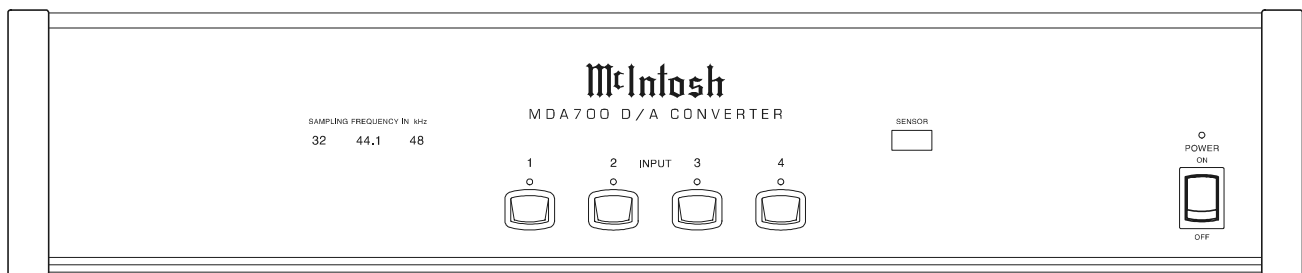


MDA700 D/A Converter



MDA700

Thank You

Your decision to own this McIntosh MDA700 D/A Converter 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 Sales Corporation
661 W. Redondo Beach Blvd.
Gardena, CA 90247
Phone: 888-979-3737
Fax: 310-217-9288

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 Repair department. For assistance on factory repair return procedure, contact the McIntosh Repair Department at:

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

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Table of Contents

Thank You	2
Please Take a Moment	2
Technical Support	2
Customer Service	2
Table of Contents	2
Safety Instructions	3
Introduction	4
Performance Features	4
Installation	5
Rear Panel Connections and Switch	6
How to Connect the MDA700	7
Front Panel Controls, Displays, Push-Buttons, and Switch	8
How to Operate the MDA700	9
Specifications	10
Packing Instruction	11

NOTES:

- The following 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.*
- For additional connection information, refer to the owner's manual(s) for any component(s) connected to the MDA700 D/A Converter.*
- Balanced and Unbalanced Outputs can be used separately or both simultaneously connected to different components.*
- Pin configuration for the XLR Balanced Input/Output connectors on the MDA700:
PIN 1: Shield or ground.
PIN 2: + input.
PIN 3: - input.*

IMPORTANT SAFETY INSTRUCTIONS!

PLEASE READ THEM BEFORE OPERATING THIS EQUIPMENT.



WARNING SHOCK HAZARD - DO NOT OPEN.

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.



AVIS RISQUE DE CHOC - NE PAS OUVRIR.

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.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION
DANGER D'ELECTROCUTION
NE PAS OUVRIR

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

To prevent the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified personnel.

General:

1. Read all the safety and operating instructions, contained in this owner's manual, before operating this equipment.
 2. Retain this owner's manual for future reference about safety and operating instructions.
 3. Adhere to all warnings and operating instructions.
 4. Follow all operating and use instructions.
 5. **Warning: To reduce risk of fire or electrical shock, do not expose this equipment to rain or moisture. This unit is capable of producing high sound pressure levels. Continued exposure to high sound pressure levels can cause permanent hearing impairment or loss. User caution is advised and ear protection is recommended when playing at high volumes.**
 6. **Caution: to prevent electrical shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.**
- Attention: pour prevenir les chocs electriques pas utiliser cette fiche polarisee avec un prolongateur, une prise de courant ou un autre sortie de courant, sauf si les lames peuvent etre inserees afond ans en laisser aucune partie a decouvert.**
7. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning or power line surges.
 8. Do not use attachments not recommended in this owner's manual as they may cause hazards.
- #### Installation:
9. Locate the equipment for proper ventilation. For example, the equipment should not be placed on a bed, sofa, rug, or similar surface that may block ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet, that may impede the flow of air through the ventilation openings.
 10. Locate the equipment away from heat sources such as radiators, heat registers, stoves, or other appliance (including amplifiers) that produce heat.
 11. Mount the equipment in a wall or cabinet only as described in this owner's manual.
 12. Do not use this equipment near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool, etc.
 13. Do not place this product on an unstable cart, stand, tripod, bracket, or table. The equipment may fall, causing serious injury to a person, and serious damage to the product.
- #### Connection:
14. Connect this equipment only to the type of AC power source as marked on the unit.
 15. Route AC power cords so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the instrument.
 16. Do not defeat the inherent design features of the polarized plug. Non-polarized line cord adapters will defeat the safety provided by the polarized AC plug. If the plug should fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

