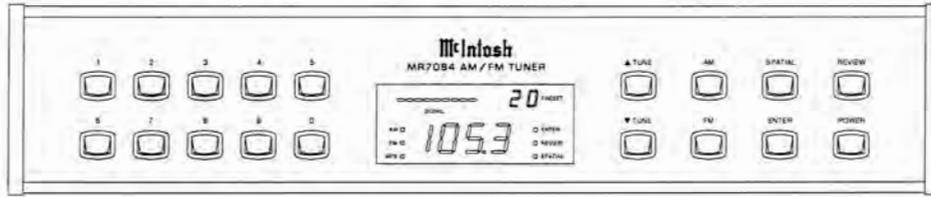


McIntosh[®]
OWNER'S MANUAL

**MR7084
AM/FM
TUNER**



MR7084
AM/FM
TUNER

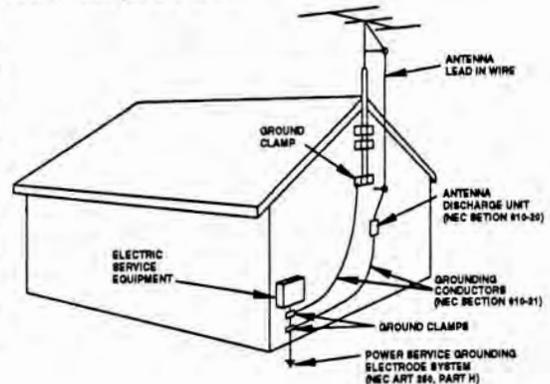
IMPORTANT SAFETY INSTRUCTIONS

THESE
INSTRUCTIONS
ARE TO PROTECT
YOU AND THE
McINTOSH
INSTRUMENT.
BE SURE TO
FAMILIARIZE
YOURSELF
WITH THEM

1. Read all instructions - Read the safety and operating instructions before operating the instrument.
2. Retain Instructions - Retain the safety and operating instructions for future reference.
3. Heed warnings - Adhere to warnings and operating instructions.
4. Follow Instructions - Follow all operating and use instructions.
WARNING: TO REDUCE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS INSTRUMENT TO RAIN OR MOISTURE.
5. Power Sources - Connect the power supply only to the type described in the operating instructions or as marked on the unit.
6. Power-Cord Protection - Route power-supply 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.
7. Ventilation - Locate the instrument for proper ventilation. For example, the instrument 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.
8. Heat - Locate the instrument away from heat sources such as radiators, heat registers, stoves, or other appliance (including amplifiers) that produce heat.
9. Wall or Cabinet Mounting - Mount the instrument in a wall or cabinet only as described in the owner's manual.
10. Water and Moisture - Do not use the instrument near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
11. Cleaning - Clean the instrument by dusting with a dry cloth. Clean the panel with a cloth moistened with a window cleaner.
12. Object and Liquid Entry - Do not permit objects to fall and liquids to spill into the instrument through enclosure openings.
13. Power Lines - Locate any outdoor antenna away from power lines.
14. Outdoor Antenna Grounding - If an outdoor antenna is connected to the antenna terminal, be sure the antenna system is grounded to provide some protection against voltage surges and built up static charge. In the U.S.A., section 810 of the National Electrical Code, ANSI/NFPA No. 70-1978, provides information on the proper ground for the mast and supporting structure, ground for the lead-in wire to an antenna discharge unit, and size of ground conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

For ground wire:

- a) Use No. 10 AWG (5.3mm²) copper No. 8 AWG (8.4 mm²) aluminum, No. 17 AWG (1.0 mm²) copper-clad steel, bronze wire, or larger as ground wire.
 - b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.2 meters) to 6 feet (1.83 meters) apart.
 - c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
 - d) Use jumper wire not smaller than No. 6AWG (13.3 mm²) copper or equivalent when separate antenna grounding electrode is used.
15. Nonuse Periods - Unplug the power cord from the AC power outlet when left unused for a long period of time.
 16. Damage Requiring Service - **Service must be performed by qualified service personnel when:**
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the instrument; or
 - C. The instrument has been exposed to rain; or
 - D. The instrument does not appear to operate normally or exhibits a marked change in performance; or
 - E. The instrument has been dropped, or the enclosure damaged.
 17. Servicing - Do not attempt to service beyond that described in the operating instructions. All other service should be referred to qualified service personnel.



