ray as the source, press the DISPLAY MODE Push-button once. The current Input Selection and Volume Setting will be indicated on the Front Panel Information Display. Refer to figure 75. At the same



Figure 75

time the On-Screen display will also indicate the complete MX150 Operational Status. Refer to figure 76.

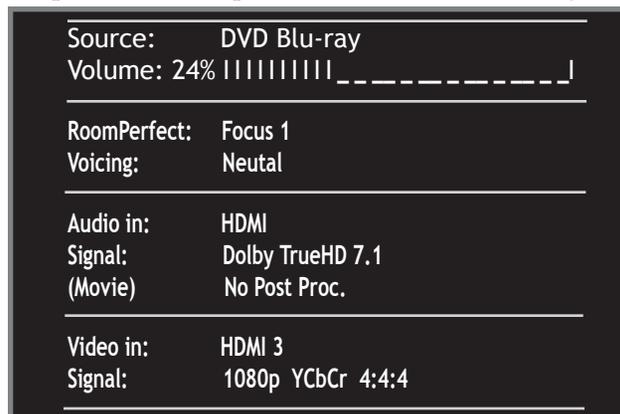


Figure 76

Figure 76. When the DISPLAY MODE Push-button is pressed twice, the Front Panel Information Display

will indicate the incoming audio signal type. Refer to figure 77. By pressing the DISPLAY MODE Push-



Figure 77

button three times, the current Surround Mode will be indicated on the Front Panel Information Display. Refer to figure 78.



Figure 78

Late Night

The LATE NIGHT Push-button turns a volume compression circuit On and Off. This feature suppresses loud sounds or music that might disturb neighbors or others not in the immediate area of the Home Theater. Soft levels are also raised slightly so they are still listenable at reduced overall volume levels. This works only on a Dolby Digital Sound Track with encoded data that supports the compression function.

Setup

Pressing the SETUP Push-button activates the MX150 SETUP Mode for making changes to the System settings.

Adjust ▼ ▲

The ADJUST ▼ (Down) and ▲ (Up) Push-buttons allow for adjustment of a selected Trim Function and are used when in the Setup Mode.

Back

When the MX150 is in Setup Mode it is used for returning to a previous Menu Screen.

Select

When the MX150 is in the Setup Mode it is used to select the highlighted option.

Navigate ◀ ▶

The NAVIGATE ◀ (Left) and ▶ (Right) Push-buttons move Left or Right through Menu Options. Also used to activate the Trim Mode selecting the various Trim Functions.

Reset of Microprocessors

In the event that the controls of the MX150 stop functioning, there is a built-in user reset function. Press and hold in the STANDBY/ON Push-button until the Front Panel Information Display indicates “MCU reset”. Refer to figure 79.



Figure 79

The MX150 will then switch Off. Press the STANDBY/ON Push-button to resume normal operations.

Note: The above condition is usually caused by either interruptions in AC power and/or major changes in voltage.

Enhanced Remote Control Operation

The McIntosh MX150 has been factory configured for operating in a standard McIntosh Home Theater System. This consists of McIntosh Source Components connected via data ports to the MX150. Using the McIntosh Remote Control supplied with the MX150 it becomes possible to operate the basic functions of the McIntosh Source Components with one remote control.

In those Home Theater Systems where a non-McIntosh Remote Control will be used controlling other types of equipment (such as a drop down projector screen, room lighting, etc.), the MX150 has an optional remote control operating mode known as Enhanced Mode. This optional mode may also be used when it is desirable to use the remote controls supplied with each of the McIntosh Source Components for complete operational functionality.

Note: If the Enhanced Mode of Remote Control operation is to be used, it is advisable to disconnect any Data Control Cables between the MX150 and McIntosh Source Components to prevent any unintended operation of those components.

To switch the Enhanced Remote Mode On, enter the MX150 Setup Mode, select the System Setup Menu, followed by the General Setup Menu and then “Enhanced RC ctrl” menu item. Refer to page 34 in this Owner’s Manual and page 7 of the MX150 Setup separate sheet.