17. Do not overload wall outlets, extension cords or integral convenience receptacles as this can result in a risk of fire or electric shock.

Care of Equipment:

18. Clean the instrument by dusting with a dry cloth. Unplug this equipment from the wall outlet and clean the panel with a cloth moistened with a window cleaner. Do not use liquid cleaners or aerosol cleaners.
19. Do not permit objects of any kind to be pushed and/or fall into the equipment through enclosure openings. Never spill liquids into the equipment through enclosure openings.
20. Unplug the power cord from the AC power outlet when left unused for a long period of time.

Repair of Equipment:

21. Unplug this equipment from the wall outlet and refer servicing to a qualified service personnel under the following conditions:
 - A. The AC power cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the equipment.
 - C. The equipment has been exposed to rain or water.
 - D. The equipment does not operate normally by following the operating instructions contained within this owner's manual. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - E. The equipment has been dropped or damaged in any way.
 - F. The equipment exhibits a distinct change in performance - this indicates a need for service.
22. Do not attempt to service beyond that described in the operating instructions. All other service should be referred to qualified service personnel.
23. When replacement parts are required, be sure the service technician has used replacement parts specified by McIntosh or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
24. Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Introduction

The new McIntosh MDA700 D/A Converter offers a highly refined Balanced/Parallel Circuit utilizing eight of Burr Brown's most sophisticated Digital to Analog (D/A) chips. Combine the MDA700 with a McIntosh Compact Disc Transport, or any appropriate Digital signal source and you will enjoy sound reproduction of unparalleled sonic perfection.

Performance Features

● **Balanced/Parallel D/A Design**

Eight Burr Brown 20 Bit D/A chips are used in the McIntosh Balanced/Parallel D/A circuit which cancels noise and distortion artifacts, reduces conversion step errors and improves linearity.

● **Automatic Sampling Frequency Selection**

The MDA700 automatically selects the correct sampling frequency to match the input signal requirements. Front panel LED's indicate 48KHz, 44.1KHz or 32KHz.

● **Four Selectable Digital Inputs**

Two Coaxial and two Optical inputs are provided which can be selected by front panel pushbuttons or with a McIntosh Remote Control.

● **20Bit Digital Filter**

A high quality 20 Bit Digital filter with 8 times oversampling is used.

● **Balanced and Unbalanced Outputs**

Stereo Balanced and Unbalanced Outputs are provided.

● **The Front Panel Display**

The Display indicates the input being used and the sampling frequency of the digital signal source.

● **Ultra Low Distortion**

Distortion levels of all types are less than 0.002%. Music is amplified with total transparency and accuracy.

