

C 710
AUDIO
CONTROL
CENTER

Your decision to own this piece of McIntosh Stereo Equipment 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 thousands of hours 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 piece of McIntosh equipment. This will ensure that you receive all the performance benefits this instrument can offer you, and that it will become a highly valued part of your home entertainment system.

The serial number, purchase date, and McIntosh Laboratory Service Contract number are important to you for possible insurance claim or future service. Record this information here.

Serial Number

Purchase Date

Service Contract Number

Upon application, McIntosh Laboratory provides a Service Contract to the original purchaser. Your McIntosh Authorized Service Agency can expedite repairs when you provide them with the Service Contract.

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**THANK
YOU**

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**McINTOSH
THREE YEAR
SERVICE
CONTRACT**

**TAKE ADVANTAGE OF 3 YEARS OF CONTRACT SERVICE . . .
FILL IN THE APPLICATION NOW.**

Your C710 System Control Center will give you many years of satisfactory performance. If you have any questions, please contact,

McIntosh Laboratory Inc.

2 Chambers Street
Binghamton, New York 13903-2699
Phone: 607-723-3512

An application for A THREE YEAR SERVICE CONTRACT is included with this manual. The terms of the contract are:

1. If the instrument covered by this contract becomes defective, McIntosh will provide all parts, materials, and labor needed to return the measured performance of the instrument to the original performance limits free of any charge. The service contract does not cover any shipping costs to and from the authorized service agency or the factory.
2. Any McIntosh authorized service agency will repair all McIntosh instruments at normal service rates. To receive the free service under the terms of the service contract, the service contract certificate must accompany the instrument when taken to the service agency.
3. Always have service done by a McIntosh authorized service agency. *If the instrument is modified or damaged as a result of unauthorized repair the service contract will be cancelled.* Damage by improper use or mishandling is not covered by the service contract.
4. The service contract is issued to you as the original purchaser. To protect you from misrepresentation this contract cannot be transferred to a second owner.
5. Units in operation outside the United States and Canada are not covered by the McIntosh Factory Service Contract, irrespective of the place of purchase. Nor are units acquired outside the USA and Canada, the purchasers of which should consult with their dealer to ascertain what, if any, service contract or warranty may be available locally.

INTRODUCTION

McIntosh has earned world renown for its technical contributions to improved sound reproduction. When you bought McIntosh, you bought not only high technology, but also technological integrity proven by time. The McIntosh C710 Audio Control Center is another example of McIntosh engineering excellence.

McIntosh audio products are always designed for the best sound and superior reliability. Dedication to achieving these goals since 1949, has earned McIntosh the reputation for creating the finest quality products in the stereo industry. The McIntosh "Classic" design has also been recognized as the most outstanding in the industry.

McIntosh products are designed to be maximum user friendly so anyone can enjoy using them. Another McIntosh design policy is to provide products that are easy to maintain.

The C710 Audio Control Center is simple, yet elegant. There are many useful features to enhance your listening enjoyment.

There are seven pairs of high level inputs to accommodate the traditional program sources as well as the most recent new sources. These include CD players, audio signals from laser disc players and audio from video recorders. A PHONO input is also provided for a record player with a magnetic phone cartridge. If the PHONO is not used, the AUX input can accommodate another high-level program source.

DIGITAL LOGIC integrated circuits drive ELECTROMAGNETIC SWITCHES on all inputs and operating functions for the most reliable, lowest distortion switching available today.

Two TAPE MONITOR switches allow the use of two separate tape recorders. Two TAPE COPY switches are also provided for easy tape copying from one recorder to the other. A continuously variable Active Loudness control allows loudness compensation to be selected for any setting of the volume control. The Loudness control circuit elements are removed from the signal path when the control is in the flat or fully counterclockwise position.

Bass and Treble tone controls provide 12dB of boost or cut. At the center or detent position of the tone controls, all tone control circuits are removed from the signal path. Other features include a front panel HEADPHONE output, a MONO switch and rear panel Signal PROCESSOR Loop connections that affect the main outputs. Power supply voltage regulator circuits maintain stable operation even though the AC power line may vary. A double shielded power transformer completely isolates it from the audio circuits.