18. Grounding or Polarization - 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.

19. 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 UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FONE SANDS EN LAISSER AUCUNE PARTIE A DECOUVERT.

Note to CATV system installer:

This reminder is provided to call the CAT system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



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.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

CAUTION: TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICABLE 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.

LIGHTNING - 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 and disconnect the antenna or cable system. This will prevent damage to the product due to lightning or power line surges.

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

**IMPORTANT
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INSTRUCTIONS**

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THANK YOU

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. 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 music system.

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

Serial Number

Purchase Date

Authorized Dealer Location

Installed By

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The new McIntosh MR7084 Tuner incorporates the popular 3-5/8" high front panel configuration, which is identical to the C712 Control Center and the MC7100 Power Amplifier. Included is the familiar all glass front panel with lighted nomenclature.

The MR7084 has 50 station memory presets available in any combination of AM and FM stations, instantly available from a 10 pushbutton front panel array. Whenever a preset is selected, the tuner automatically switches to the appropriate AM or FM band according to the preset memory.

A Review feature allows you to cycle through the presets that have been memorized. A total preset clear button is also included.

The McIntosh SPATIAL circuit is also included, which modifies frequency and phase response for a stereo effect on mono AM stations, and enhanced apparent stereo separation on strong FM stations. Full remote control operation is possible when the MR7084 is used with contemporary McIntosh Remote Controlled products.

Refer to the TECHNICAL DESCRIPTION section in this manual for detailed information on the various circuits of the MR7084 Tuner.

The MR7084 can be placed upright on a table or shelf, standing on its own plastic feet. It also can be installed in an optional McIntosh L70 equipment cabinet. Follow the mounting instructions enclosed with the L70 cabinet.

The MR7084 can be custom installed in a piece of furniture or cabinet of your choice. The required panel cutout, mounting shelf ventilation cutout and unit dimensions are shown on page 13. Always provide adequate ventilation for your MR7084, even though it develops very little heat.

Be sure to cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing.

Cool operation insures the longest possible operating life for any electronic instrument. Do not install your MR7084 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 their 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" (3.8cm) above the unit so airflow is not obstructed. Cut out a ventilation hole in the mounting shelf according to the dimensions in the drawing. Allow 14 inches (35.6cm) depth behind the mounting panel, which includes clearance for connectors. Allow 1-1/8" (2.9cm) in front of the mounting panel for clearance.

INTRODUCTION

INSTALLATION

THE REAR PANEL AND HOW TO CONNECT

Use high quality cables to interconnect the MR7084 Tuner to other components. Your McIntosh dealer can advise you on the types and lengths of cables best suited for your particular installation.

The last page of this manual folds out to show drawings of the front and back panels of the MR7084. This will help you in identifying and locating the front panel push-buttons, displays and the rear panel connectors. The letters and numbers on the drawings refer to the paragraphs that follow.

1. AC POWER CORD

Plug the AC power cord into a 120 volt 50/60Hz outlet. The plug blades are polarized so be certain the plug is fully inserted in the outlet to prevent blade exposure.

2. PRESET CLEAR

The PRESET CLEAR is a recessed pushbutton used to clear all tuner AM and FM presets previously stored in memory. Use a device such as a ball point pen to press the PRESET CLEAR pushbutton. Press the pushbutton and hold it in for at least 5 seconds. The preset digits will start flashing on and off to indicate that the PRESET CLEAR function will occur. When the digits stop flashing, all the preset memories will then be instantly erased.

3. DATA IN/OUT

Connect the DATA IN to a TUNER DATA OUT port on a McIntosh Control Center or Remote Control System. This allows the Hand Held Remote Controller or keypad of the other unit to operate all major functions of the MR7084.

These include;

1. Select AM or FM
2. Seek up or down the broadcast band on either AM or FM
3. Select any one of 50 previously stored Preset stations.
4. Review up to a total of 50 Presets on any combination of AM or FM stations.
(Leave the MR7084 AC power ON, and plug its AC power cord into a switched outlet operated by a Control Center or preamplifier.)

The DATA PORTS use shielded wire with 1/8" mini phone plugs. Connections are ground to the sleeve and signal to the tip of the plug.

