

OWNER'S MANUAL

MAC 1500



STEREO RECEIVER

thank  *you*

To insure your enjoyment please read and carefully follow these instructions. The time spent will make it possible for you to enjoy thousands of hours of musical enjoyment.

If you are in a hurry read page 4 first. This gives you a brief outline of what each control and indicator does. Reading time for this manual is 30 minutes. This is time well spent.

CONTENTS

GENERAL DESCRIPTION	1
SPECIFICATIONS	3
IF YOU ARE IN A HURRY	4
CABINET INSTALLATION	5
INSTALLATION-CONNECTIONS	7
COMPLETE SYSTEM HOOK-UP	9
BLOCK DIAGRAM	10
FRONT PANEL INFORMATION	12
BALANCING YOUR SYSTEM	15
ENJOYING YOUR SYSTEM	16
GUARANTEE	Cover

GENERAL DESCRIPTION

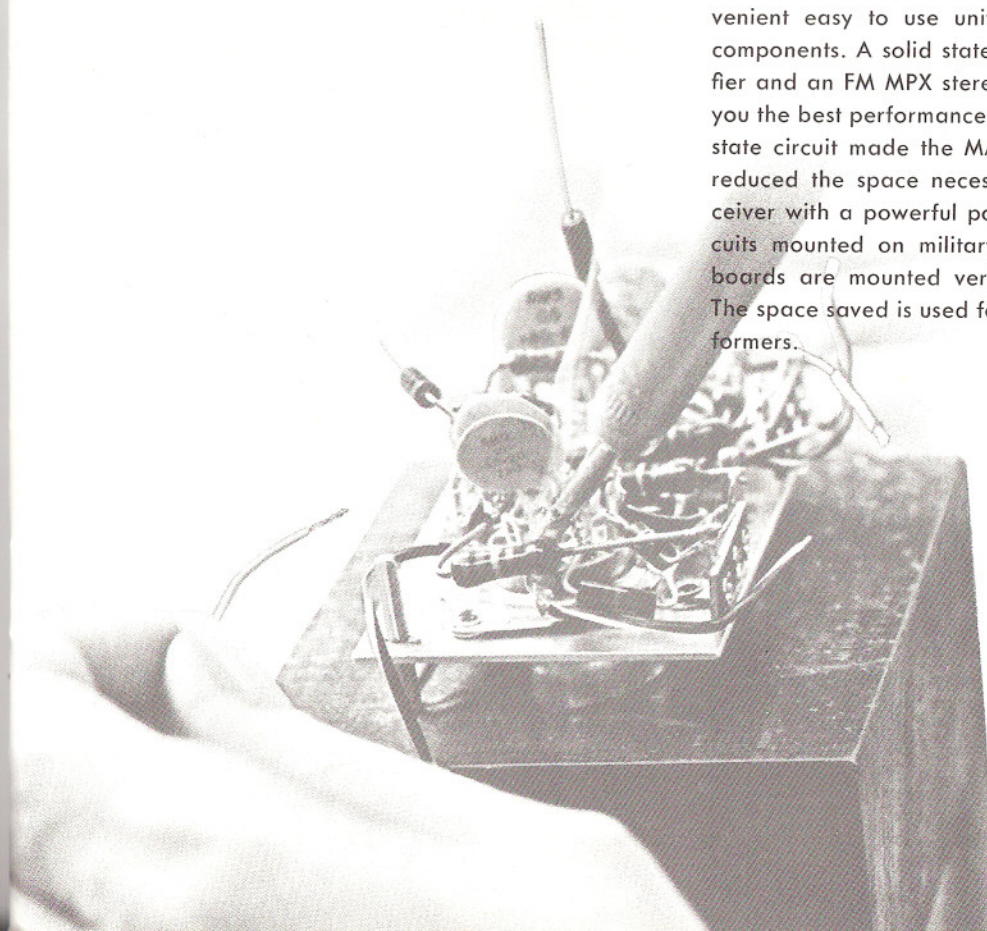
The MAC 1500 is a stereo receiver. In one small convenient easy to use unit are three top notch stereo components. A solid state preamplifier, a power amplifier and an FM MPX stereo tuner are combined to give you the best performance possible. Transistors and solid state circuit made the MAC 1500 possible. Transistors reduced the space necessary to combine a stereo receiver with a powerful power amplifier. Solid state circuits mounted on military specification printed circuit boards are mounted vertically. This takes less space. The space saved is used for large powerful output transformers.

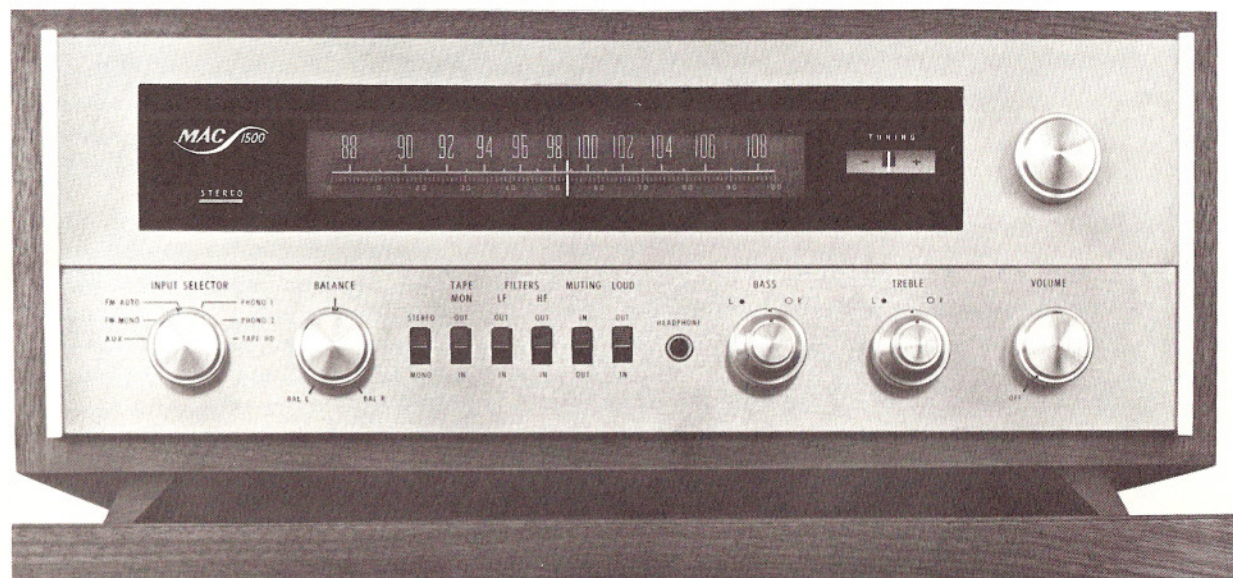
The MAC 1500 is built in three sections. Each section is built with maximum care and skill. Upon completion each section is joined with others to make a complete unit. Each section's physical size is kept to a minimum. The result is a compact, easy to use stereo instrument. A stereo instrument that brings you the best in all types of stereo listening.

The MAC 1500 is new and exciting. For the past three years the advanced products design department worked on this product. Every avenue and approach was searched. New avenues were tried. New types of circuits were tested. All approaches were evaluated. The result is a product that comes to you with an ancestry founded in the most advanced technology.

