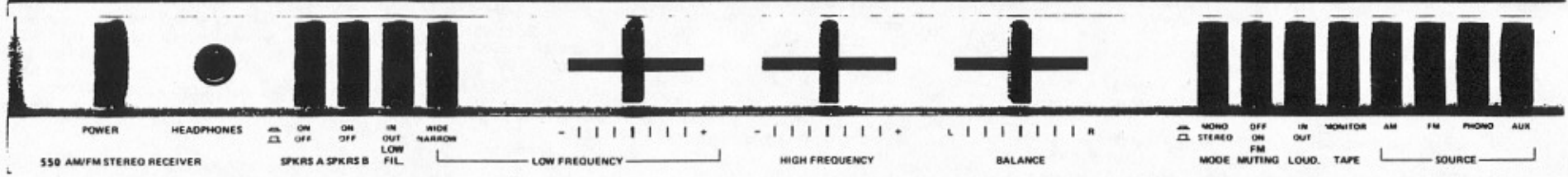
BOSE MODEL 550
AM/FM STEREO RECEIVER

Owner's Manual



FRONT PANEL FEATURES

1 POWER
Switches the receiver on.

2 SPKRS A
Connects or disconnects the main speakers.

3 SPKRS B
Connects or disconnects the remote speakers.

4 LOW FILTER
Reduces the lowest octave of bass energy reducing rumble.

5 SOURCE AND ROOM COMPENSATION CONTROLS

WIDE — Activates the Low Frequency Control in the 20-400Hz range.
NARROW — Activates the Low Frequency Control in the 100-250Hz range.

6 LOW FREQUENCY
Permits adjustment of program material for both channels under 400 Hz. Normal setting is determined by a procedure outlined in the Owner's Manual.

7 HIGH FREQUENCY
Permits the adjustment of the program material for both channels above 2.2 kHz.

8 BALANCE
Adjusts the relative volume of both channels. Normal position is centered.

9 MODE
Adjusts the operating (MONO or STEREO) characteristics of the Power Amplifiers providing separate channels or combined operation of both channels.

10 FM MUTING
Activates the "FM quieting" circuitry eliminating FM interstation noise.

11 LOUDNESS
Activates a volume compensation circuit adding low and high frequencies to the program material as a function of the volume control setting.

12 TAPE
Connects a Tape recorder to the Receiver for playback or monitoring of a recording.

13 SOURCE
Selects one of the AM, FM, PHONO, OR AUX. input signals for listening or tape recording

14 VOLUME
Adjusts the sound level of both channels and the headphone jack simultaneously.

15 TUNING
Selects the AM or FM Station.

16 TUNING DIAL
Indicates the frequency of the AM or FM Station being received. Includes a logging scale as a tuning aid.

17 STEREO LAMP
Indicates the reception of an FM STEREO signal. Also indicates operation of receiver in stereo as selected by the MODE switch.

18 901 EQUALIZER
Indicates the connection of the internal 901 Series IV Equalizer.