Installation

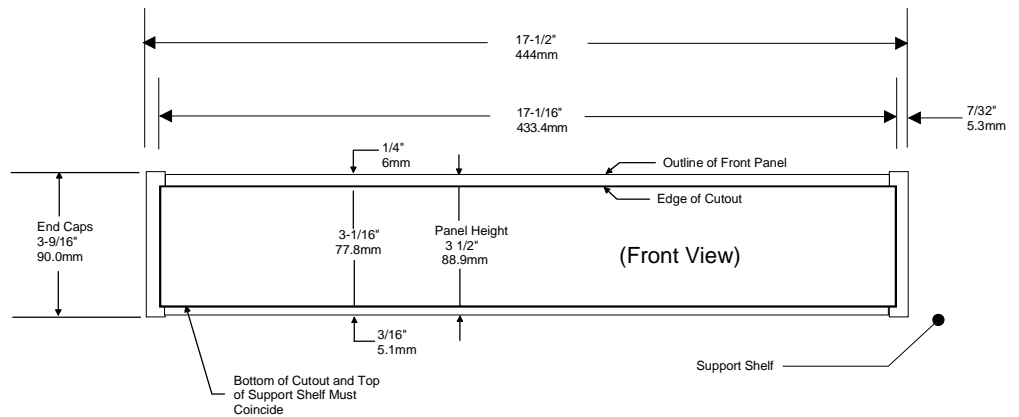
The MDA700 can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in a piece of furniture or cabinet of your choice. The required panel cutout, ventilation cutout and unit dimensions are shown.

Always provide adequate ventilation for your MDA700. Cool operation ensures the longest possible operating life for any electronic instrument. Do not install the MDA700 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 defi-

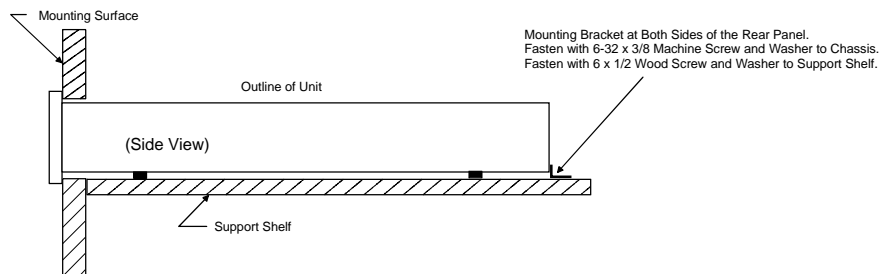
nite asset in maintaining all the system components at the coolest possible operating temperature.

A custom cabinet installation should provide the following minimum spacing dimensions for cool operation. Allow at least 1-1/2 inches (3.8cm) above the unit so airflow is not obstructed. Allow 17-1/2 inches (44.5cm) depth behind the mounting panel, which includes clearance for connectors. Allow 3/4 inches (1.9cm) in front of the mounting panel for clearance. Be sure to cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing.