A product that brings you the best of both worlds. Where tubes give superior performance and long life they are used. Where transistors give improved performance and long life they are used. Here in one unit you have the most advanced solid state preamplifier, the most advanced tube and solid state multiplex circuitry, plus a conservatively rated tubed power amplifier. The FM stereo tuner comes from the same engineers who make the tuner that AUDIO magazine called "UNEXCELLED."

The stereo solid state preamplifier in the MAC 1500 gives you full sonic control of your listening room. Bass and treble controls have $\pm 18\text{db}$ of boost and cut. This means you can control how your speakers will sound in





your particular room. The prime function of a preamplifier is to reproduce records and tapes with full accuracy and sonic realism. Records are made with the bass cut and the highs boosted. This allows more musical information to be put on the record groove. Tapes are also recorded with the bass cut and the highs boosted. For true musical enjoyment the MAC 1500 reintroduces the bass and the highs following accurate and definite standards. Your records and tapes will sound alive and thrilling when you hear them through the MAC 1500.

The solid state preamplifier uses 12 silicon planar transistors. Silicon planar transistors are used because of their high thermal stability, low noise and superior high frequency response. The silicon planar transistors make the fantastic sound reproduction possible.

Despite the small space available for tuner placement the MAC 1500 gives you a 2.5 microvolt FM stereo tuner. This sensitive tuner brings you clear noise free reception from distant stations. The tuner section is

superb. The reason is simple. Pride of craftsmanship. In tuner design, one misplaced wire, one lead length too long, one capacitor out of place, can affect the performance of the tuner.

Each MAC 1500 must pass 171 tests before it is ready for you. The tuner section uses six tubes and two transistors. Tubes as RF amplifiers still give maximum sensitivity with greatest overload protection. It is virtually impossible to overload the MAC 1500 with too much signal from a nearby FM station. A transistor is used in the oscillator because it is not susceptible to drift.

Distortion on FM is less than 0.5%. You get all there is to hear with this FM tuner. The MPX section of the MAC 1500 uses six transistors and two tubes. In test after test this particular MPX section outperformed all other designs. One added advantage of the predominantly solid state design of the multiplex section is the long life expectancy of the circuit.

POWER. This is one thing you have plenty of with the MAC 1500. The power output section of the MAC 1500 will drive even the most inefficient speaker systems. Here is a dual power amplifier with 30 watts continuous power per channel with both channels operating. Distortion is less than 0.5% from 30 cycles to 20,000 cycles. Now you can listen to music with the knowledge your power amplifier delivers all the power your speakers need. Good full rich music is yours with the MAC 1500.

TECHNICAL FEATURES AND SPECIFICATIONS FOR MAC 1500

FM TUNER SECTION:

USABLE SENSITIVITY (at 100% modulation): 2.5uV (I.H.F. Standards)

SIGNAL TO NOISE AND HUM RATIO: 65db.

HARMONIC DISTORTION: Mono, less than .5%
Stereo, less than .8%

DRIFT: Less than 25KC

FREQUENCY RESPONSE: Flat from 20 cps to 20KC with standard 75 μ second deemphasis and 19KC pilot frequency filter.

CAPTURE RATIO: Better than 2.0db.

IMAGE REJECTION: Better than 60db.

STEREO MULTIPLEX SEPARATION: Better than 30db at 1KC.

SPECIAL FEATURES:

- Automatic stereo switching.
- Muting: IF Injected circuit with at least 50db quieting between stations.
- Antenna inputs for 300 ohm balanced (for twin lead) and 75 ohm unbalanced (for coaxial cable).
- Nuvistor RF amplifier, Nuvistor mixer.
- Four stages of IF amplification, with AGC used to insure that limiting occurs only in the limiter stages.
- Two limiter stages used for exceptional capture ratio and smooth muting operation.
- Multiplex filter and SCA filter, to suppress 19KC and 38KC signal components at least 40db below program and to suppress 67KC SCA by 60db.
- Noise immune logic circuit used to activate MPX stereo light and automatic stereo switching on 19KC stereo pilot only.
- D'Arsonval tuning meter for accurate center of channel tuning.
- Flywheel tuning for ease of operation and precise tuning.

AMPLIFIER SECTION:

POWER OUTPUT: 60 watts continuous, 30 watts per channel, 85 watts total music power (I.H.F. Standards).

HARMONIC DISTORTION: Less than 0.5% 30 cps to 20KC, both channels operating at rated output at the same time.

INTERMODULATION DISTORTION: Less than 0.5% for any combination of frequencies from 30 cps to 20KC at rated output (equivalent RMS watts). I.M. decreases as output power is reduced.

FREQUENCY RESPONSE: ± 0.5 db 20 cps to 20KC. (Power amplifier response is 2 cps to 150KC at -3db; power bandwidth is 19 cps to 30KC.)

OUTPUT IMPEDANCE: 4, 8, and 16 ohms. Rated output is delivered by any of these impedances.

DAMPING FACTOR: Greater than 10.

INPUT SENSITIVITY AND IMPEDANCE:

Tape Head—2.8MV, 1 megohm
Phono 1—5.6MV, 47K ohms
Phono 2—2.8MV, 47K ohms
Aux—400MV, 500K ohms
Tape Monitor—400MV, 500K ohms

TAPE OUTPUT LEVEL: Tuner—1.2 volts, for other inputs 400MV at rated sensitivity.

HUM AND NOISE:

Power Amplifier, -90db
High Level Inputs, -75db
Low Level Inputs, -60db

tone control range:

Bass control +15db to -18db at 50 cps.
Treble control +15db to -15db at 10KC.

L.F. and H.F. FILTER:

L.F. filter, cutoff frequency = 50 cps,
attenuation rate = 12db per octave

H.F. filter, cutoff frequency = 5KC,
attenuation rate = 12db per octave

SPECIAL FEATURES:

- Loudness control for full fidelity listening at low levels.
- Tape monitor switch for listening to recorded tape program while recording.
- Tone controls are "clutched" for tracking operation of left and right channels or independent operation.
- Headphone output fed from special tap on output transformer for maximum signal to noise ratio. Speakers may be automatically muted when headphone plug is inserted, by use of rear mounted switch.
- Silicon transistors used in all preamplifier stages for low noise and hum free operation.
- High quality epoxy circuit boards for reliable long life performance.
- High quality conservatively operated components are used throughout for long life.
- Zener regulated power supply is used for critical circuits.
- Equalization and tone control circuits are feedback type for lowest distortion and greatest accuracy.

MISCELLANEOUS

FINISH: Gold anodized panel and knobs, black finished chassis.

DIMENSIONS: 16" wide, 5 1/2" high, 16" deep.