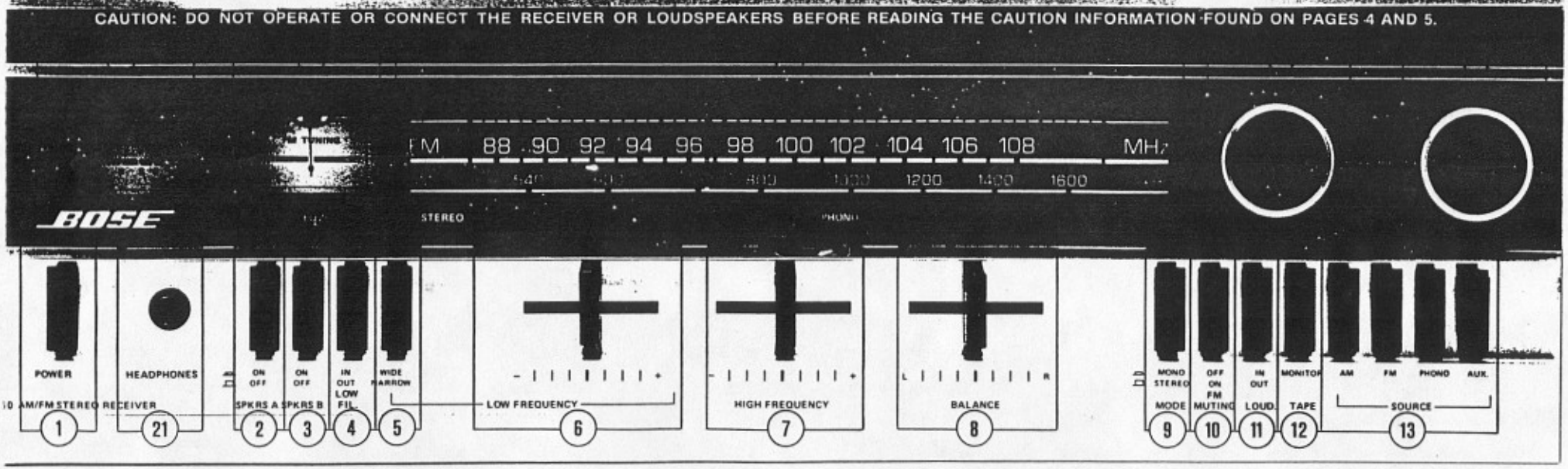
19 FM TUNING METER
Indicates the tuning position (at "0" center) that provides best reception.

20 SIGNAL STRENGTH METER
Indicates the relative strengths of FM and AM stations as received in your area. FM and AM Stations should be tuned to indicate the highest signal strength.

21 HEADPHONE
Connects any low or high impedance headphone to the receiver.

22 FUNCTION INDICATORS
Displays input selected by source pushbuttons.

CAUTION: DO NOT OPERATE OR CONNECT THE RECEIVER OR LOUDSPEAKERS BEFORE READING THE CAUTION INFORMATION FOUND ON PAGES 4 AND 5.



CAUTION INFORMATION

CAUTION: Read this section before connecting or operating the unit or connecting the loudspeakers

1. Please retain all safety and operating information provided with the Model 550 Receiver for future reference.
2. For your safety, follow all cautions and warnings in the operating instructions and on the unit. This includes all cautions and warnings regarding the loudspeakers as well.
3. As the Model 550 Receiver is a complex electronic instrument, do not assume the unit is faulty until you have completed Section IV.D.
4. Do not connect to the outlets on the rear of the receiver any accessory that requires more power than the outlets are rated to provide.
5. Do not use your receiver near water; for example, near a bath tub, washbowl, kitchen sink, in a wet basement, or near a swimming pool.
6. Place the unit so its location and position does not interfere with proper ventilation. Do not place it on a bed, sofa, rug, or similar surface that might block ventilation holes. If you are enclosing the receiver in a bookshelf or cabinet, follow the instructions in Section II.A. of the instruction manual to ensure proper air flow through ventilation openings.
7. Do not place any objects (for example, papers, magazines, record jackets) on top of the cabinet that impede air flow as this may cause failure of the unit.
8. Locate the unit away from direct sunlight or any excessive heat sources such as radiators, heat registers, stoves or other appliances.
9. Connect the receiver to an AC Line (power mains) of the same type marked on the rear of the unit, such as 120 VAC, 60 HZ, and VA (Watts or volt-amperes).
10. Route the power line cord where it will not be walked on, or pinched, or cut by heavy or sharp objects. Pay particular attention to cords, plugs, convenience receptacles, or at places where the cord exits from or plugs into the unit.
11. The power line cord of the unit should be unplugged from the outlet (power mains) when left unused for long periods of time, such as a long vacation.
12. Do not drop objects or spill liquids into the cabinet openings.
13. The unit should be serviced by qualified personnel when:

    The power line cord or plug has been damaged.

    Objects or liquids have fallen or been spilled into the unit.