4. SCOPE, H (Horizontal)/(Vertical) OUTPUT

Connect shielded cables from the SCOPE H and V outputs to the Horizontal and Vertical Inputs of an oscilloscope with DC amplifiers. This allows you to observe the absence or presence of multipath interference as well as signal strength when receiving FM stations. The scope display will show only signal strength when receiving AM stations.

5. FIXED OUTPUT L & (Left)/R (Right)

Connect shielded cables from the Left and Right FIXED OUTPUTs to the TUNER inputs of a Control Center or Remote Control System that has its own volume control. The FIXED output levels cannot be changed by the user.

6. VARIABLE OUTPUT L (Left) / R (Right)

Connect shielded cables from the VARIABLE OUTPUTs to the TUNER inputs of a Control Center or Remote Control System. Adjust the level of the VARIABLE OUTPUTs to match other program sources by turning the **OUTPUT LEVEL Control**, with a small screw driver.

THE REAR PANEL AND HOW TO CONNECT

7. OUTPUT LEVEL

Turn the OUTPUT LEVEL Control with a small screw driver to adjust the audio level of the VARIABLE OUTPUTS. Usually the control should be set so the tuner level from an average radio station is similar to the volume levels of other audio sources such as a CD player or tape deck.

8. AM ANT (Antenna)

A DIN connector socket is provided to allow an external AM antenna to be added for greater AM signal pickup sensitivity. This can be either a long lead wire, or a shielded loop cable.

Connect a long line AM antenna to terminal number "4" on a male 7 pin DIN plug and insert the plug into the AM ANTenna socket on the MR7084 rear panel.

A shielded loop consists of a length of shielded microphone cable or coax cable, arranged in a single turn loop. For best reception, orient the loop vertically. It may be attached around the frame of a window, behind a curtain, on the back of the equipment cabinet or in some similar manner. Signal strength is proportional to the size of the loop. A loop should not be smaller than six feet in diameter. The larger the loop, the greater is the signal strength.

To prepare the loop antenna from the shielded cable, strip 3/4 of an inch of outer insulation from each of the cable ends. At one end, completely remove the 3/4" of shield, since the shield is not connected at this end of the cable. Then remove 3/8" of insulation from the center conductor.

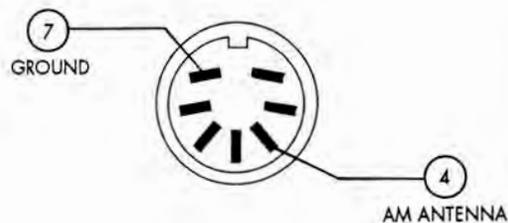


On the other end of the cable, leave the shield intact and strip 3/8" of insulation from the center conductor. On this end only, twist the center conductor and the shield together so they make a good electrical connection.



At the cable end with the exposed center conductor and no shield, connect only the center conductor of the cable to terminal number "4" on a male 7 pin DIN connector plug. Connect the other end of the cable, with the center conductor and shield connector together, to terminal number "7" on the DIN plug. Terminal number "7" is also chassis ground. Insert the DIN plug into the AM ANTenna socket on the MR7084 rear panel to connect the loop.

AM ANTenna
Connector terminals



9. 75 Ω FM ANTenna

Coaxial "F" type connector for a 75 ohm FM antenna. Four different types of FM antennas can be used with the MR7084.

1. The flexible 75 ohm indoor dipole antenna supplied with your MR7084 makes a convenient antenna for urban or high signal strength areas. Extend the two dipole sections as straight

THE REAR PANEL AND HOW TO CONNECT

as possible. The antenna can be tacked behind the enclosure cabinet, placed under a rug or along the wall. Since the antenna is directional, you may have to experiment with the correct position for best reception of your favorite FM stations. An indoor antenna may not prove effective in houses or buildings with metal siding or insulation.

2. An all channel (UHF-VHF-FM) antenna can be connected. This type of antenna will be similar to the flexible dipole in reception, but may be more convenient to install.
3. An outdoor antenna designed specifically for the FM broadcast band is the best for optimum reception in all areas. In fringe areas, a directional FM antenna with a rotor is recommended. A rotor allows you to position the antenna for the best possible reception of a specific FM station. Consult your McIntosh dealer for assistance if you decide to install an outdoor FM antenna system.
4. A signal from your local cable company can also be connected. Consult your McIntosh dealer and the cable company for installation assistance.

All coaxial connections use either RG59U or RG6 coaxial cable.