With the Enhanced Remote Control feature active press the MENU Push-button on the Remote Control and the User Menu will appear On-Screen. Refer to figures 80 and 81. Also refer to the MX150 “User Menu-1” separate folded sheet contained in the Owner’s Manual Packet.

Note: Note during the time User Menu appears On-Screen, the Front Panel Information Display will indicate “User Menu”

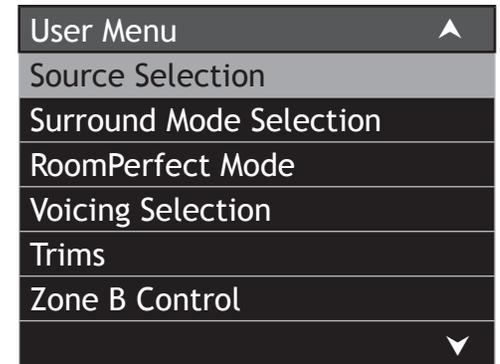


Figure 80

The User Menu allows for Source Selection, Surround Mode, RoomPerfect Correction Modes, Voicing Curve Selection, Trim Adjustments and Zone B Control. Press the INFO Push-button on the Remote Control and the MX150 Operational Status will appear On-Screen. Refer to figure 76 on page 40.

Press the AM Push-button to select RoomPerfect Global correction, Focus 1 correction or bypass all corrections. Refer to figure 81. Pressing the FM Push-button will allow selection of Focus corrections (2 thru 8) when they are measured and stored into memory. Pressing one of the numeric (1-8) Push-buttons will directly access a specific Focus corrections and numeric 9 Push-button to access the Global correction. Pressing the numeric 0 Push-button will access the RoomPerfect Bypass Mode.

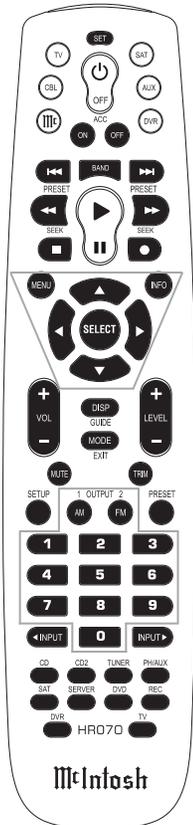


Figure 81



How to Operate Zone B

The MX150 includes the capability of being able to operate and control two audio/video zones, independently of each other. Zone A is the Primary (Home Theater Listening Area) with Surround Sound. Zone B is configured for a Secondary Remote Location providing two channel audio and video programs.

Operating Zone B from the MX150 Front Panel

To activate Zone B Control from the MX150 Front Panel, perform the following steps.

1. When the MX150 is Off, press the ZONE B CONTROL Push-button and the LED above the Push-button will illuminate. Then press the STANDBY/ON Push-button. After the start up initialization the Front Panel Information Display will indicate the Zone B Source and volume setting. Refer to figures 82 and 83.

Notes: 1. If Zone A is already On when the ZONE B Push-button is pressed the Front Information Display will indicate "Zone B: Off".