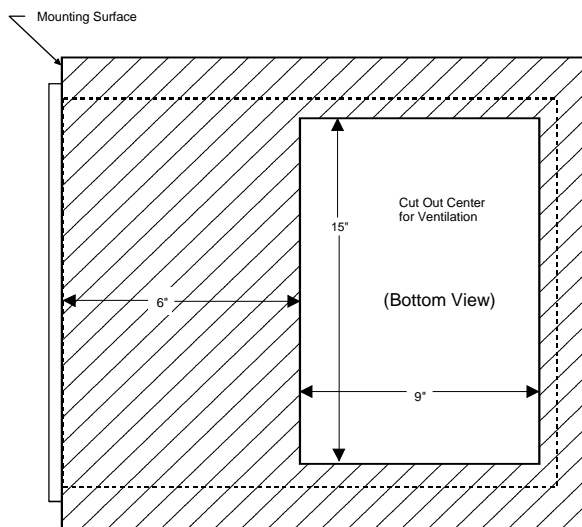
Front View of MDA700 custom installed



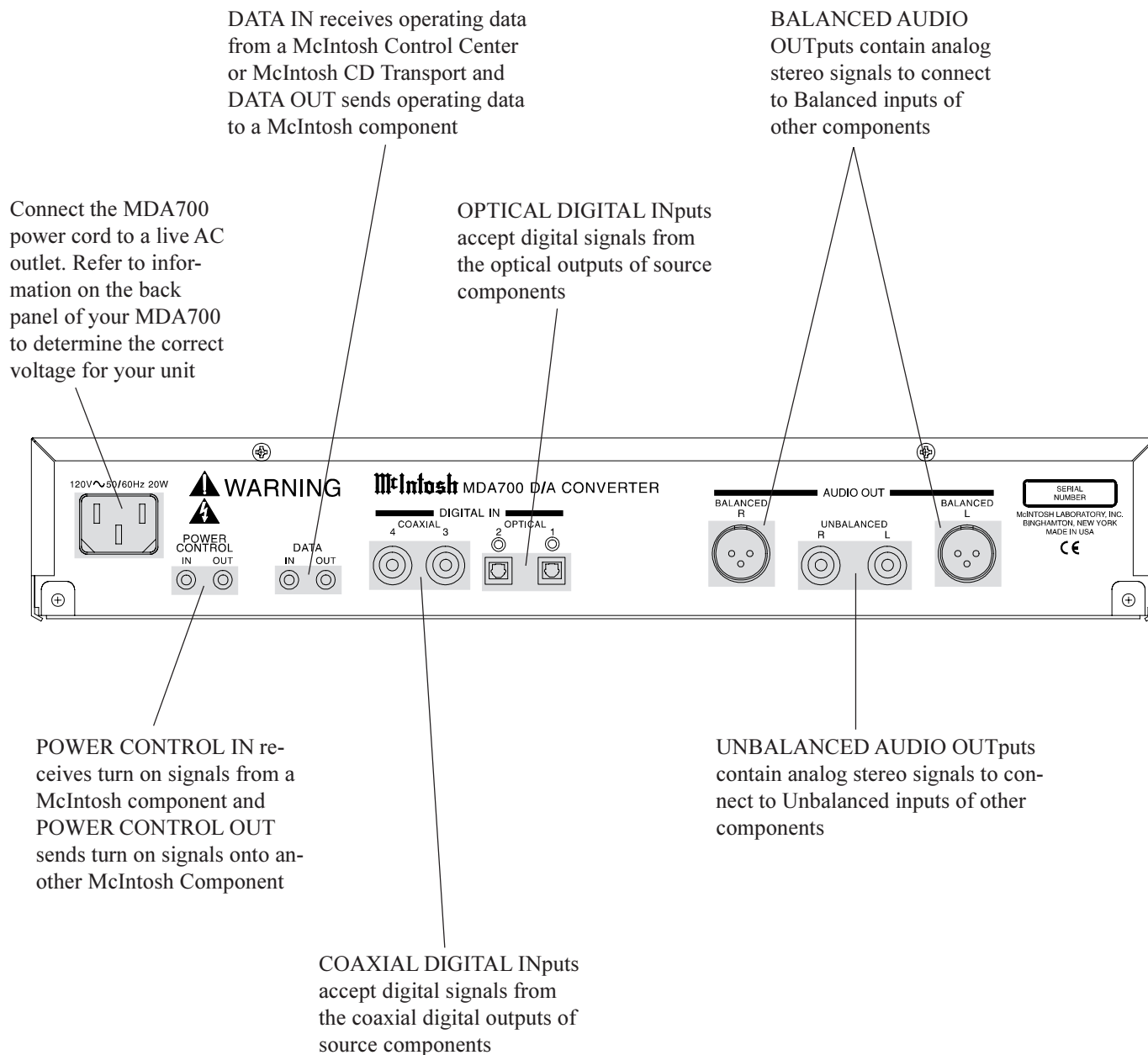
Side View of the MDA700 custom installed