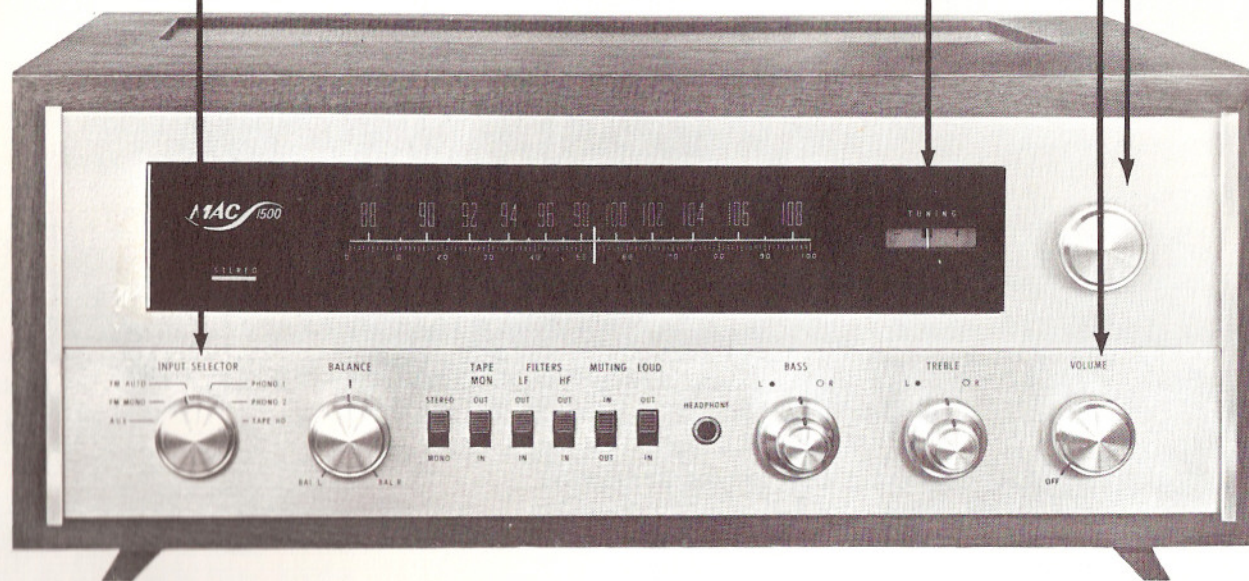
WEIGHT: 40 lbs., shipping weight 54 lbs.

POWER CONSUMPTION: 180 watts, 120 volts, 60 cps.

TRANSISTOR AND TUBE COMPLEMENT:

19 silicon transistors
1 germanium transistor
15 tubes
16 diodes, rectifier, and zener diode

IF YOU'RE IN A *Hurry...*



- 1** Input Selector . . . Aux . . . for any device connected to the AUX inputs on back. FM MONO listen to FM mono broadcasts. FM AUTO . . . listen to FM stereo broadcasts. Phono 1 for phonograph records. Phono 2 for phonograph records. Tape hd. for a tape playback unit without preamplifier.
- 2** Tune for center of black area.
- 3** Adjust to desired volume. Power off. Turns the system on/off.
- 4** Tuning . . . select desired station.
- 5** Treble . . . modifies high frequency sounds. Set to your taste.
- 6** Bass . . . modifies low frequency sounds. Set to your taste.
- 7** Headphone . . . to connect a set of low impedance stereo headphones.
- 8** Loud . . . use this switch to compensate for low volume listening and still hear full frequency range.
- 9** HF Filter In . . . reduces high frequency noise such as record surface noise.
- 10** LF Filter In . . . reduces low frequency noise such as turntable rumble.
- 11** Muting In . . . eliminates interstation noise. Muting Out . . . use to receive weak stations.
- 12** Tape Mon . . . monitor position used to monitor a recording when used with a tape recorder with separate playback and record heads. **MUST BE IN OUT POSITION FOR NORMAL LISTENING.**
- 13** Stereo . . . Mono . . . Set to stereo for all stereo program material. Mono position for all mono material.
- 14** Balance . . . to make one speaker louder than the other. Permits you to adjust for unequal sound caused by room acoustics or program material.
- 15** Will light only on stations broadcasting MPX stereo.

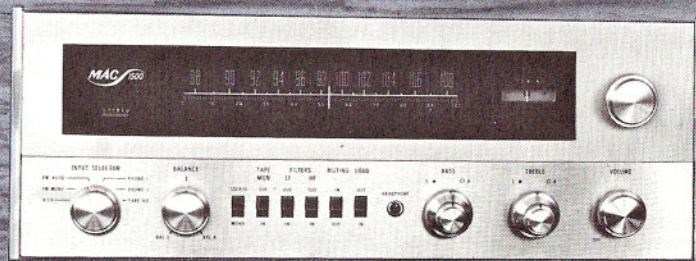
CABINET INSTALLATION

The MAC 1500 can be installed in furniture cabinets, or custom built installations. If the unit is to be used on a shelf or table top, mount it in the attractive MAC 15 WO cabinet.

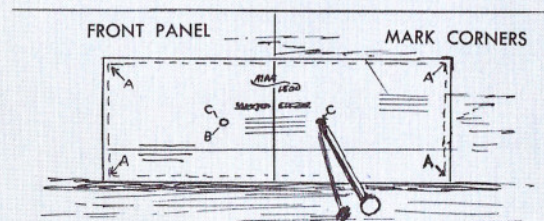
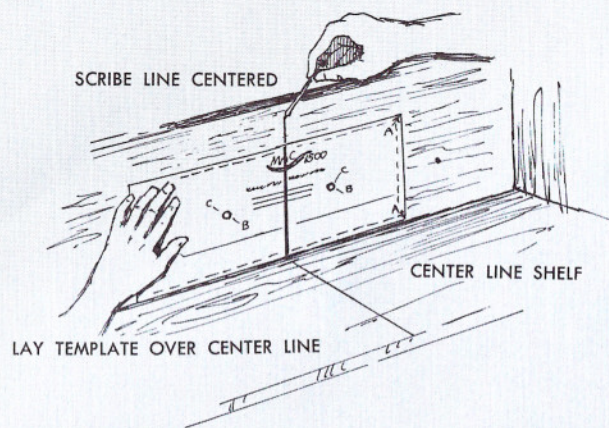
Allow sufficient cabinet space for air circulation. Minimum internal cabinet dimensions should be $15\frac{7}{16}$ inches wide, $13\frac{5}{8}$ inches deep, and $5\frac{1}{4}$ inches high. The back of the cabinet should be left as open as possible for ventilation. Proper ventilation will insure your receiver a long trouble free life. A fan to circulate the air will further increase the life of your receiver.

The MAC 1500 installs easily from the front of the cabinet into a panel cutout. Front panels of any thickness can be used. Four screws into the bottom of the MAC 1500 through the mounting shelf hold the unit firmly in place. Due to the weight of the MAC 1500 we recommend the unit rest on a wooden shelf of at least $\frac{1}{2}$ " thickness. Unless the MAC 1500 is adequately held in place vertical mounting should not be attempted. If vertical mounting is used a fan delivering 50 cubic feet per minute must be used.

Since the MAC 1500 must rest on a shelf, locate the cutout from the back of the panel. A template to help you make mounting easy is in the packet that contains the owners manual.