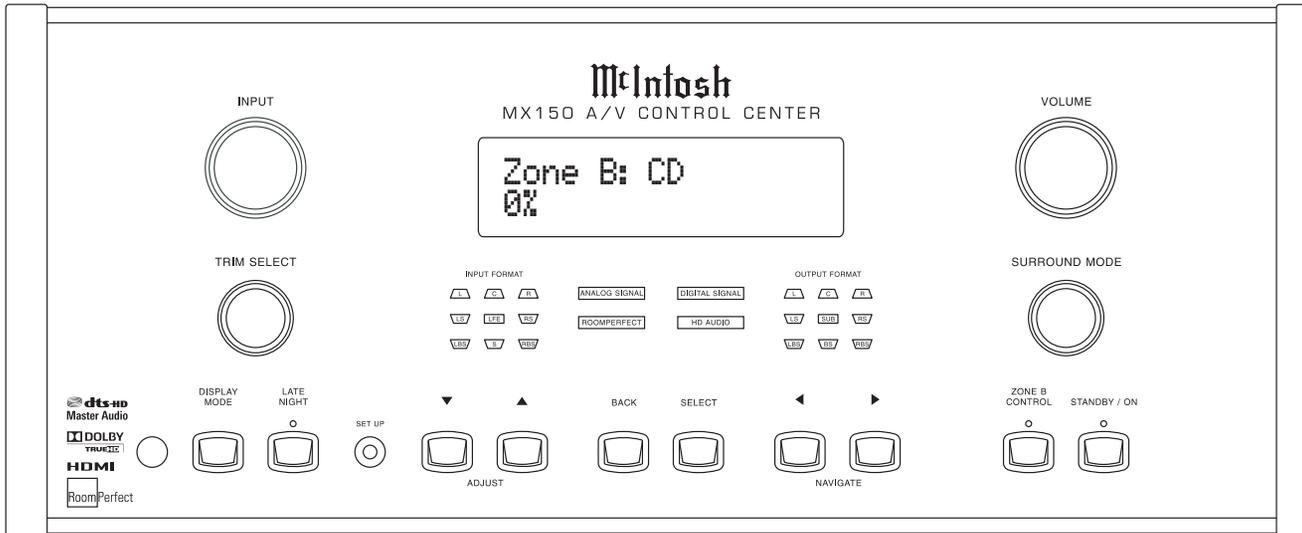


Figure 82

2. The first time Zone B is switched On, the default source is CD at 0% volume. After the first time, Zone B will wake up to the last source and previous volume setting listened to (unless changed in the MX150 Setup Mode, refer to page 31).



Figure 83

2. Rotate the INPUT Control to select the desired source for Zone B.
3. Rotate the VOLUME Control to the desired volume level for Zone B.
4. Return Zone A Front Panel Control at any time by pressing the ZONE B CONTROL Push-button, the LED illumination above the ZONE B CONTROL Push-button will go out and the Front Panel Information Display will indicate current Zone A

status and return the Front Panel Controls, Displays and Push-buttons for Zone A operation.

5. To switch Zone B Off, first press the ZONE B CONTROL Push-button (unless the LED above the push-button is already illuminated) then press the STANDBY/ON Push-button. Press the ZONE B CONTROL Push-button to switch Off Zone B Control.

Operating Zone B from a Sensor

To activate Zone B Control from a Sensor using a Remote Control perform the following:

1. Press the (Power On) Push-button on the Remote Control aimed at a Sensor located in Zone B.

Note: The Front Panel Alphanumeric Display will indicate "Zone B is on", when Zone A is not active. Refer to figure 85.