A pair of Balanced Outputs is also included to take advantage of the greater noise reduction capabilities of balanced cables.

HOW TO INSTALL THE C710

The C710 can be placed upright on a table or shelf, standing on its own plastic feet. It can also be installed in an optional McIntosh L70 equipment cabinet. Follow the mounting instructions enclosed with the L70 cabinet.

The C710 can be custom installed in a piece of furniture or cabinet of your choice. The required panel cutout and unit dimensions are shown on Page 11 of this manual.

Always provide adequate ventilation for your C710, even though it develops very little heat. Cool operation insures the longest possible operating life for any electronic instrument. Do not install your C710 directly above a heat generating component such as a high powered amplifier. In a system stack, the power amplifier should always be at the top. 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 temperatures.

A custom cabinet installation should provide the following recommended 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 1-1/8 inches (2.9cm) in front of the mounting panel for knob clearance.

FRONT PANEL CONTROLS, SWITCHES AND PUSHBUTTONS

The last page of this manual folds out to show photographs of the front and rear panels of the C710. This will help you in identifying and locating the controls and switches on the C710 front panel, and the connectors on the rear panel. The letters and numbers on the photographs refer to the paragraphs that follow.

A. INPUT

Selects the program source that feeds the MAIN BALANCED, UNBALANCED, TAPE 1 and TAPE 2 OUTPUTS.

B. BASS and TREBLE

Provide 12dB Boost or Cut with flat response at the center detent position. All tone control circuit elements are removed from the signal path in the center flat position.

C. BALANCE

The BALANCE control adjusts the volume of the channels relative to each other.

L, (left): Turn the control to the left to accent the left channel by reducing the volume of the right channel.

R, (right): Turn right to accent the right channel by reducing the volume in the left channel.

D. LOUDNESS

The LOUDNESS control provides frequency response contoured to compensate for the behavior of the human ear at softer listening levels. At the fully counterclockwise detent position, the frequency response is perfectly flat and the loudness circuit components are removed from the signal path. Turn the control clockwise to increase frequency compensation in the correct proportion for proper listening at softer volume levels. The compensated frequency response is not affected by changes in the volume control settings. First adjust the volume for the desired listening level, then adjust the loudness control to the setting you prefer.

E. VOLUME

Adjusts the Volume level from the MAIN BALANCED and UNBALANCED OUTPUTS. The TAPE OUTPUTS are not affected by the VOLUME control.

FRONT PANEL CONTROLS, SWITCHES AND PUSHBUTTONS

F. MONO

Press the MONO button to add the left and right channel signals together for MONO signals at the MAIN BALANCED and UNBALANCED OUTPUTS. A Red LED above the pushbutton will light to indicate the MONO mode of operation. The MONO pushbutton does not affect the Tape outputs. They are always stereo.

G. TAPE MONitor 1 and 2

Press TAPE MON 1 or 2 to listen to playback of tapes from either of two tape recorders. You can listen to previously recorded tapes, or monitor tape from a three-head tape recorder during the recording process. The TAPE MON pushbuttons operate independently from the INPUT switch. A Red LED will light above either pushbutton to indicate which TAPE MON has been selected.

H. HEADPHONES

Plug in a pair of low impedance dynamic headphones to this jack for headphone listening.

I. TAPE COPY, 1 ► 2, 2 ► 1

Copy tapes from either of two tape recorders, to each other. The TAPE COPY pushbutton switches operate independently from the INPUT switch. Use the TAPE MONitor switches to monitor the output of the recorder playing the original tape, or the recorder making the copy. A Red LED will light above either pushbutton to indicate which TAPE COPY mode is in use.

The TAPE COPY switches are electronically interconnected to prevent both circuits from being activated at the same time. If you press one of the TAPE COPY switches to activate a copy function, you must press the same TAPE COPY switch again before pressing the other TAPE COPY switch.