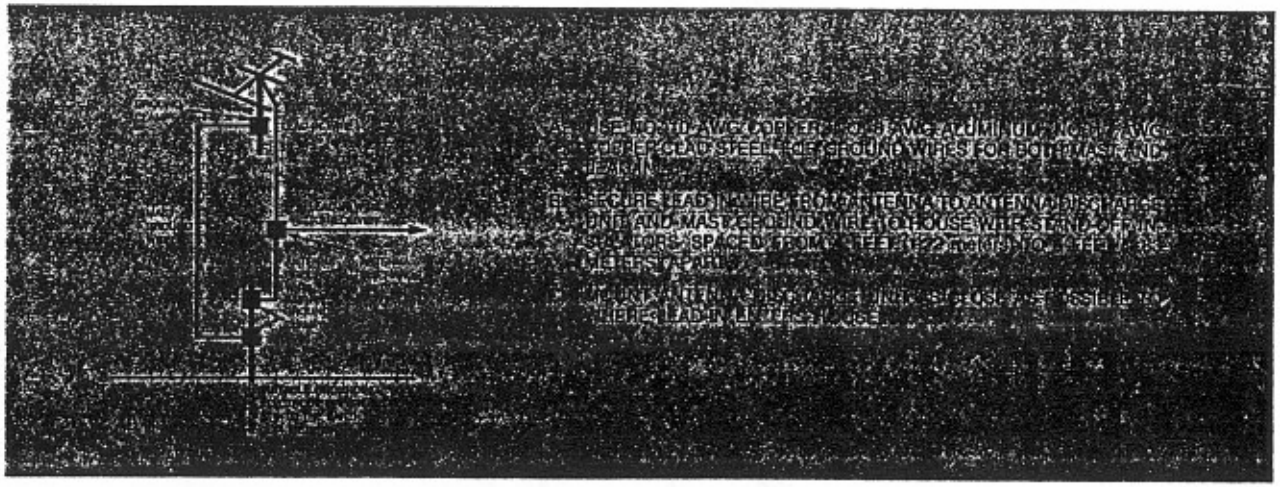
    The unit has been exposed to rain or excessive moisture.

    The unit does not appear to operate normally or exhibits a marked change in performance.

    The unit has been dropped or the enclosure is damaged.
14. Clean the unit as recommended in Section IV.B., of the instruction manual.
15. If you install an outdoor antenna or aerial locate it away from power lines or high tension lines. Ground the antenna system to protect against voltage surges and built-up static charges. (This is especially important in protecting your house and receiver during electrical storms.)

    An example of antenna grounding, as per National Electrical Code Instructions, is shown below. Follow the grounding instructions provided with the external antenna. If the instructions provided with your antenna are inadequate, Section 810 of the National Code, ANSI/NFPA Number 70-1978, provides detailed information regarding the proper antenna grounding procedure. This document can usually be purchased from your local wholesale electric supply outlet or by mail from:

    National Fire Protection Association
    Publications Department
    470 Atlantic Avenue
    Boston, Mass. 02210.



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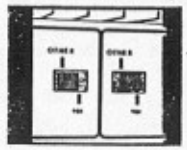
I. FOREWARD

Congratulations on your choice of the BOSE® Model 550 AM/FM Stereo Receiver. Its unique design and innovative engineering provide a high level of performance and versatility.

Two important features found only in BOSE equipment have been incorporated into the Model 550 Receiver:

The Source and Room Compensation Controls replace the standard tone controls normally found on most receivers and offer much greater flexibility. These Controls help eliminate the tonal imbalances caused by room surfaces, absorptive characteristics of room furnishings, and variations in program material.

The built-in equalizer makes it easy and economical to use BOSE® 901 Series III or IV speakers with your music system*. Once the rear panel switches are set, the equalizer is switched in and out of the signal path automatically. The Model 550 Receiver can also accomodate conventional loudspeakers since the 901 equalizer can be easily switched out of the circuit.



Take time to get acquainted with your new Model 550 Receiver. Read the Owner's Manual and review the sections concerning speaker connection and auxilliary equipment. The more you understand the features of your new receiver, the more you'll enjoy it.