2. Select the desired Zone B Source by pressing one of

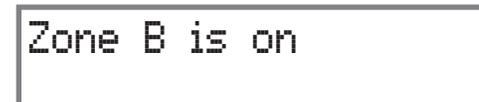


Figure 85

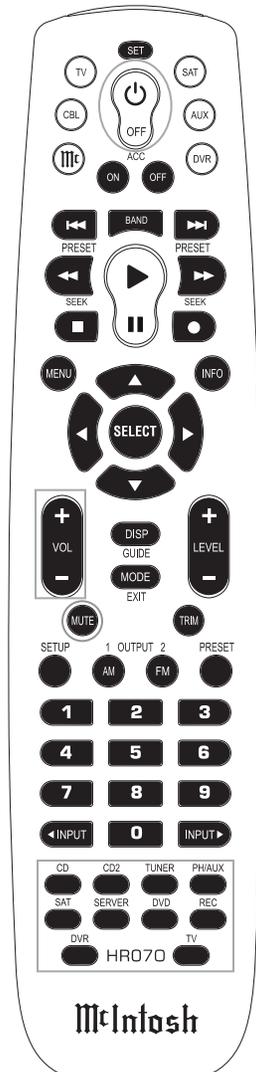
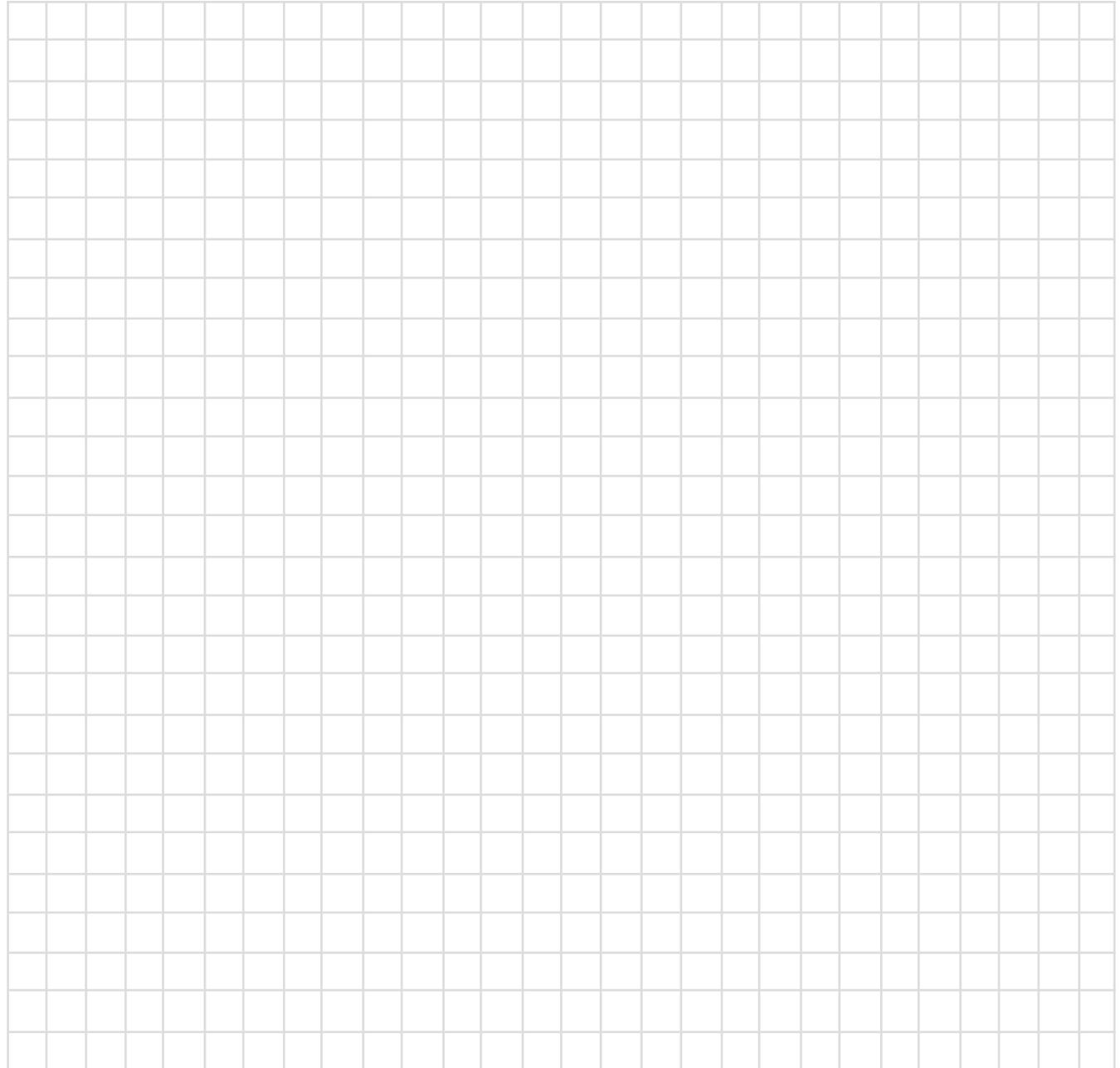


Figure 84

the ten direct access push-buttons

Note: A phantom Input for Zone B may be selected using the Front Panel INPUT Control. The Remote Control ◀ INPUT ▶ Push-buttons are disabled for Zone B.

3. Press the VOLume +/- Push-button to adjust the volume to the desired listening level.
4. Press the MUTE Push-button to mute the sound, press the MUTE Push-button to resume listening.
5. If a McIntosh source component is connected to the MX150 via data ports, basic operating functions of the source component can be performed using the Remote Control aimed at a Sensor located in Zone B.