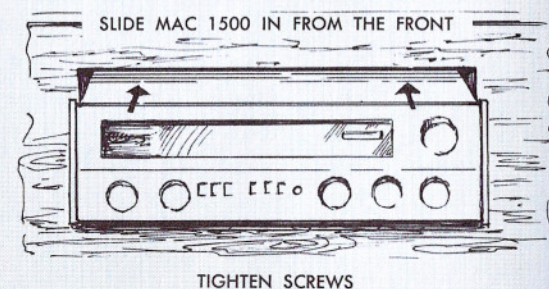
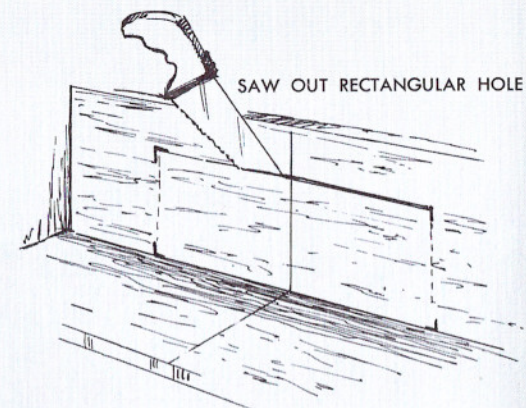


MAC 1500



MAC 1500

- 1 On the back of the cabinet panel, scribe a vertical line through the exact center of the area to be cut out.
- 2 Place the template against the back of the panel. Match the template centerline with the scribed centerline. The bottom of the template must rest on the shelf.
- 3 On each side of the centerline of the template there are two holes marked "B." These are the "LOCATING HOLES." These holes are used to locate the front panel of the MAC 1500 with reference to the shelf behind the cabinet panel. To insure the MAC 1500 will rest on the cabinet shelf, follow these instructions carefully.
- 4 Mark the back of the cabinet panel with a pointed instrument through the two "B" LOCATING HOLES. Drill these two holes through the cabinet panel with a $\frac{3}{16}$ " diameter drill. Be certain the drill is perpendicular to the panel.
- 5 Position the template on the front of the panel. Align the "C" holes in the template with the drilled holes in the cabinet panel.
- 6 Mark the "A" corner cutouts in the template. Join the corner markers. The edge of the template can be used as a straight edge.
- 7 Cut out the rectangular opening.
- 8 Take the shelf template and fold along the dotted line. Put the dotted line against the back of the front mounting panel. Align the center line of the shelf template with the scribed front panel centerline.
- 9 Mark holes "A" and "B." Drill the holes using a $\frac{1}{4}$ " to $\frac{1}{2}$ " bit. The larger you make the holes the more latitude you will have to position the MAC 1500.
- 10 Scribe the suggested cutout outline. Cut out the area.
- 11 Prepare the MAC 1500 for mounting by removing the four plastic feet fastened under the chassis.
- 12 The MAC 1500 is installed from the FRONT of the cabinet. Insert the MAC 1500 power cord through the rectangular opening of the cabinet panel. Carefully slide the MAC 1500 through the opening. Continue to slide the MAC 1500 until its front panel is against the cabinet mounting panel.
- 13 Secure the MAC 1500 to the mounting shelf using the screws supplied in the hardware package.
- 14 Connect the MAC 1500 to the rest of the system.



INSTALLATION

CONNECTIONS TO YOUR MAC 1500

CONNECTING THE PHONO 1 POSITION for your main record player

Connect the "left" channel to the "L" input of PH 1. Connect the "right" channel to the "R" input of PH 1. If your record player has a ground wire connect the ground wire to GND.

CONNECTING THE PHONO 2 POSITION

Phono 2 position can be used if two record players are used in a system. Connect the "left" channel to the "L" input of PH 2. Connect the "right" channel to the "R" input of PH 2.

CONNECTING TAPE PLAYER (no preamplifier in tape player)

Use this position only for a tape deck with no electronics. Connect the "left" channel to the "L" input of TAPE HD. Connect the "right" channel to the "R" input of TAPE HD.

CONNECTING A TAPE RECORDER or TAPE PLAYER with BUILT-IN ELECTRONICS

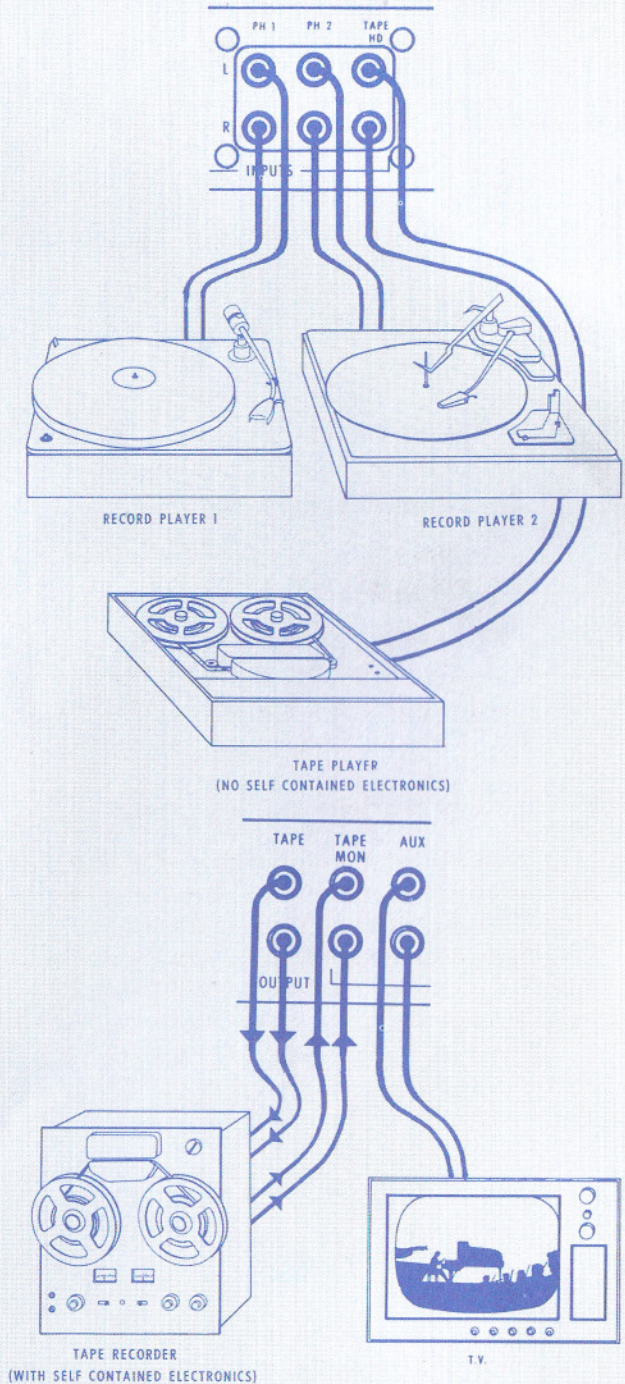
Connect the "left" channel of the tape player or tape recorder to the "L" channel AUX input. Connect the "right" channel of the tape player or tape recorder to the "R" channel AUX input.