J. POWER

Press the red POWER button to turn the C710 system ON. Press again to turn it OFF. The rear panel SWITCHED AC Outlet turns on with the POWER switch.

Use good quality shielded cables to interconnect the associated equipment used with the C710. The installation of high quality cables will insure the best possible performance from your stereo system. Your McIntosh dealer can advise you on the type and length of cables best suited for your installation.

1. SWITCHED AC OUTLET

The SWITCHED AC outlet turns on and off with the front panel POWER Switch. Connect a power amplifier or accessories to this outlet.

The total power capacity of the SWITCHED AC outlet must not exceed 1400 watts or 11.6 amperes.

To expand the AC capacity of the SWITCHED outlet, add a McIntosh R612A or PC2 Power Controller.

2. L and R BALANCED OUTPUTS

Connect cables with XLR type Balanced Connectors from the C710, L (Left) and R (Right) BALANCED OUTPUT jacks to the balanced input jacks of a stereo amplifier, or two mono amplifiers. Signals at the BALANCED jacks are the same signals as at the Unbalanced MAIN OUTPUTS.

Using balanced connectors and cables can reduce noise and interference by as much

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as 40dB. This extra noise reduction can be a significant improvement, especially if the cables are quite long. If two separate mono power amplifiers are used with the C710, balanced cables can eliminate the possibility of hum pickup. If cable lengths between the C710 and the power amplifiers are one meter or less, you may find high quality unbalanced cables to be adequate.

Balanced Jack Pin Configuration:

- Pin 1. System Ground
- Pin 2. + Output
- Pin 3. - Output

3. POWER CONTROL

This connector supplies a 5-volt DC Logic 1 control signal to feed to a similar Power Control input on a compatible power amplifier or accessory. The POWER CONTROL signal is used to turn the AC power of the accessory component on and off.

The POWER CONTROL connector uses single conductor shielded wire with 1/8 inch mini phone plugs. Connections are to the tip and sleeve of the plug.

4. MAIN OUTPUTS (Unbalanced)

Connect shielded cables from the C710 MAIN L and R OUTPUTS to the Left and Right channel power amplifier inputs.

5. TAPE OUTPUTS 1 and 2

These outputs provide signals to feed two separate tape recorders. The program that appears at the tape outputs is determined by the setting of the front panel INPUT switch. The TAPE COPY Switch also affects the signals at the tape outputs.

Connect a cable from the C710 Left channel TAPE 1 OUTPUT to the left channel high level input of a tape recorder. Connect a cable from the C710 Right channel TAPE 1 OUTPUT to the right channel high level input of the tape recorder. Connect a second tape recorder in a similar manner, to the TAPE 2 OUTPUTS.

IF MORE THAN ONE TAPE RECORDER IS CONNECTED FOR BOTH RECORD AND PLAY, MAKE CERTAIN THAT THE INPUTS AND OUTPUTS OF EACH RECORDER ARE CONNECTED TO THE SAME MATCHING NUMBERED INPUTS AND OUTPUTS.

6. PROCESSOR FROM and TO

An external signal processor can be added to the C710 that will affect only the MAIN and BALANCED Outputs.

The PROCESSOR-FROM jacks have built-in switching contacts to allow normal signals to pass through when no cables are connected. When an external processor is properly connected, the program signals feed to the processor from the PROCESSOR-TO jacks, and return to the C710 at the PROCESSOR-FROM jacks.

Connect a cable from the left channel processor output to the C710 left channel PROCESSOR-FROM jack. Connect a cable from the right channel signal output to the C710 right channel PROCESSOR-FROM jack.

Connect a cable from the C710 left channel PROCESSOR-TO jack to the signal processor left channel input. Connect a cable from the C710 right channel PROCESSOR-TO jack to the right channel signal processor input.

WHEN AN EXTERNAL SIGNAL PROCESSOR IS CONNECTED TO THE C710 PROCESSOR JACKS, THE PROCESSOR MUST BE TURNED ON AND OPERATING, OR IN BYPASS MODE, FOR A PROGRAM TO BE HEARD THROUGH THE SYSTEM.