Creating a Backup

The MX150 includes the capability of backing up any changes made to the factory default settings. With a backup made, to an external USB Drive (not supplied), it makes restoring those settings easier in the event resetting the MX150 becomes necessary. To create a backup perform the following steps:

Note: RoomPerfect Measurements and Corrections are not saved.

1. Press the SETUP Push-button on the Remote Control. Refer to figure 86.

Note: The MX150 Front Panel Push-buttons may be used instead of the Remote Control.

2. Using the ▼(Down) Push-button scroll down thru the Installer Menu to “Device Management” and then press the SELECT Push-button. Refer to figure 87.
3. With “New Backup” highlighted press the SELECT Push-button. Refer to figure 88.
4. Change the “Backup To” option from “STORAGE” to “USB” by using the ► (Right) Push-button and Down▼ Push-button. Refer to figure 89.
5. Insert into the MX150 Rear Panel USB Socket a Formated USB Drive (PC Format) with at least 1G bytes of available memory.
6. Referring to figure 89, with “Create Backup” highlighted, press the SELECT Push-button. Refer to figure 90.
7. Using the ▲ (Up) Push-button highlight “Yes” and press the SELECT Push-button. Refer to figure 91. Then press the SELECT Push-button.
8. Use the SETUP Push-button to exit from the Setup Mode.
9. Remove the USB Drive from the MX150 Rear Panel and keep it in a safe place.