*Bose 901 Series III loudspeakers are fully compatible with the Bose 901 Series IV Equalizer built into the receiver.

II. INSTALLATION

A. Unpacking, Installation, and Initial Connection

After opening the carton, grasp the receiver by the sides and lift it out of the carton. Place the receiver on a table and remove the plastic wrap.
Note: Unpack your receiver carefully. Inspect it for signs of possible damage. If you find the receiver is damaged, contact your dealer immediately.

Unwrap the FM DIPOLE antenna (the T-shaped wire antenna) in the receiver carton. Connect it to the terminals labeled "300" on the Receiver's rear panel. (See Figure 1). Stretch the dipole antenna to its full length and "T" shape, and position horizontally.*

Uncoil the AC line cord and connect to any convenient AC outlet.

When positioning the receiver, please observe the following precautions.

1. Although the BOSE Model 550 Receiver generates little heat, it does need a certain amount of ventilation. If you place your receiver in a cabinet, make certain that it has adequate ventilation. (See Figure 2.)
2. Do not connect equipment requiring more than 200 watts to either the switched or unswitched AC outlets.

When you have finished installing the receiver, save the carton and packing material for possible later use.

*Directions to connect an outside FM antenna are found in Section III.B., Improving FM Reception.

B. CONNECTING THE LOUDSPEAKERS

1. Wiring the Loudspeakers

It is important that the wire used to connect your speaker system is large enough. If the wire has too much resistance, audible coloration of the sound and loss of power can result.

The table below summarizes suggested wire lengths for 18-, 16-, and 14- gauge, stranded copper wire for use with 8 ohm or 4 ohm loudspeakers.

Measure and cut the wire to length. Strip ½ inch (1.3 cm) of insulation from each conductor, and twist the wire strands together. Speaker wiring must be placed in your room where furniture or sharp, heavy objects cannot pinch or cut the insulation or conductors.

Amplifier connections for both speaker systems must be identical (See Figure 3) allowing both speakers to work in phase.

a. Locate the connection terminals on the left (Part I) speaker.

b. Locate the Receiver connection terminals; to make a connection to the receiver, insert the wire in the hole in the center of the terminal while depressing the terminal.

c. Using the speaker wire (which is marked with a ribbed line(s) or different color allowing easy identification of each wire), connect the left speaker terminal marked "–" (COM or GND.) to the terminal marked "–" on the left channel of the Speakers A amplifier output.*

d. Connect the "+" (or POS.) speaker terminal to the (+) connection on the left channel of the Speakers A amplifier output.*

e. Repeat the connection procedure for the right (Part II) speaker as well.*

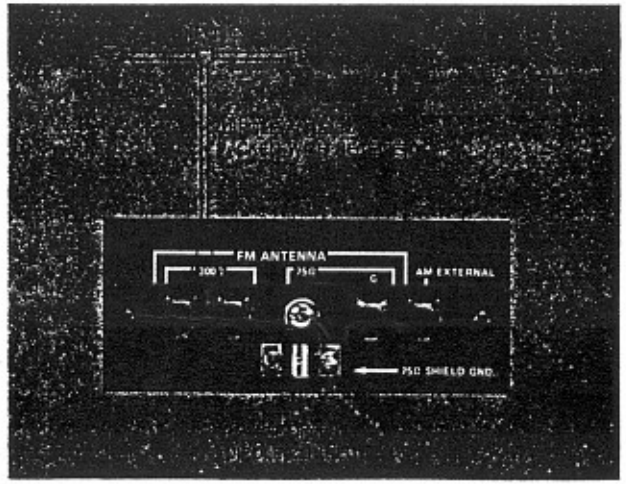
Wire connections for Speakers B the same as Speakers A.*
Follow your speaker manufacturer's recommendations regarding fusing your speakers. (The 901-IV speaker need not be fused when used with the Model 550 Receiver).