THE REAR PANEL AND HOW TO MAKE CONNECTIONS

7. TAPE 1 and 2

Connect a cable from the left channel output of a tape recorder to the C710 L (Left) channel TAPE 1 or 2 INPUT. Connect a cable from the right channel output to the corresponding R (Right) TAPE 1 or 2 INPUT. Connect a second tape recorder in a similar manner.

The TAPE INPUTS can also be used for other accessory equipment with similar output levels.

IF MORE THAN ONE TAPE RECORDER IS CONNECTED TO BOTH RECORD AND PLAY, MAKE CERTAIN THAT THE INPUTS AND OUTPUTS OF EACH RECORDER ARE CONNECTED TO THE SAME MATCHING NUMBERED INPUTS AND OUTPUTS.

8. VIDEO

Use these inputs for the audio signals from accessories such as a Laser Disc Player, VCR, or TV receiver.

Connect a cable from the left channel audio output of the video unit to the C710 L (Left) channel VIDEO INPUT. Connect a cable from the right channel audio output to the C710 R (Right) VIDEO INPUT.

9. TUNER

Connect a cable from the left channel output of a tuner to the C710 L (Left) TUNER INPUT. Connect a cable from the right channel output to the C710 R (Right) TUNER INPUT.

10. CD1 and CD2

Connect a cable from the left channel output of a CD player to the C710 L (Left) CD1 INPUT. Connect a cable from the right channel output to the C710 R (Right) CD1 INPUT. Connect a second CD player to the C710 CD2 inputs in a similar manner.

For example, CD1 inputs could be used for a single play CD player, and the CD2 inputs for a CD changer.

11. AUX (Auxiliary) / 12. PH (Phono)

Both the PHono and AUXiliary input jacks are selected by the same position on the front panel INPUT switch. One or the other pair of inputs can be used, but not both simultaneously.

Connect the left channel high level output of any audio accessory unit to the C710, L (Left) Auxiliary INPUT. Connect the right channel accessory output to the C710, R (Right) Auxiliary INPUT. When cables are connected to the AUX input jacks, the PHono circuit is automatically bypassed.

To connect a record player with a magnetic phono cartridge, FIRST, remove any connecting cables from the AUXiliary input jacks.

Connect a cable from the left channel turntable output to the C710 L (Left) PHono INPUT. Connect a cable from the right channel to the C710 R (Right) PHono INPUT.

The C710 phono input circuit is designed to accept the signals from a standard moving magnet phono cartridge.

13. GND (Ground)

If there is a separate ground wire from the turntable, connect it to the GND terminal.

14. AC POWER

Connect the AC Power cable to a live 120 volt 50/60Hz AC outlet.

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The plug blades are polarized so be certain the plug is fully inserted in the outlet to prevent blade exposure.

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT CONNECT THE POLARIZED AC PLUG ON THIS UNIT TO AN EXTENSION CORD OR OTHER AC OUTLET THAT IS NOT DESIGNED TO ACCEPT POLARIZED PLUGS. THE PLUG MUST BE FULLY INSERTED TO PREVENT BLADE EXPOSURE AND MAINTAIN LINE POLARITY.

SPECIFICATIONS

PERFORMANCE LIMITS

Performance limits are the maximum deviation from perfection permitted for a McIntosh instrument. We promise you that when you purchase a new C710 from a McIntosh Franchised Dealer, it will be capable of performance at or better than these limits.