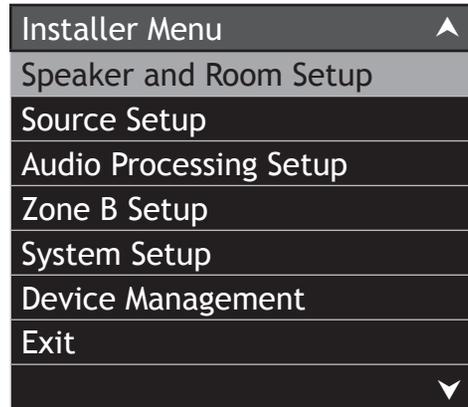


Figure 86

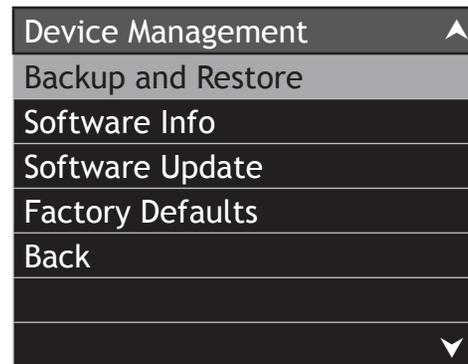


Figure 87

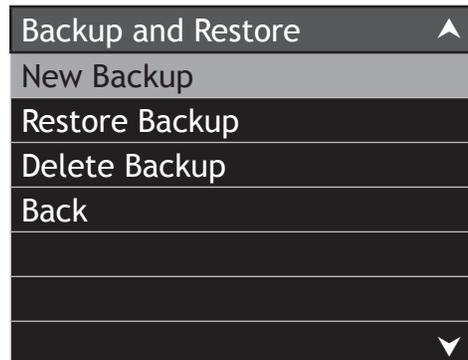


Figure 88

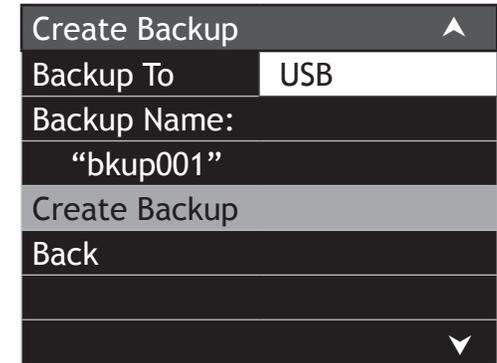


Figure 89

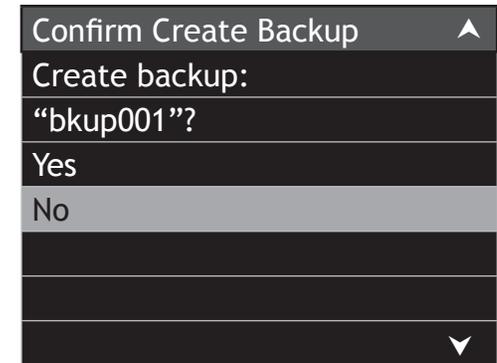


Figure 90

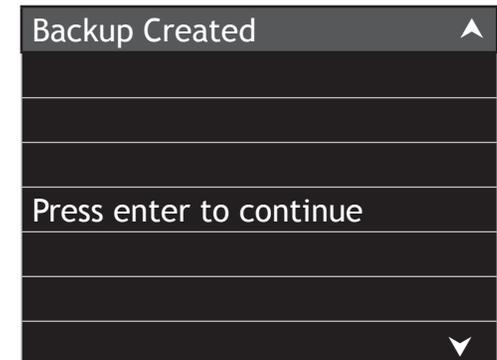


Figure 91

Returning to Factory Default Settings

If it should become necessary to perform a complete reset of the MX150 as a result of malfunctioning, perform the following steps:

1. Press the SETUP Push-button on the Remote Control. Refer to figure 86.

Note: The MX150 Front Panel Push-buttons may be used instead of the Remote Control.

2. Using the ▼(Down) Push-button scroll down thru the Installer Menu to “Device Management” and then press the SELECT Push-button. Refer to figure 87.
3. Scroll down to “Factory Defaults” and then press the SELECT Push-button. Refer to figure 92.
4. Using the ▲ (Up) Push-button highlight “Yes” and press the SELECT Push-button. Refer to figure 93.

At this time the MX150 will switch Off, reset the microprocessors and return the MX150 to factory default settings. If a Backup of the settings was previously performed it can now be used to restore those settings by performing the following steps:

5. Insert into the MX150 Rear Panel USB Socket the USB Drive containing the Backup File.
6. Using the Remote Control, enter the Setup Mode and proceed thru the “Installer Menu”, “Device Management” and the “Backup and Restore” Menus until “Restore Backup” menu option is highlighted. Press the SELECT Push-button. Refer to figure 94.
7. Change the “Restore Backup” option from “STORAGE” to “USB” by using the ► (Right) Push-button and Down▼ Push-button. Refer to figure 95.
8. Using the Down▼ Push-button to highlight “Select Backup” and press the SELECT Push-button. Refer to figure 96.

9. Use the Down▼ Push-button to highlight “bkup001” (default name) or name given when the backup was created and press the SELECT Push-button. Another On-Screen Menu will appear asking for confirmation of restoring the settings. Select “Yes” and then press the SELECT Push-button. The MX150 will switch Off then On to restore the settings.
10. Remove the USB Drive from the MX150 Rear Panel and keep it in a safe place.
11. Proceed to page 24 to run a RoomPerfect Calibration.