CONNECTING A TAPE RECORDER WITH THREE HEADS

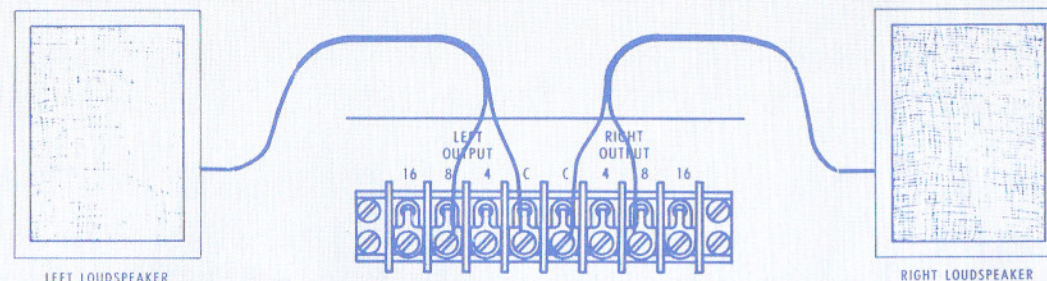
Connect the tape outputs of the MAC 1500 to the high level inputs on the tape recorder. This will make it possible for you to record from the MAC 1500. Connect the tape recorder outputs to the TAPE MON inputs on the MAC 1500. Use TAPE MON ... In for listening to pre-recorded tapes as well as to monitor.

CONNECTING A TAPE RECORDER TO RECORD FROM THE MAC 1500

Connect the TAPE OUTPUTS of the MAC 1500 to the high level inputs on the tape recorder.



Connect one wire to the C (common) on the left output, connect a second wire to the impedance that matches your loudspeaker. Run these two wires to the "left" loudspeaker. Connect one wire to the C (common) on the right output, connect a second wire to the impedance that matches your loudspeaker. Run these two wires to the "right" loudspeaker.

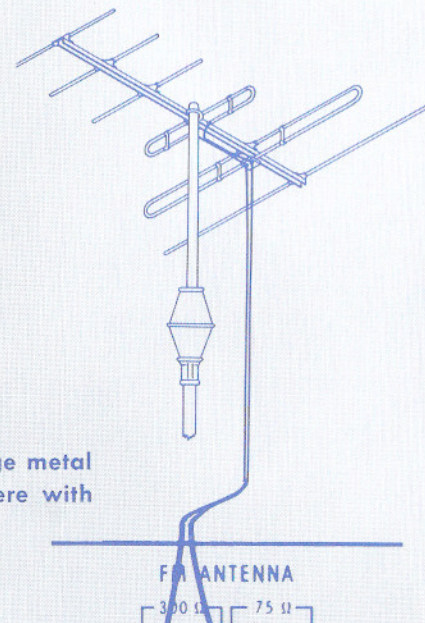


ANTENNA CONNECTIONS

A convenient flexible indoor FM dipole (300 ohm) antenna is supplied with the MAC 1500. This antenna is easy to install. It is suitable for good FM reception in high signal areas.

Connect the two leads of the dipole antenna to the two terminals marked "300" on the back panel of the MAC 1500.

The flexibility of the thick flat wire lets you easily locate the dipole behind the equipment. Open the dipole into a "T." Extend the arms as straight as possible. The dipole antenna is somewhat directional. It should be positioned for best reception of the desired stations.



IMPORTANT

Keep the dipole away from large metal objects or surfaces. They interfere with the efficiency of the antenna.

OUTDOOR FM ANTENNA

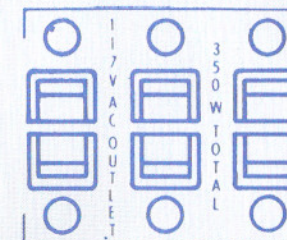
An outdoor FM antenna is recommended. It will give you the best reception under all conditions. In fringe areas, a highly directional antenna used with a rotator will give the finest possible FM reception. Rotate the antenna until it points in the direction of the station or until it receives the best possible signal.

75 OHM ANTENNA

An unbalanced 75 ohm FM antenna can be used with the MAC 1500. Use the two terminals marked 75.

MUTING (on the rear panel)

This control determines the strength of signal necessary for a station to be heard with the tuner in the muting position. The muting threshold is carefully adjusted to optimum at the factory using precision test instruments. Casual adjustment of the muting threshold is not recommended.