FREQUENCY RESPONSE

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

RATED OUTPUT

2.5V at BALANCED and MAIN (Unbalanced) OUTPUTS

MAXIMUM VOLTAGE OUTPUT

8V from 20Hz to 20,000Hz at BALANCED and MAIN (Unbalanced) OUTPUTS

TOTAL HARMONIC DISTORTION

0.002% maximum from 20Hz to 20,000Hz at rated output

SENSITIVITY

Phono: 2.5mV for 2.5V rated output, (0.5mV IHF)

High Level: 250mV for 2.5V rated output, (50mV IHF)

SIGNAL-TO-NOISE RATIO, A-WEIGHTED

Phono: 90dB below 10mV input, (84dB IHF)

High Level: 105dB below rated output, (95dB IHF)

MAXIMUM INPUT SIGNAL

Phono: 90mV

High Level: 10V

INPUT IMPEDANCE

Phono: 47K ohms and 65pF Capacitance

High Level: 22K ohms

VOLTAGE GAIN

Phono to Tape: 40dB

Phono to Main: 60dB

High Level to Tape: 0dB

High Level to Main: 20dB

tone controls

Bass and Treble variable, 12dB boost to 12dB cut

AC POWER OUTLET

One Switched; Total current capacity 11.6 amperes, (1400 watts)

POWER REQUIREMENTS

120V, 50/60Hz, 25 Watts

MECHANICAL

SIZE

Front Panel: 17-1/2 inches (44.5cm) wide, by 3-9/16 inches (9cm) high

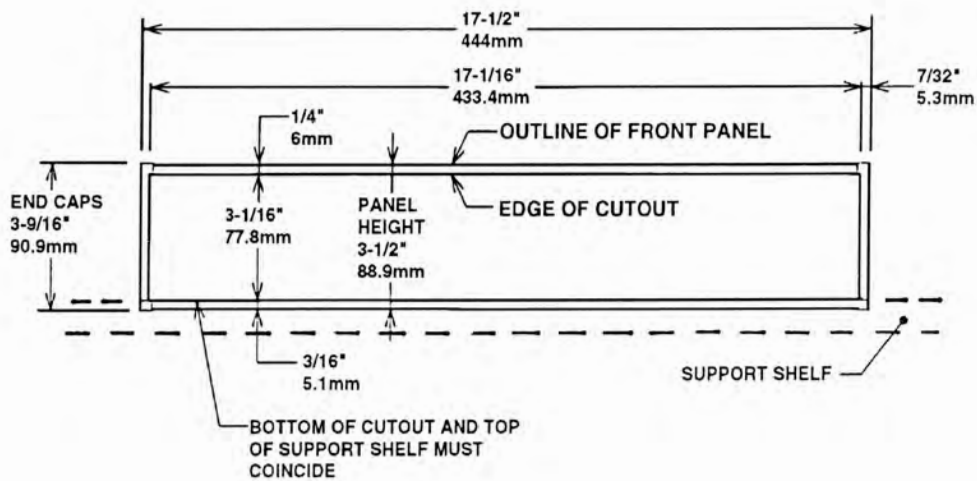
Chassis depth behind mounting panel including clearance for connectors is 17-1/2 inches (44.5cm). Knob clearance required in front of Mounting Panel is 1-1/8 inches (2.9cm)

FINISH

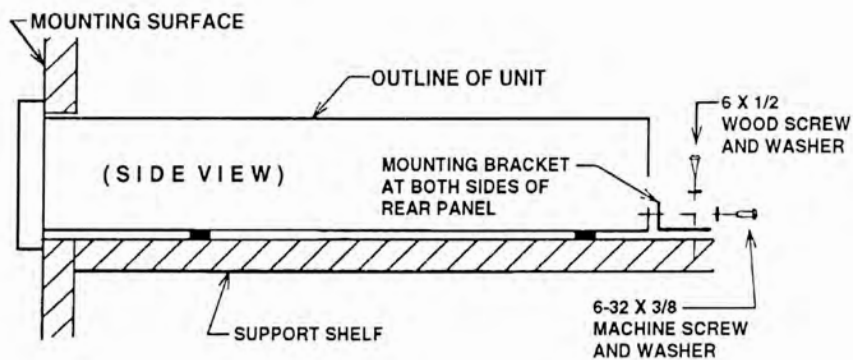
Front Panel is glass, with gold/teal nomenclature illumination. The chassis is black.

WEIGHT

17 pounds (7.7Kg) net, 31 pounds (14Kg)



CUSTOM INSTALLATION DRAWING



The letters and numbers correspond to the paragraphs on pages 6 through 9.