Bottom View of the MDA700 custom installed



MDA700 Rear Panel Connections



How to Connect the MDA700

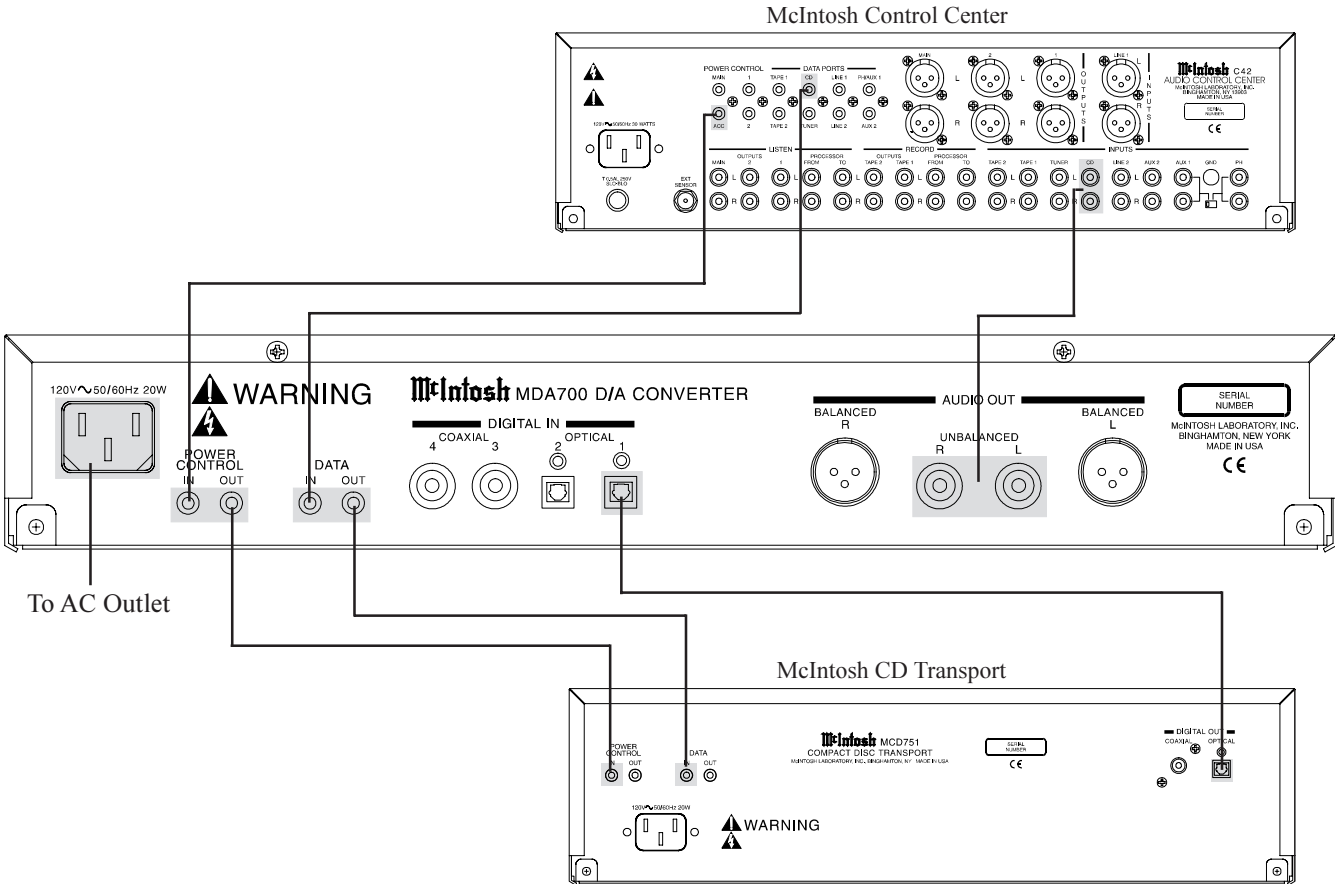
1. Connect the MDA700 AC power cord to a live AC outlet.
2. Connect the POWER CONTROL IN to the Power Control Out of a McIntosh Control Center.
3. Connect the POWER CONTROL OUT to the Power Control In of a McIntosh MCD751 CD Transport.
4. Connect the DATA IN to the appropriate Data Out on a McIntosh Control Center.
5. Connect the DATA OUT to the Data In of a McIntosh MCD751 CD Transport.