10. AM LOOPSTICK ANTENNA

When the MR7084 is packed for shipping, the AM loopstick antenna is folded flat and taped against the rear panel. Remove the securing tape and fold it out, away from the panel for proper AM reception. The AM loopstick antenna is directional so it is designed to be easily moved to a wide range of positions. This allows you to move the loopstick to the position for the best possible reception of your favorite AM stations.

See Number **"8" AM ANTenna** for information on adding an external AM antenna.

FRONT PANEL PUSHBUTTONS AND DISPLAYS

A. PRESET PUSHBUTTON

Press and release pushbuttons 1 through 0 to access or program AM and FM station presets from 1 to 50. Pressing pushbuttons 1 through 9 directly will access these presets with a 2 second delay. Press 0 first and then 1 through 9 to access the presets instantly. Access to any double digit preset (10 through 50) is instantaneous. Whenever a preset is selected, the tuner automatically switches to the appropriate AM or FM band according to the preset memory.

If you manually tune to a station that also has been stored as a preset, the preset number will appear in the front panel preset display window.

B. AM/FM/MPX

An LED lights to indicate whether AM or FM is selected. The MPX LED lights when the selected FM station is broadcasting in multiplex stereo.

C. SIGNAL

The SIGNAL display has a row of LEDs which indicate the relative signal strength of the broadcast station being received.

D. AM or FM STATION FREQUENCY

The numerical indications of the station frequency. AM indications are in Kilohertz and change in 10kHz steps. FM indications are in Megahertz and change in 100kHz steps.

E. PRESET

Indicates the number of the AM or FM station preset that has been selected. The 50 presets

FRONT PANEL PUSHBUTTONS AND DISPLAYS

can be AM, FM or any combination of AM or FM stations. The preset numerical indicator on the front panel display window indicates the number of the preset selected. Whenever a preset is selected, the tuner automatically switches the appropriate AM or FM band according to the preset memory.

If you manually tune to a station that also has been stored as a preset, the preset number will appear in the front panel preset display window.

F. ENTER/REVIEW/SPATIAL

The ENTER LED lights whenever you are entering an AM or FM station in PRESET memory.

The REVIEW LED lights when you are reviewing the PRESET memory selections.

The SPATIAL LED lights when the SPATIAL audio enhancement is selected.

G. (▲) TUNE (▼)

Press either the UP (▲) or DOWN (▼) TUNE pushbutton to tune up or down frequency in either the AM or FM broadcast band. The AM band changes frequency in 10kHz steps and the FM band in 100kHz steps in the USA.

In Europe, the display indicates 50kHz steps by adding a second decimal point after the 100kHz display digit. For example, a station at 107.3 would indicate directly. If the display read 107.3., it would indicate a station 50kHz higher, or 107.35.

H. AM/FM

Selects either the AM or FM broadcast bands.

I. SPATIAL

The SPATIAL pushbutton connects a McIntosh designed audio processor in the tuner audio output circuit. The processor influences both frequency distribution and phase relationships to provide enhanced spatial sound distribution in both AM and FM. Spatial enhancement is especially effective when listening to a Mono broadcast. The front panel SPATIAL LED lights when the processor is in use.

HOW TO PROGRAM AM AND FM STATION PRESETS

J. ENTER - Use to program Tuner station presets.

1. Select either the AM or FM broadcast band with the AM or FM (H), pushbutton.
2. Tune to the desired broadcast station frequency using the TUNE (G) pushbuttons.
3. Momentarily press and release the **ENTER** pushbutton. The **ENTER LED** will light.

(Be sure to just momentarily press and then release the ENTER pushbutton. If the ENTER pushbutton is held in, the ENTER LED will turn back off and the programming mode will be canceled. The ENTER LED must be ON for preset programming to occur.)

The MR7084 will remain in the preset ENTER mode for 10 seconds to allow the following preset programming steps.

4. Push a **PRESET (A)**, pushbutton or sequence of pushbuttons (from 0 through 50) to select a preset number that you wish to program for a station.

When selecting single digit Preset numbers from 1 through 9, press "0" first, and then the desired single digit pushbutton.

5. Press and release the ENTER pushbutton a second time to activate the memory. The ENTER LED will turn off and the station selection preset will be memorized.

6. Repeat the above steps 1 through 5 to memorize presets for up to a total of 50, AM and FM station frequencies in any combination.