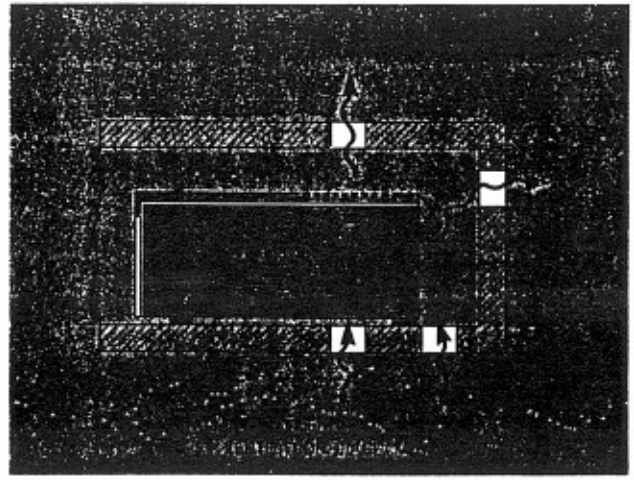
*When making both the amplifier and speaker connections, make certain that no loose wire strands from either conductor touch each other, causing possible distortion or blown fuses.

TABLE 1
RECOMMENDED CONNECTION WIRE**

Maximum Wire Length Wire Gauge	Maximum Wire Length for 8-Ohm Speakers	Maximum Wire Length For 4-Ohm Speakers
18-gauge zipcord (or two-conductor wire)	12m (40 ft.)	6m (20 ft.)
16-gauge two-conductor wire	18m (60 ft.)	9m (30 ft.)
14-gauge two-conductor wire	30m (100 ft.)	15m (50 ft.)

**The wire lengths shown in Table 1 introduce no perceptable audible coloration. Actually, most listeners will not notice any effect even if wire lengths are increased by as much as 50%.





CAUTION:

If using two pairs of Speakers with the Model 550 Receiver, BOTH speaker systems must be 8 ohms or higher. Speakers with an impedance of 4 ohms can be used but cannot be played simultaneously with other speakers connected to your receiver. Amplifier distortion or blown fuses may result.

2. Setting the Rear Panel 901 Equalizer Switches

Two switches located on the rear panel affect the performance of your loudspeakers. These switches, called "901-Other," activate the 901 Series IV Equalizer for Speakers A or B. If you are using 901 Series III or IV speakers, set the appropriate switch to the "901" Position. **If you are using any other type of speaker system, set the "901-Other" switch to the "Other" position.** If you are using two pairs of speakers, be certain to set both "901-Other" switches to their appropriate settings, (See Figure 4).

See Section II.E. "Connecting Other Equipment," if you are using speakers that require a separate active equalizer (such as the original 901 or 901 Series II loudspeakers).

CAUTION:

THE BUILT-IN 901 EQUALIZER IS ACTIVATED WHENEVER THE BOSE 901 SERIES III OR IV SPEAKERS ARE PLAYING, AS INDICATED BY THE "901 EQZR" LIGHT. THE EQUALIZED SIGNAL CAN DAMAGE HEADPHONES AND CONVENTIONAL SPEAKERS; THEREFORE DO NOT ATTEMPT TO USE EITHER WHILE PLAYING 901 SERIES III OR IV LOUDSPEAKERS.