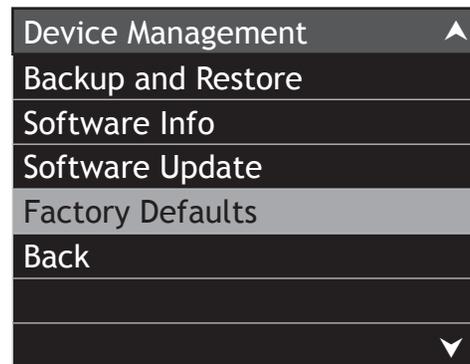


Figure 92

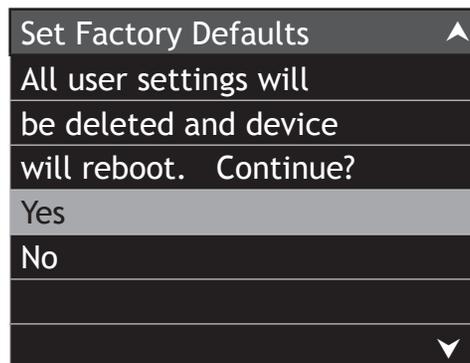


Figure 93

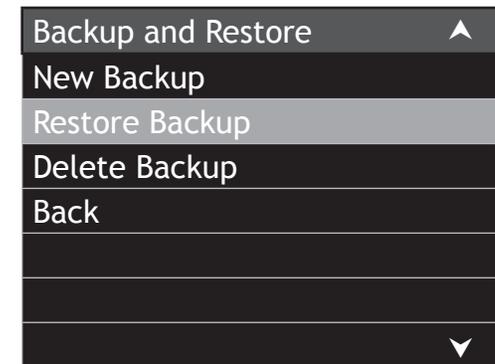


Figure 94

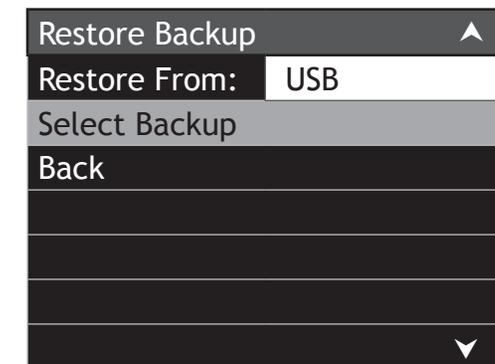


Figure 95

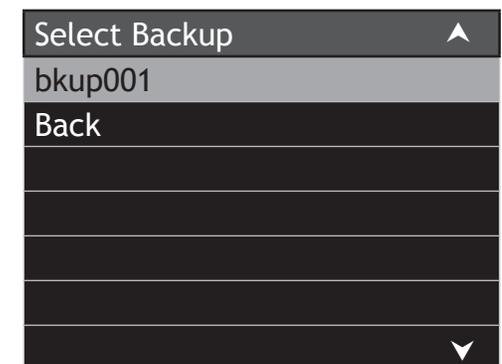


Figure 96



Audio Specifications

Unless otherwise noted, the below MX150 Specifications were taken with RoomPerfect set to Bypass Mode and Voicing Mode set to Neutral.

Frequency Response

Left, Center, Right, Left Surround, Right Surround, Left Back Surround, Right Back Surround:
±0.5dB from 20Hz-20,000Hz

Subwoofer:

±0.5dB from 20Hz-8000Hz

Total Harmonic Distortion

0.005% maximum from 20Hz to 20,000Hz at rated output

Signal To Noise Ratio

Phono: 86dB below 10mV input (A Weighted)
High Level: 96dB below rated output (A Weighted)

Rated Output Voltage

2.5V Unbalanced Outputs (Main)
5.0V Balanced Outputs (Main)

Maximum Voltage Output

6.5V Unbalanced (8.5V Subwoofer)
13V Balanced (17V Subwoofer)

Output Impedance

75 ohms Unbalanced
100 ohms Balanced

Input Impedance

Phono: 47k Ohms, 65pf
High Level: 10k Ohms Unbalanced and Balanced

RoomPerfect and Voicing Specifications

Sensitivity for Rated Output

Phono: 5mV
High Level: 500mV Unbalanced
1V Balanced

Maximum Input Signal

Phono: 50mV
High Level: 4.5V Unbalanced and Balanced

Tone Controls

Bass Control: ±10dB at 30Hz
Treble Control: ±10dB at 10,000Hz

General Specifications

Power Requirements

100 Volts, 50/60Hz at 65 watts
110 Volts, 50/60Hz at 65 watts
120 Volts, 50/60Hz at 65 watts
220 Volts, 50/60Hz at 65 watts
230 Volts, 50/60Hz at 65 watts
240 Volts, 50/60Hz at 65 watts
Standby, less than 1 watt

Note: Refer to the rear panel of the MX150 for the correct voltage.

Overall Dimensions

Width is 17-1/2 inches (44.45cm)
Height is 7-5/8 inches (19.37cm) including feet
Depth is 19-1/2 inches (49.53cm) including the Front Panel, Knobs, Rear Panel Connections and USB Drive