Whenever a preset is selected, the tuner automatically switches to the appropriate AM or FM band according to the preset memory.

(If the MR7084 AC line cord is disconnected, or the AC power is interrupted, the tuner power supply turns off. However, the Tuner preset memory will be retained permanently. If presets are not programmed, each preset number defaults to AM, 1710kHz.)

FRONT PANEL PUSHBUTTONS AND DISPLAY

HOW TO ERASE OR CLEAR ALL STATION PRESETS FROM MEMORY

On the rear panel is a recessed PRESET CLEAR pushbutton which allows you to clear all tuner AM and FM presets previously stored in memory. Use a device such as a ball point pen or small screw driver to press the PRESET CLEAR pushbutton. Press the pushbutton and hold it in for at least 5 seconds. The preset digits will start flashing on and off to indicate that the PRESET CLEAR function will occur. When the digits stop flashing, all the preset memories will then be instantly erased.

K. REVIEW

Press REVIEW and the tuner will start the automatic 5 second audition of each of the preset stations stored in the PRESET memory. The REVIEW LED lights when this process is active. Only the presets stored in memory will be reviewed. If only five presets have been stored in memory, only those five will be reviewed. Press REVIEW a second time to stop on the desired preset station, and exit the REVIEW process. The REVIEW LED then turns off.

The REVIEW process can also be cancelled by pressing any other tuner function pushbutton.

L. POWER

Press POWER to turn the MR7084 ON and OFF.

TECHNICAL DESCRIPTION

TUNING SYSTEM

The MR7084 provides three modes of tuning, MANUAL, SEEK, and REVIEW. MANUAL tuning is provided by the TUNE (▲) up and (▼) down pushbuttons on the front panel. Push the button once to move one channel up or down the AM or FM band. Push and hold the buttons to tune continuously. Release the buttons to stop tuning. When the end of the band is reached the tuned frequency WRAPS AROUND to the other end and continues to tune in the same direction.

When a SEEK pushbutton is pressed, a ramped tuning voltage is generated, increasing in voltage for SEEK up, decaying for SEEK down. The ramp continues until the zero crossing of the detectors S curve is sensed at the input of the controller. It then stops and maintains that voltage with any necessary correction added. The SEEK pushbuttons are located on the REMOTE CONTROL IR transmitter. During the SEEK mode, an output from the controller lowers the tuner sensitivity. This prevents weak noisy stations from being heard. If one wishes to listen to weak stations, they may tune them manually.

Once a station has been tuned by either the MANUAL or SEEK mode you may ENTER it into any of the fifty memory locations. Simply press ENTER then within ten seconds, the desired STATION buttons, 1 through 50. Press ENTER again the ENTER light will go OFF and the station will be memorized.

A momentary press of one or more station PRESET pushbuttons will recall the station from memory. The memory is permanent. It will remain the same until changed or cleared. Each time a pushbutton is pressed, a mute pulse suppresses any noise that might occur during the tuning process.

Press REVIEW and the tuner will start the automatic 5 second audition of each of the preset stations stored in the PRESET memory. Only the presets stored in memory will be reviewed. If only five presets have been stored in memory, only those five will be reviewed. Press REVIEW a second time to stop on the desired preset station, and exit the REVIEW process.

FM TUNER

A type F connector is provided on the rear panel for connections of a 75 ohm antenna or cable system.

Following the antenna matching circuit is an RF tuner of exceptional performance. It uses a DMOSFET RF amplifier, Double Balanced Mixer and 4 RF circuits that are tuned by matched varactor diodes. The results are high spurious rejection and great sensitivity. This circuitry and high tuning voltage eliminate RF intermodulation distortion caused by diode non linearities.

The FM IF section uses 2 transistors, 3 linear phase piezoelectric filters, and 2 integrated circuits. They combine to provide over 120dB of gain and a selectivity greater than 90dB. Limiting, muting, signal strength drive, and FM detection are all functions of the LA 1235 integrated circuit.

A phase locked loop (PLL) stereo decoder integrated circuit, is the heart of the multiplex section. It has a high signal to noise ratio, low distortion, high channel separation, and high SCA rejection. The PLL MPX IC eliminates inductors to minimize drift, provides integral lamp driving capability for stereo indication, and has transient free mono/stereo switching.