C. CONNECTING A TURNTABLE OR CHANGER

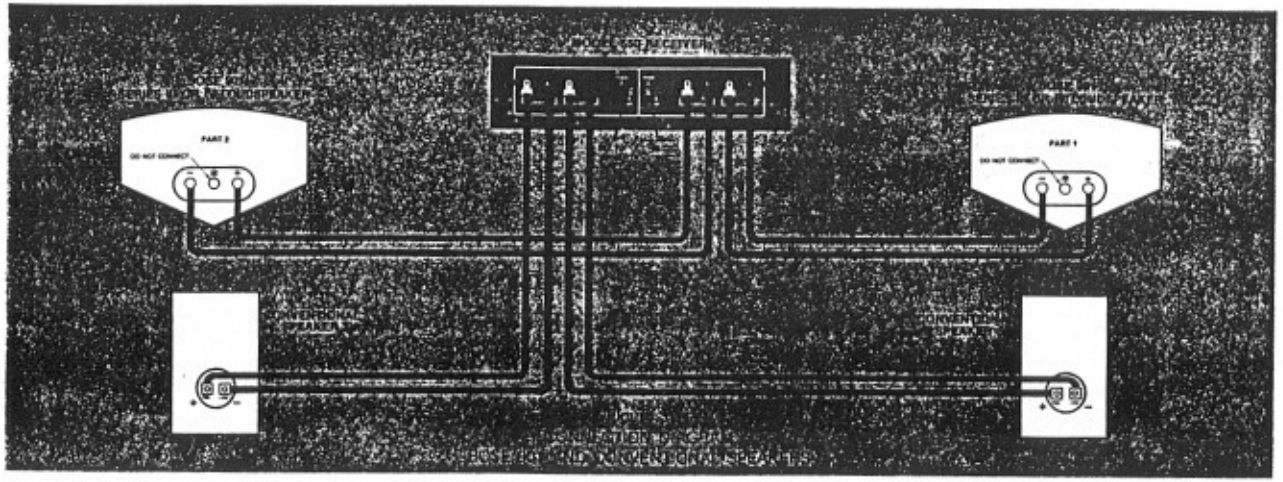
The BOSE Model 550 Receiver has connections for a turntable or record changer. The two phono connection jacks are found on the rear panel of the receiver and are marked Left and Right; additionally, a separate ground terminal is provided for certain types of record playing equipment. (See Figure 6).

Most turntables have color-coded cables or plugs that identify the left and right channels. Connect these cables to the Phono jacks on the Receiver.

If your turntable has a separate ground wire, connect it to the ground (GND.) connection found to the left of the phono connections. (See Figure 6.)

If you are using a belt drive, direct drive, or electronic drive turntable, connect the power cord to the SWITCHED AC outlet found on the rear of the receiver. This permits the on/off switch found on the receiver to control the turntable.

Older record changers or turntables using "idler wheel" drive systems should be connected to the UNSWITCHED AC outlet allowing the unit to cycle off at the end of the record.



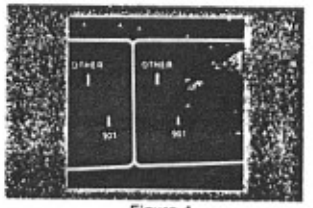


Figure 4

Figure 5

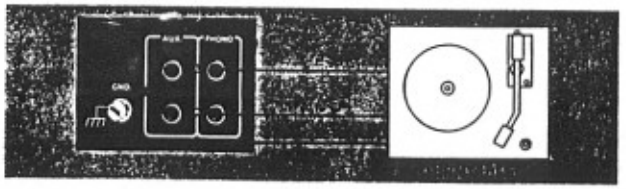


Figure 6
TURNTABLE CONNECTIONS

D. CONNECTING A TAPE RECORDER

The BOSE Receiver tape connection facilities allow a tape recorder to be connected for both recording and playback.

Connect a pair of cables from the "line out" jacks on the tape recorder to the "TAPE IN" jacks on the Receiver. (If you're uncertain, consult your tape recorder's instruction manual to identify the input and output jacks).

Connect a pair of cables from the "TAPE OUT" jacks on the Receiver to the "line input" jacks on the tape recorder.

To connect a second tape recorder, use a 'Y' Connector to connect the TAPE OUTPUT Signals to both tape recorders. Connect the output of the second recorder to the AUX input jacks. For further information, see Section III. A. 9., "Tape" (See Figure 7.)

Connect all cables maintaining the correct left and right connections.

E. CONNECTING OTHER EQUIPMENT

1. HEADPHONES

Any high-quality headphone may be used with the front panel jack found on the BOSE Receiver. A special internal headphone circuit provides a volume-controlled output for the headphones.

Electrostatic headphones should be connected to the Speakers B terminal. Set the "901-Other" switch to the "Other" position.