6. Connect an Optical cable from a DIGITAL OPTICAL IN to the Digital Optical Out of a McIntosh MCD751 CD Transport.

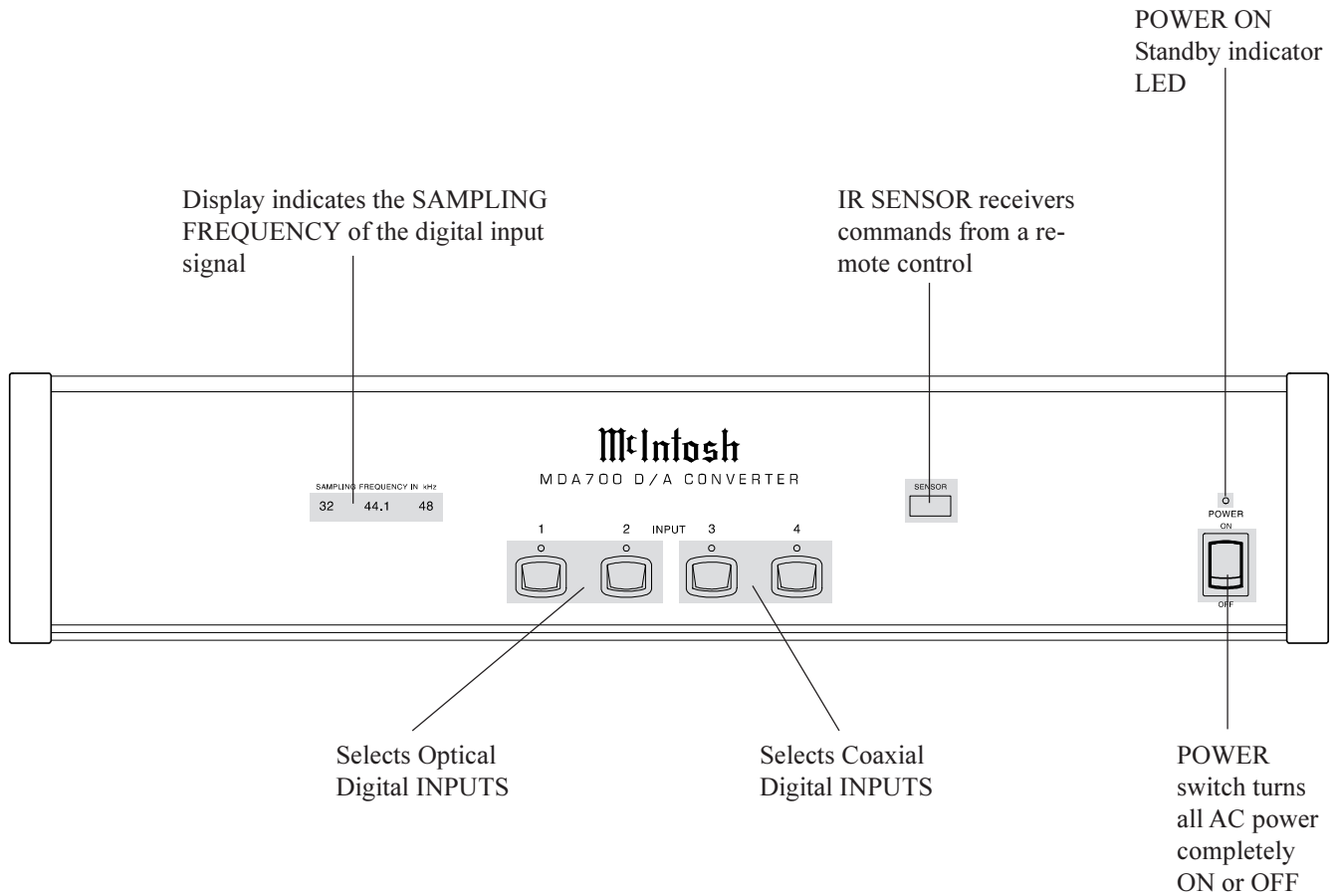
Note: A Digital source component can be connected to either a COAXIAL or an OPTICAL Input.