Following the PLL MPX decoder an LC tuned notch filter is used to prevent tape recorder bias interference. The LC filter is driven from the MPX output amplifier and is terminated by an operational amplifier. This provides the necessary filter input and output impedances for proper phase response.

AM TUNER

The first element in the input section is a new Low Impedance Loopstick Antenna. It receives all the AM stations and rejects noise and other interference. A J FET transistor cascode amplifier follows. This amplifier, with its J FET inputs stage, provides excellent sensitivity and spurious response rejection. It also has a delayed AGC system that does not degrade the overload performance margin.

Two varactor tuned circuits, a second RF amplifier and a double balanced mixer are next. This type of mixer has excellent image and IF rejection. The mixer's 450kHz output feeds a matching transformer for the wide band linear phase piezoelectric 4 element lattice filter, then the IF amplifier, another transformer, and finally the AM detectors, filter and muting circuits.

AUDIO PROCESSOR

The MR7084 contains an audio processor that looks at L + R and L - R information and ENHANCES the sound.

If the tuner is receiving a weak AM or FM station, it introduces frequency and phase differences between the two channels giving a stereo effect. Since this is done at audio frequencies, it does not influence the signal to noise ratio. When receiving a strong FM station in stereo, it ENHANCES apparent stereo separation giving a wider stereo image.

ANTENNA INPUTS

FM

The MR7084 is provided with a 75 ohm coaxial antenna input. It is a standard "F" connector that mates with most common antenna and cable service feedlines. This type of input combines low loss with interference rejecting shielding.

A matched dipole antenna is provided for average reception. However, optimum performance is obtained with an outdoor highly directional beam antenna and rotator. Although a 75 ohm coaxial feedline offers the best noise and multipath rejection, many antennas use 300 ohm twinlead. If this is the case, a matching transformer (balun) can be used.

AM

The AM antenna input on the MR7084 is unusual in that it will accept almost any type of antenna. In a location of moderate signal strength and little interference (few fluorescent lights, motors, TV sets, etc.) the new Low Impedance Loopstick will give good performance. In a rural area, an outdoor long-wire might be desirable. A DIN connector is provided for the connection of several types of EXTERNAL AM antennas.

SPECIFICATIONS

FM SECTION

USEABLE SENSITIVITY

15dB which is 1.6uV across 75 ohms

50dB QUIETING SENSITIVITY

Mono, 19dB which is 2.5uV across 75 ohms

Stereo, 39dB which is 25uV across 75 ohms

SIGNAL TO NOISE RATIO

Mono: 80dB

Stereo: 75dB

FREQUENCY RESPONSE

Mono: +0, -1dB from 20 to 15,000Hz

Stereo: +0, -1dB from 20 to 15,000Hz

HARMONIC DISTORTION

Mono: 0.08% at 100Hz

0.08% at 1,000Hz

0.12% at 10,000Hz*

Stereo: 0.08% at 10Hz

0.08% at 1,000Hz

0.12% at 10,000Hz*

INTERMODULATION DISTORTION

Mono 0.08%

Stereo 0.12%

CAPTURE RATIO

1.5dB

ALTERNATE CHANNEL SELECTIVITY

70dB

SPURIOUS RESPONSE

100dB

IMAGE RESPONSE

80dB

STEREO SEPARATION

50dB

AM SECTION

SENSITIVITY

AM 20uV external antenna input (50 ohm source input)