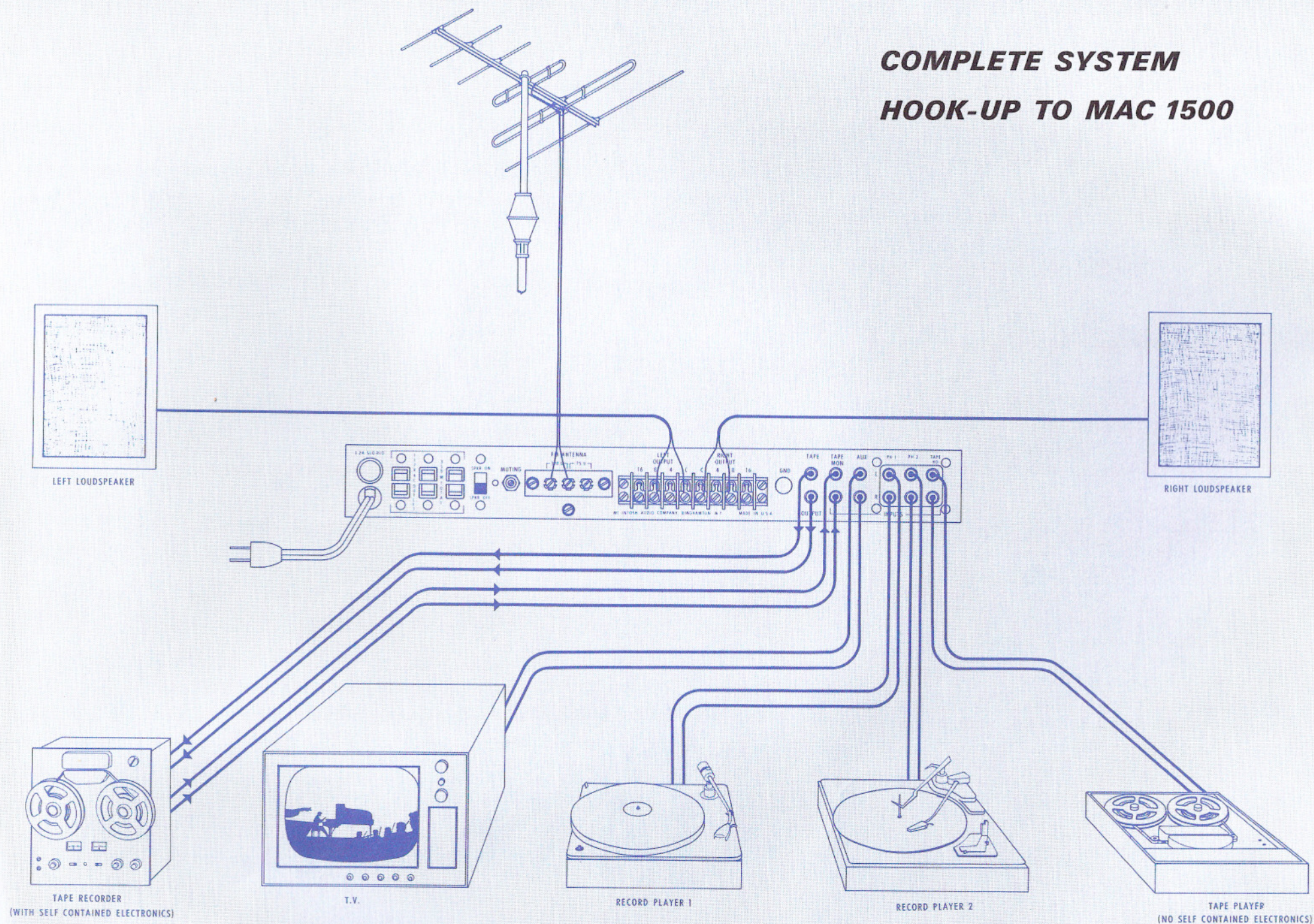
AC OUTLETS

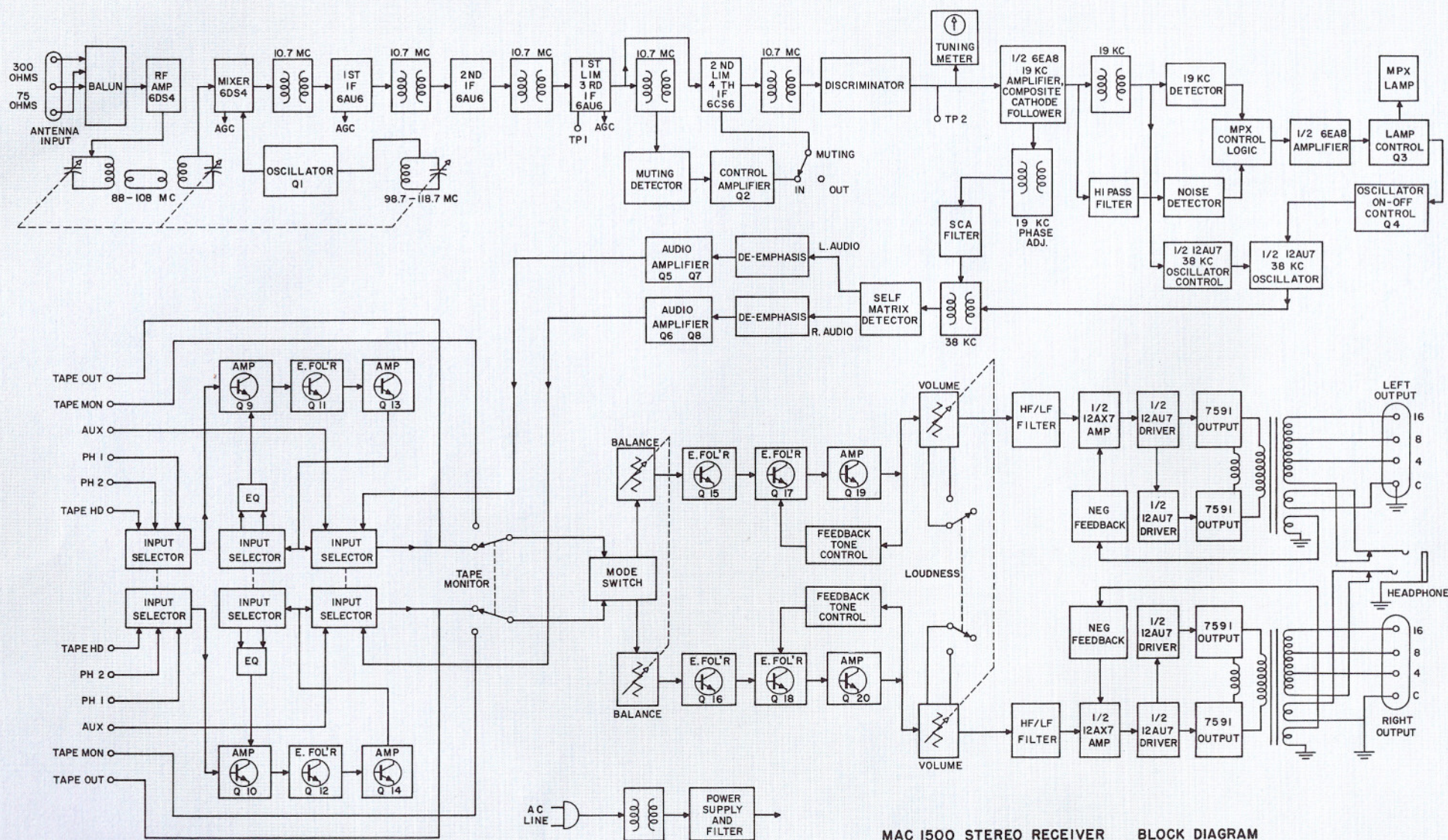
There are two BLACK AC outlets and one RED AC outlet. The power to the black AC outlets is controlled by the front panel switch. Use these outlets for accessories such as a tape recorder. The red receptacle is on at all times and is used for a turntable or record changer. The turntable is protected by this arrangement. It is necessary to turn off the turntable or record changer by its own AC switch. Connect the AC cord from your record player to the RED outlet.

SPKR ON . . . OFF

This switch controls the loudspeakers when you use the headphone jacks on the front panel. With the switch in the ON position the loudspeakers will remain on when you plug in the headphones. With the switch in the OFF position the loudspeakers will turn off when you plug in headphones.

COMPLETE SYSTEM HOOK-UP TO MAC 1500





MAC 1500 STEREO RECEIVER BLOCK DIAGRAM

Now your enjoyment begins...

Having completed the installation of your MAC 1500 a new world of musical enjoyment is yours. The following section gives you a detailed explanation of all the controls and their functions. It will tell you how to adjust your MAC 1500 for maximum enjoyment.

If you have any further questions please write:

**Customer Service
McINTOSH AUDIO COMPANY
2 Chambers Street
Binghamton, New York 13903**

MAC 1500

FRONT PANEL INFORMATION



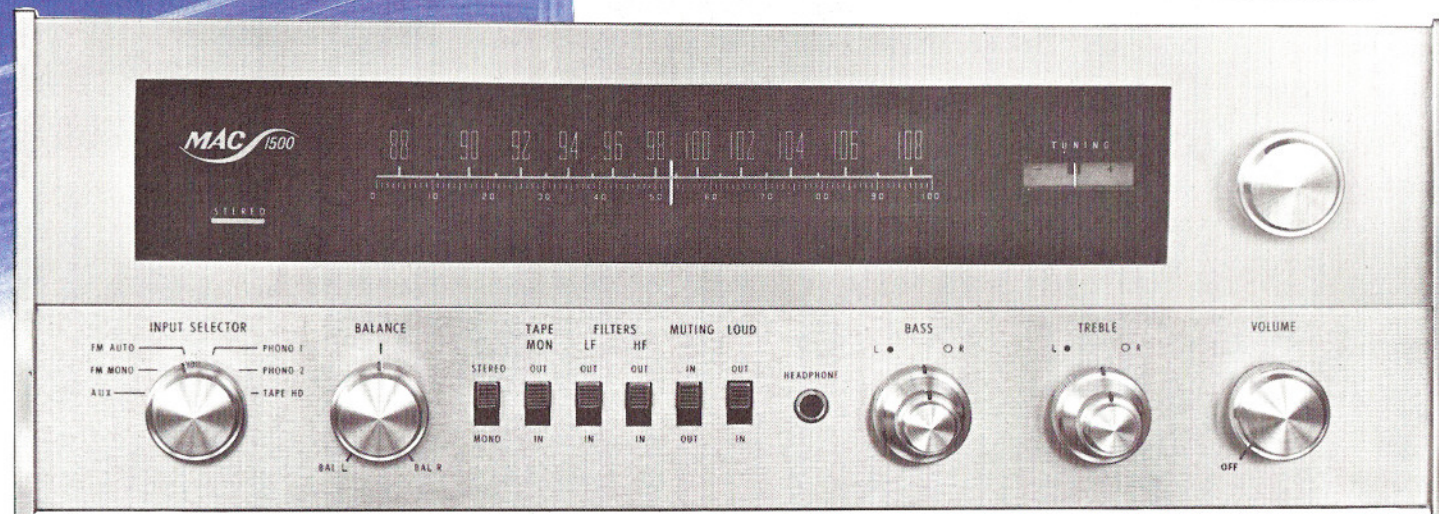
TUNING DIAL SCALES—The MAC 1500 has two dial scales. The megacycle scale indicates the position of FM stations in the 88 to 108 megacycle FM band. The linear division of the 0-100 logging scale makes it easy to return to a station using a logging scale number.