7. Connect Unbalanced cables from the UNBALANCED AUDIO OUT jacks to the Unbalanced Inputs of a Control Center.

Note: An optional connecting method is to use Balanced cables from the BALANCED AUDIO OUT jacks to the Balanced Inputs of a Control Center.



MDA700 Front Panel Display, Push-Buttons, and Switch



How to Operate the MDA700

Power On

The MDA700 can be turned on manually with the front panel Power Switch. When a Power Control cable is connected to a McIntosh Control Center, the MDA700 Power Switch can be left on, and the Converter will turn on automatically whenever the Control Center turns on.

Input Pushbuttons

Press an Input pushbutton to select the desired Digital source connected to the MDA700.

Selecting Inputs with Remote Controls

Select Inputs with the MCD751 Remote Control by pressing the INPUT pushbutton followed by a Number pushbutton. Select Inputs with Remote Controls of a McIntosh MCD7009 or MCD7010 CD Player by pressing the AUTO SPACE pushbutton followed by a Number pushbutton. Select Inputs with Remote Controls of McIntosh Control Centers or Amplifiers by pressing the AM pushbutton followed by a Number pushbutton.

Note: The Number pushbutton must be pressed within two seconds after the INPUT/AUTO SPACE/AM pushbutton is pressed.

Reset of Microprocessors

In the event that the MDA700 stops functioning, turn the Power switch off for approximately 10 seconds. This will reset the MDA700 microprocessors.

Frequency Display

Refer to the Frequency display to the left on the front panel to determine the Sampling Frequency of the Digital Signal Source being reproduced. The most often used Sampling Frequencies are 32kHz for Satellite, 44.1kHz for CD and 48kHz for DVD and DAT.

Specifications

Frequency Response

4-22,000Hz +/-0.3dB (Sampling frequency:48KHz)
4-20,000Hz +/-0.3dB (Sampling frequency:44.1KHz)
4-15,000Hz +/-0.3dB (Sampling frequency:32KHz)

Total Harmonic Distortion

0.0015% (1KHz)

Signal To Noise Ratio

110dB (A-weighted)

Dynamic Range

Better than 100dB (1KHz)

Channel Separation

Better than 110dB (1KHz)

Sampling Frequency

48KHz, 44.1KHz or 32KHz

D/A Conversion

(4) 20-bit converter/channel

Digital Filter

8-times oversampling 20-bit digital filter

Analog Filter

3rd order GIC Butterworth Filter

Maximum Voltage Output

2.2V RMS (Unbalanced and Balanced)

Inputs

1 and 2:Optical
3 and 4:Coaxial 0.5V p-p/75 ohm

Output Impedance

220 ohms, Balanced and Unbalanced

Power Requirements

100 Volts, 50/60Hz at 20 watts
110 Volts, 50/60Hz at 20 watts
120 Volts, 50/60Hz at 20 watts
220 Volts, 50/60Hz at 20 watts
230 Volts, 50/60Hz at 20 watts
240 Volts, 50/60Hz at 20 watts

NOTE: Refer to the rear panel of the MDA700 for the correct voltage.