SIGNAL TO NOISE RATIO

50dB at 50% modulation

60dB at 100% modulation

HARMONIC DISTORTION

0.5% maximum at 30% modulation

FREQUENCY RESPONSE

50Hz to 6000Hz NRSC**

ADJACENT CHANNEL SELECTIVITY

45dB minimum IHF

ADJACENT CHANNEL SELECTIVITY

45dB minimum IHF

IMAGE REJECTION

78dB minimum

GENERAL INFORMATION

AUDIO OUTPUT

Fixed: 1.2V RMS at 100% modulation

Variable: 1.2mV to 1.2V at 100% modulation

SEMICONDUCTOR COMPLEMENT

Transistors: 15

Integrated Circuits: 23

Varactors: 8

LEDs: 7

Diodes: 22

POWER REQUIREMENTS

120V 50/60Hz, 20 Watts

DIMENSIONS

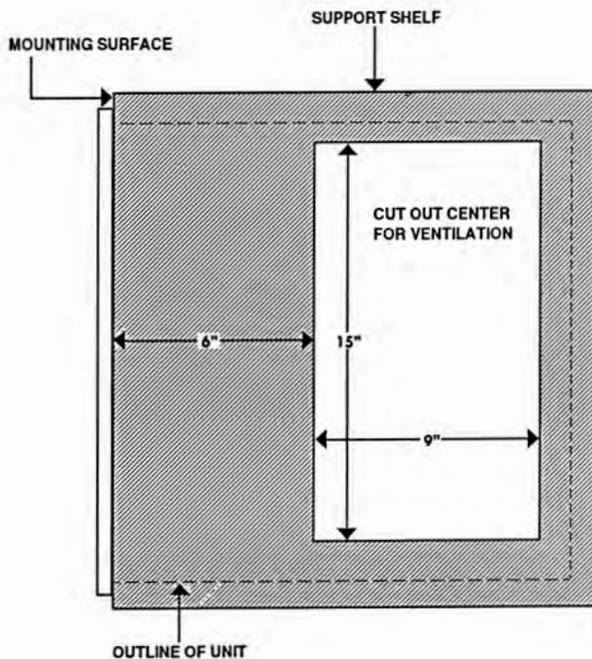
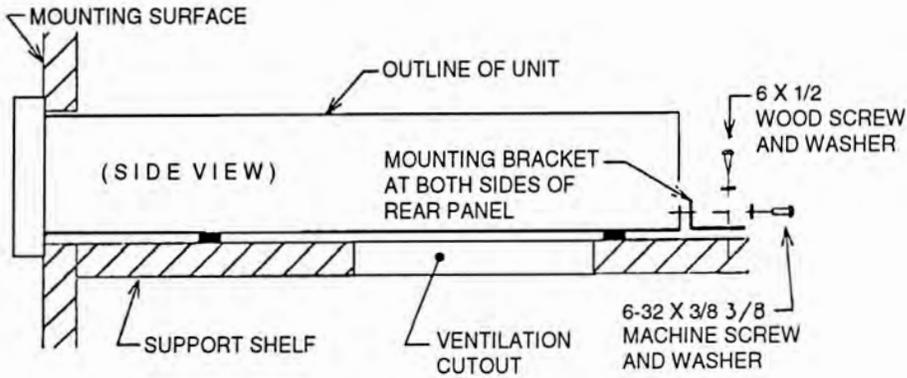
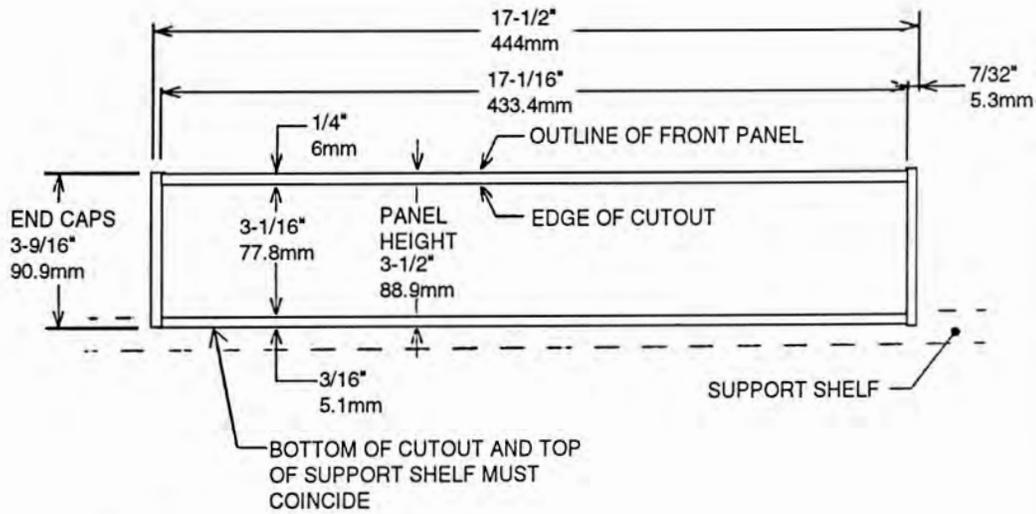
17-1/2" (44.5cm) wide, 3-5/8" (9.2cm) high, 17-1/2" (44.5cm) deep, including clearance for connectors. Allow 3/4" (1.9cm) in front of the mounting panel for clearance.