INDICATORS—The MAC 1500 has two indicators on the front panel. One is the tuning meter. When an FM station is correctly tuned the indicator will be in the black area of the meter. The action of the TUNING indicator is independent of station signal strength. The second indicator is the STEREO INDICATOR. The STEREO INDICATOR will light only when the dial pointer crosses a station broadcasting multiplex stereo.

VOLUME ON-OFF—Use the VOLUME control to adjust the volume to a desired listening level. Turn the VOLUME control clockwise to increase the volume. Full counterclockwise rotation turns the unit off.

TREBLE—The TREBLE control is a dual control. The small knob controls the treble in the left channel. The large knob controls the treble in the right channel. The two knobs are friction coupled. They can be adjusted together or separately. Turn clockwise to increase treble. Turn counterclockwise to decrease treble.

BASS—The BASS control is a dual control. The small knob controls the bass in the left channel. The large knob controls the bass in the right channel. The two knobs are friction coupled. They can be adjusted together or separately. Turn clockwise to increase bass. Turn counterclockwise to decrease bass.



HEADPHONE—The headphone jack is for use with low impedance headphones. There is a switch on the rear panel to control the loudspeakers. With the switch in the **SPEAKER OFF** position the loudspeakers will turn off when you insert your headphone jack. With the switch in the **SPEAKER ON** position the loudspeakers will remain in the system.

LOUD . . . An abbreviation of loudness

OUT . . . This is the normal position for moderate to loud listening levels. Use the **LOUD** . . . **IN** position to listen to low listening levels. It will allow you to hear the full frequency range. With the volume turned down there is an apparent loss of bass and treble response. When the volume is low the human ear's response to bass and treble decreases more rapidly than its response to notes in the mid-range. The **LOUD** control automatically boosts the bass and treble. With the switch **IN** the bass and treble are heard in correct proportion to the mid-range at low listening levels.

HF (High Frequency) FILTER—Use the HF filter switch to reduce high frequency noise such as record scratch or hiss from tapes.

OUT . . . filter disconnected for normal flat frequency response.

IN . . . reduces high frequencies above 5,000 cycles.

LF (Low Frequency) FILTER—Use the LF filter switch to reduce low frequency noise such as turntable rumble or acoustic feedback coupled from the speakers to the turntable.

OUT . . . filter disconnected for normal flat frequency response.

IN . . . reduces low frequencies below 50 cycles.

MUTING

IN . . . turns on the muting circuit. Muting suppresses background hiss and noise usually heard when tuning between stations. Weak or distant stations that cannot override the background noise and interference are suppressed by the muting.

OUT . . . turns off the muting to allow conventional tuning. Interstation noise will be present. Use this setting to listen to weak or distant stations that have noise or interference.

TAPE MON.

The MAC 1500 tape switch makes it possible to instantly compare recorded material with the source signal. Tape jacks on the back panel accept a signal from a tape recorder with a monitor head and preamplifier.

OUT . . . the program source is fed through the MAC 1500 to the loudspeakers.

IN . . . the program source is fed from the MAC 1500 to the tape output jacks to the tape recorder. The signal is recorded

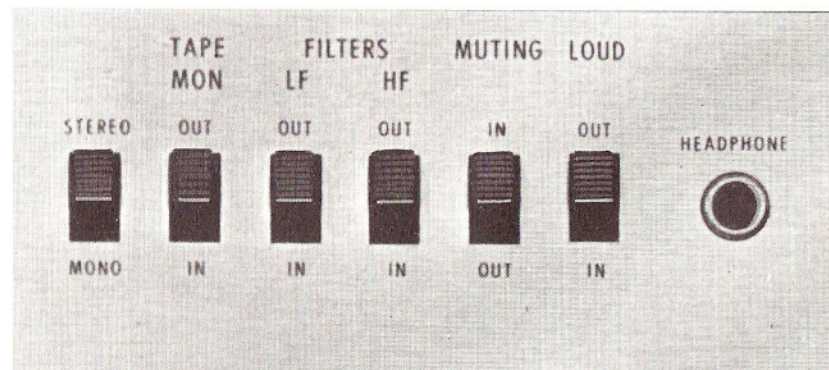
onto the tape at the record head. The signal follows a difficult path . . . the tape is played by the playback head . . . through the playback preamplifier in the tape recorder . . . out of the tape recorder into the tape monitor inputs on the MAC 1500 . . . then through the power amplifier of the MAC 1500 and to the loudspeakers.

CAUTION: THE SWITCH MUST BE IN THE OUT POSITION FOR NORMAL LISTENING.

STEREO MON.

Stereo . . . for all normal stereo listening.

Mono . . . for all normal monophonic listening.

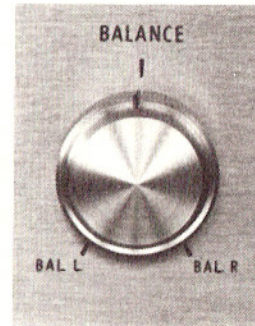


MAC 1500

BALANCE

Use the MAC 1500 BALANCE control to balance unequal volume in the left and right channels.

Left . . . turning the control to left accents the left channel by reducing the right channel output.



Right . . . turning the control to the right accents the right channel by reducing the left channel output.

INPUT SELECTOR

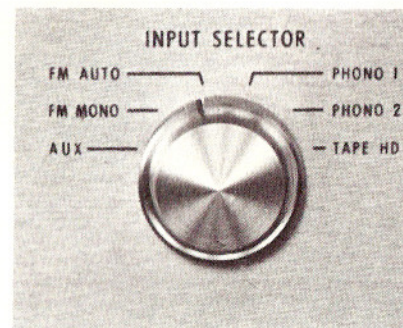
Select any one of six program sources with this switch.

FM AUTO TUNER . . . Use this position to listen to all FM broadcasts. The tuner will automatically switch to stereo on all stations broadcasting stereo. The tuner will return to mono operation when you tune in a station broadcasting mono.