Dimensions

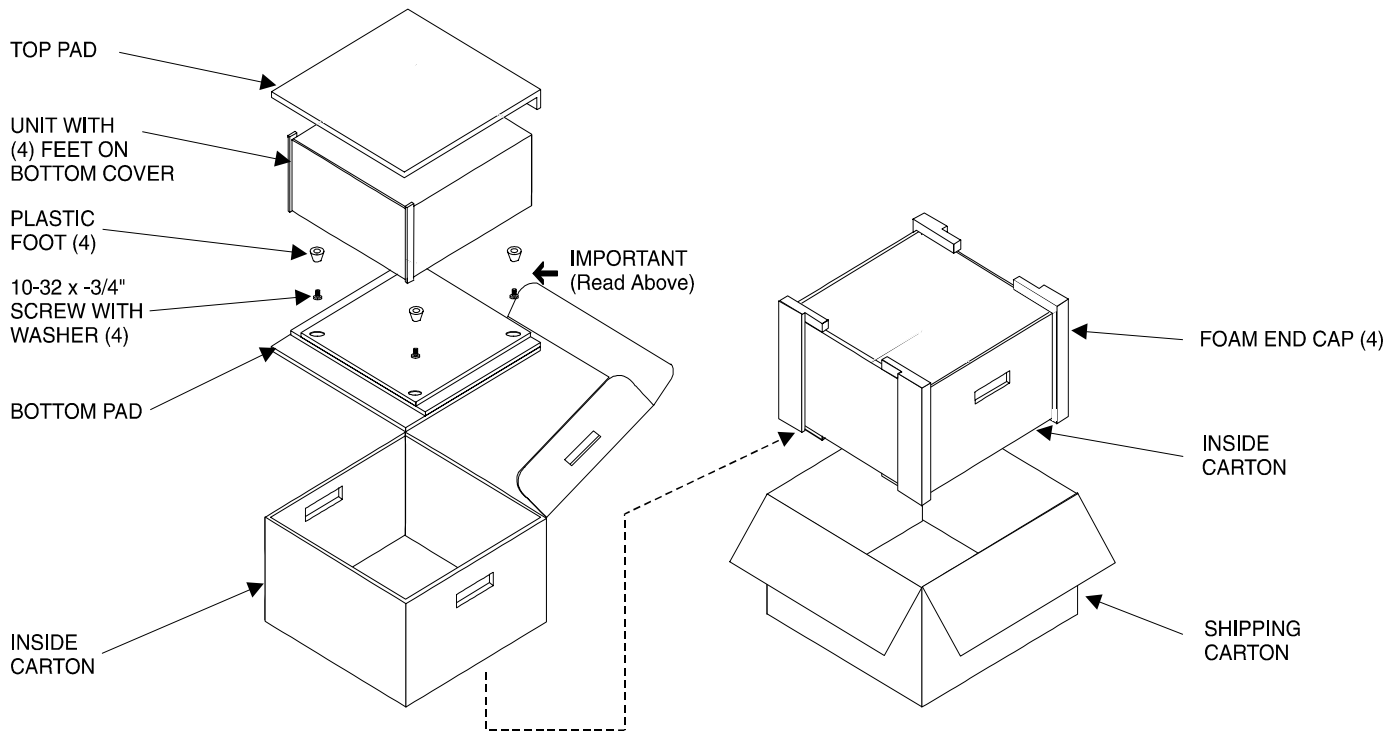
17-1/2 inches (44.5cm) wide, 3-5/8 inches (9.2cm) high, 15 inches (38.1cm) deep, including clearance for connectors. Allow 3/4 inches (1.9cm) in front of the mounting panel for clearance.

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

Quantity	Part Number	Description
1	034047	Shipping carton only
4	034022	Foam end cap
1	033606	Inside carton only
1	033726	Top pad
1	034036	Bottom pad
4	017218	Plastic foot
4	100159	#10-32 x 3/4" screw
4	104083	#10 x 7/16" Flat washer
1	048095	Shipping carton complete with all the above parts



McIntosh[®]

McIntosh Laboratory, Inc.
2 Chambers Street
Binghamton, NY 13903

McIntosh Part No. 040616