WEIGHT

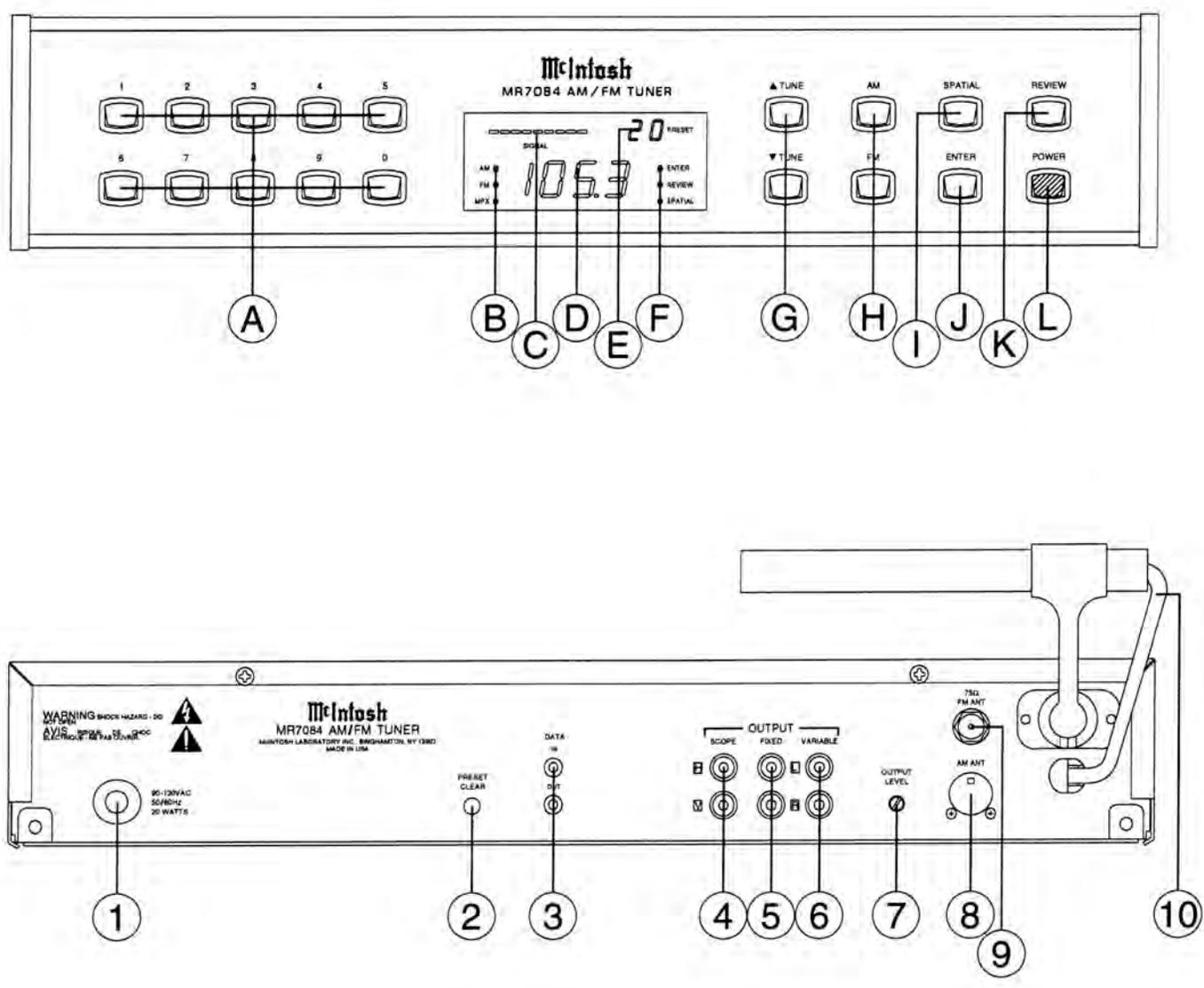
15 lbs. (6.8Kg) net, 27 lbs (12.2Kg) in shipping carton.

*Spectrum analyzer required for measurement.

**National Radio Systems Committee proposed spec. for AM tuners, Dec. 1989



The numbers and letters refer to the paragraphs on pages 6 through 10.



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2 CHAMBERS STREET, BINGHAMTON, NEW YORK 13903-2699

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