CAUTION

Do not use headphones or leave them connected while playing BOSE 901 loudspeakers ("901 EQZR" lighted) as possible damage to your headphones may occur.

2. SIGNAL PROCESSING EQUIPMENT, ROOM AND SPEAKER EQUALIZERS

If you are using signal processing devices such as a room equalizer, dynamic range expander, or noise reduction device, connect it to the TAPE jacks. (See Figure 8.)

If you own a speaker system requiring its own equalizer (such as the original 901 or the 901 Series II loudspeaker), connect it to the TAPE jacks.

The equalizer built into the Model 550 Receiver is designed to operate with the BOSE 901 Series III & IV Speaker Systems ONLY. Do not attempt to use this Equalizer with any other speaker system as possible damage can occur.

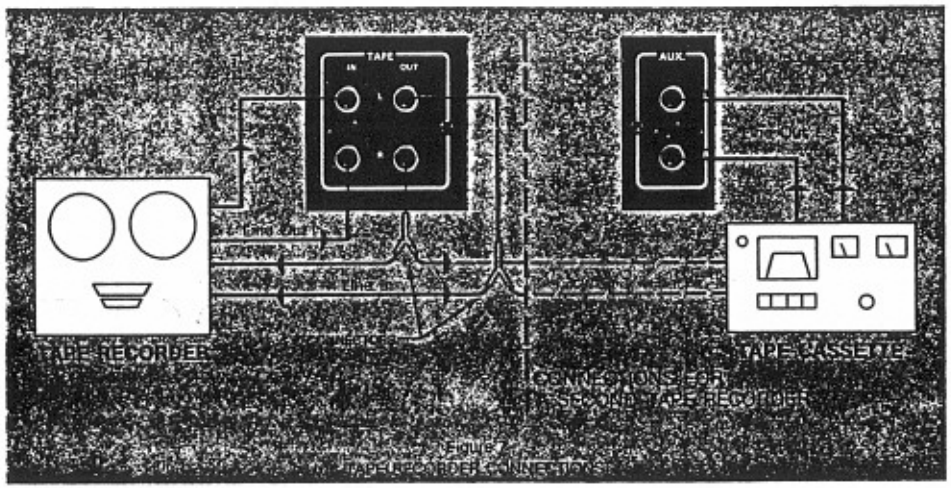
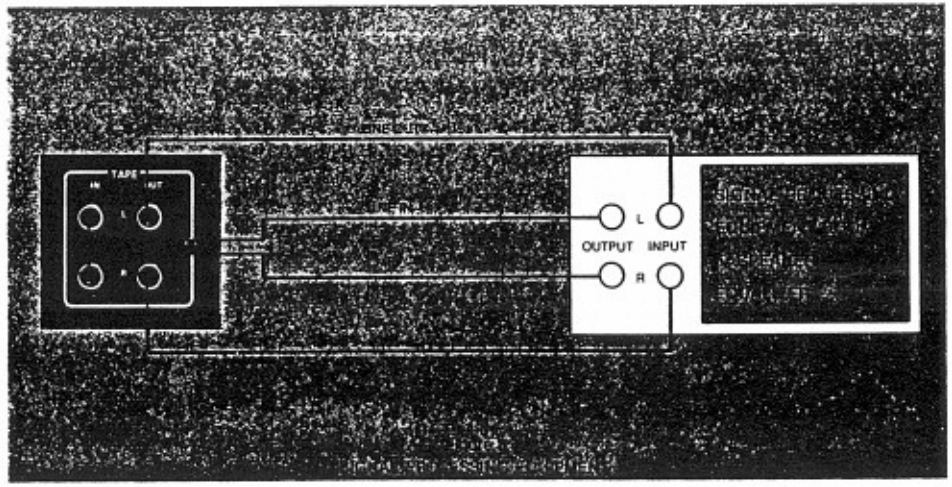
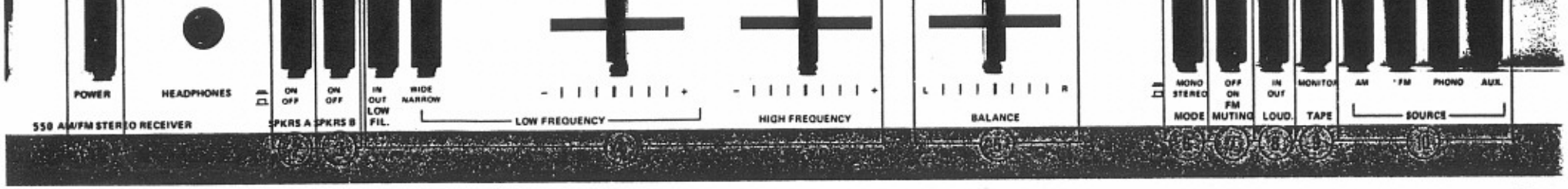