NOTE: IF A STEREO BROADCAST IS NOISY YOU CAN SWITCH THE TUNER TO FM MONO.

FM MONO . . . Use this position to listen to FM broadcasts. If a stereo broadcast is noisy you can switch the tuner to FM MONO. This puts the tuner section into the monaural mode. It will reduce noise.

AUX . . . any auxiliary service requiring flat amplification, such as a television set, or tape recorders.



PHONO 1 . . . connects the MAC 1500 for stereo and monophonic operation of records.

PHONO 2 . . . Same as PHONO 1.

TAPE HD . . . A tape deck that does not contain its own playback preamplifier is connected to the MAC 1500 through the TAPE HD position.

NOTE: OWNERS OF TAPE RECORDERS WITH SEPARATE RECORD AND PLAYBACK HEADS USE THE TAPE MONITOR POSITION TO PLAY BACK PRE-RECORDED TAPES.

SETTING YOUR CONTROLS...

Balancing a stereo system

The performance and enjoyment of your stereo system increases when the system is balanced. There are two factors in balancing. One is unequal program loudness on the left and right channels of the program source. The other is basic system balance. The control marked BALANCE on the MAC 1500 is used to correct both of these problems.

First balance the system. There are many things which affect the balance of your system: room acoustics, furniture placement, room shape, small differences in loudspeakers, etc.

TO BALANCE SYSTEM

- 1 Set the stereo mono switch to MONO.
- 2 Play a familiar recording.
- 3 Turn the balance control to the 12 o'clock position.
- 4 While the program is playing, stand in the center of the two loudspeakers. Listen to see if there is a difference in loudness from either speaker. The sound should come from a point mid-way between the speakers. If it does not, turn the control toward the speaker that is not as loud as the other. Do this until you find the point where the sound comes from the mid-point between the speakers. If it is impossible to get the sound to come from the mid-point go on to ADJUSTING PHASE. After you have adjusted the phase you can start the balancing procedure over again.

ADJUSTING PHASE

- 1 Set the MONO STEREO switch to MONO.
- 2 Stand about 10 feet in front of and mid-way between your loudspeakers. The sound should appear to be directly in front of you. Have someone switch the leads on one speaker. Be sure to switch the leads on ONE speaker only. If the sound is not directly in front of you reverse the leads on one loudspeaker. When the sound comes from the mid-point between the speakers they are in phase.



Enjoying YOUR SYSTEM

LISTENING TO A STEREO RECORD

- 1 Turn the INPUT SELECTOR to PHONO 1 or PHONO 2, whichever is connected to the record player you wish to hear.
- 2 Set the MONO STEREO switch to STEREO.
- 3 Adjust the VOLUME control to the desired volume.

LISTENING TO MONOPHONIC RECORDS

- 1 Turn the INPUT SELECTOR TO PHONO 1, or PHONO 2, whichever is connected to the record player you wish to hear.
- 2 Turn the STEREO MONO switch to MONO.
- 3 Adjust the VOLUME control to the desired volume.

LISTENING TO TAPE DECKS

- 1 Turn the INPUT SELECTOR to TAPE HD.
- 2 Turn the STEREO MONO switch to STEREO. If a mono tape, turn the balance control to the side you want to hear.
- 3 Adjust the VOLUME control to the desired volume.

LISTENING TO A STEREO TAPE RECORDER WITH ITS OWN PLAYBACK PREAMPLIFIER

A stereo tape recorder with its own playback preamplifier should be plugged in the AUX INPUT . . . NOT THE TAPE HD. INPUT.

LISTENING TO A STEREO TAPE RECORDER

The AUX input is used:

- 1 Turn the INPUT SELECTOR TO AUX.
- 2 Switch the STEREO MONO switch to STEREO or MONO depending on the program on the tape.
- 3 Adjust the VOLUME control to the desired volume.

USING A TAPE RECORDER WITH THREE HEADS AND SEPARATE PLAYBACK PREAMPLIFIER

To listen to tapes connect your tape recorder to the TAPE MON inputs on the rear of the MAC 1500.

- 1 Switch TAPE MON to "IN."
- 2 Switch the STEREO MONO switch to STEREO MONO depending on the program on the tape.
- 3 Adjust the VOLUME control to the desired volume.

MONITORING WHILE RECORDING

To monitor while recording your tape recorder must have separate record and playback heads as well as separate playback preamplifiers. The TAPE MONO switch lets you monitor the quality of tape recording made from the MAC 1500 during the process of recording. When the TAPE MONO switch is in the IN position it will play the sound from the tape as it passes the playback head, a moment after it is recorded. The recording process continues as usual. When the switch is in the OUT position normal program from the source is heard.

Your MAC 1500 stereo receiver will give you many years of pleasant and satisfactory performance. If you have any questions concerning the operation or maintenance of this receiver please contact:

GUARANTEE

McIntosh Audio Company guarantees this equipment to perform as advertised. We also guarantee the mechanical and electrical workmanship and components of this equipment to be free of defects for a period of 90 days from date of purchase. This guarantee does not extend to components damaged by improper use nor does it extend to damage incurred during transportation to and from McIntosh Audio Company.

TWO YEAR FACTORY SERVICE CONTRACT

An application for a Free Two Year Factory Service Contract is included in the packet with this manual. The Free Two Year Factory Service Contract will be issued by McIntosh Audio Company upon receipt of this completely filled out registration form. The terms of this contract are defined in the Two Year Factory Service Contract. If this application is not mailed to McIntosh Audio Company, only the service offered under the standard 90 day guarantee will apply to this equipment.

**TAKE ADVANTAGE OF 2 YEARS OF FREE FACTORY
SERVICE BY FILLING IN THE APPLICATION NOW**

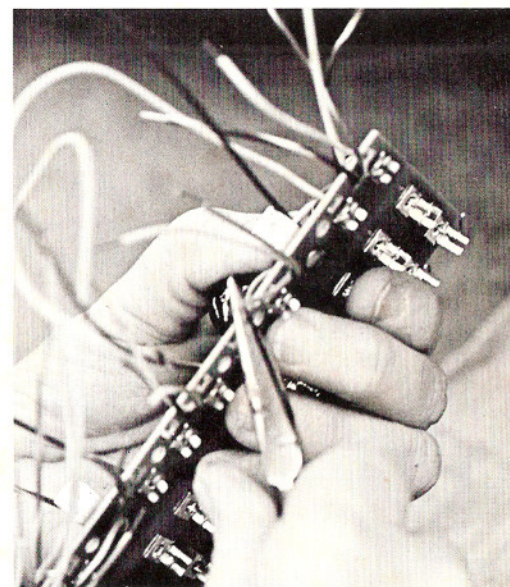
CUSTOMER SERVICE

McIntosh Audio Company
2 Chambers Street
Binghamton, New York 13903
Our telephone number is 723-5491
The area code is 607



MAC 1500

Precision craftsmanship and painstaking attention to finest accuracies make the MAC 1500 meet high standards.



MCINTOSH AUDIO COMPANY

2 Chambers St., Binghamton, N. Y. 13903

038-093

Made in U.S.A.

Phone—Area Code 607-723-5491

Design subject to change without notice.

*Wain
MIA
237147*