Weight

31 pounds (14.06Kg) net, 55 pounds (24.95Kg) shipping

Shipping Carton Dimensions

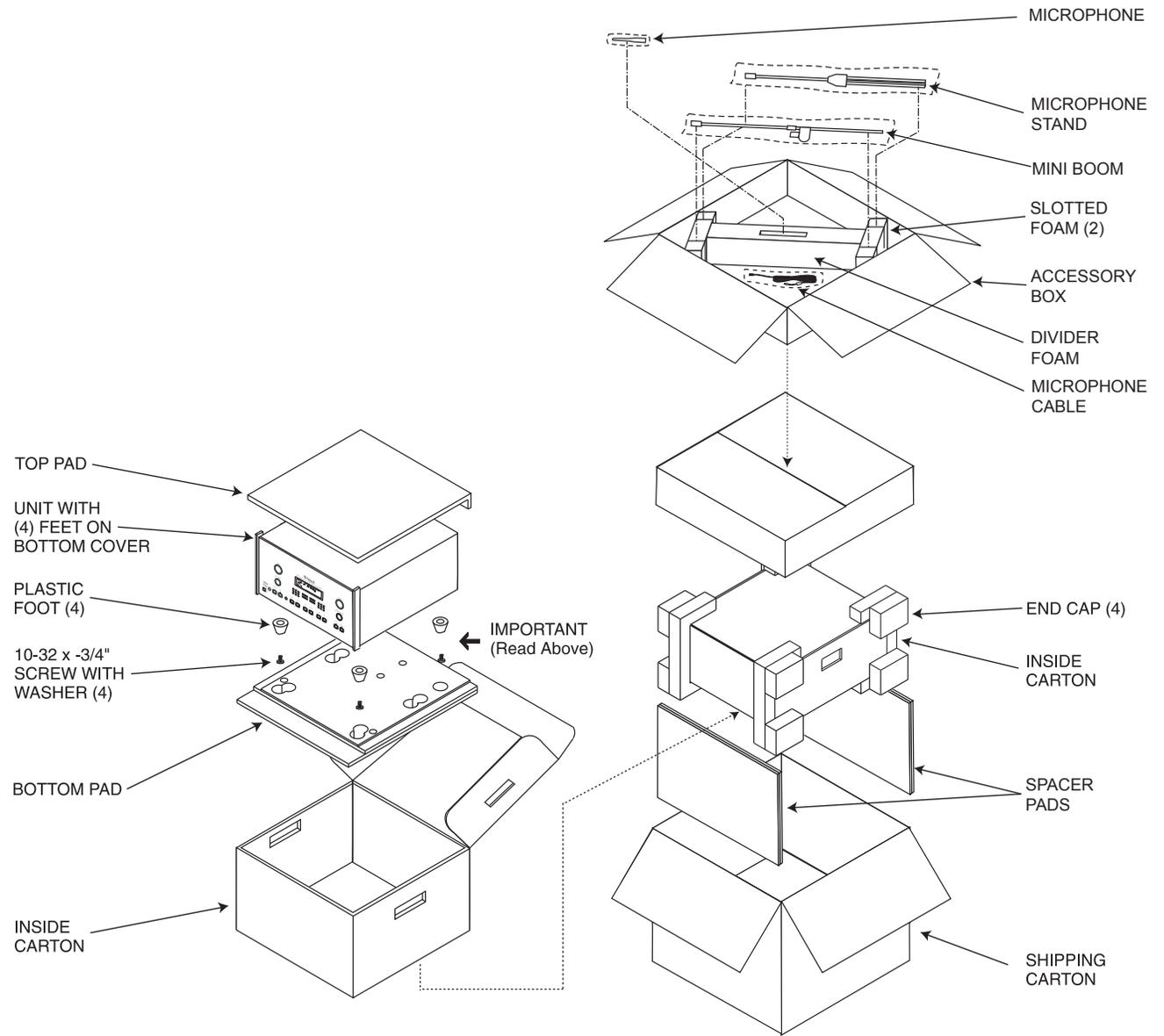
Width is 25 inches (63.5cm)
Depth is 28 inches (71.12cm)
Height is 18-3/8 inches (46.67cm)

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

Quantity	Part Number	Description
1	034256	Shipping carton only
4	033887	End cap
2	034493	Spacer pad
1	033697	Inside carton only
1	033725	Inner carton top pad
1	034301	Bottom pad
2	034446	Foam plug
4	017937	Plastic foot
4	400159	#10-32 x 3/4" screw
4	404080	#10 Flat washer
1	034499	Accessory Box
1	034486	Slotted foam
1	034487	Divider foam





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