Figure 7
TAPE RECORDER CONNECTIONS





III. OPERATION

A. Controls

To fully utilize the features and flexibility provided, please take a few minutes to become familiar with the push buttons and slide controls. While reading this section, experiment with the controls to determine their function. (See Pages 2 and 3).

1. POWER

Pushing the switch turns the receiver on and off. The power outlet marked "Switched AC" found on the rear of the receiver is controlled by the on/off switch, while the power outlet marked "Unswitched AC" is not affected by the switch.

2. SPKRS A

The Speakers A switch activates the speakers wired to the terminals marked Speakers A on the rear panel. This switch can be used to shut off the main speakers when desired.

3. SPKRS B

The Speakers B switch turns on or off a second set of speakers wired to the rear panel terminals marked Speakers B.

4. SOURCE AND ROOM COMPENSATION CONTROLS

As part of its ongoing research in sound reproduction, BOSE Corporation has carried out extensive programs examining the acoustic properties of a wide range of listening rooms. The development of the new controls (called Source and Room Compensation Controls) found on this Receiver is the practical application of this research.

a. Low Frequency Control

The Low Frequency Control provides up to 16 db of change in the bass energy range. This unique frequency contouring circuit is designed to provide the bass compensation appropriate to the acoustics of your listening room.

In the center position, this control does not affect the sound quality. Sliding the control to the right increases low frequency energy while pushing the control to the left lessens these frequencies.

Boosting this range of the audio spectrum restores a solid foundation to the musical sound. Reducing the control corrects an overly heavy or boomy recording or FM broadcast containing too much bass energy.

The action of the LOW FREQUENCY CONTROL is modified by the WIDE/NARROW pushbutton.

(1.) Wide Setting

This control setting provides a "shelf type" response that increases or decreases the low frequency range from 20 to 250 Hz. This control is particularly useful when program material requires a gradual increase or decrease in overall bass content.

(2.) Narrow Setting

This control setting affects a narrow band of frequencies near 150 Hz. This control is particularly useful when the listening room has a narrow band resonance peak or null created by the walls or ceiling.

b. High Frequency Control

This control regulates the strength of the high frequencies above 2.2 kHz. In the centered position, this control does not affect the level of high frequencies. Sliding the control to the right boosts the amount of high frequencies. Boosting the High Frequency Control helps correct high frequency imbalances caused by room absorption or equalization in the recording process. Sliding the High Frequency Control to the left reduces the amount of high frequencies. The most frequent use of high frequency "cut" is to reduce annoying harshness, hiss, or noise due to worn records or poor radio reception.

c. Low Filter

The LOW FIL. push button decreases the extreme low bass material. Normally left in the "out" position, this control can be used to reduce rumble and acoustic feedback. You may notice the effect of this control is quite subtle. It uses a specifically designed circuit to reduce subaudible frequencies with a minimum loss of audible bass energy.

5. BALANCE

The BALANCE control regulates the relative volume of the left and right channels. With the control set in the center, both channels are equally loud. If required, adjust the BALANCE control so that the sound appears in the center between the two speakers.

6. MODE (Mono/Stereo)

The MODE switch connects both amplifier channels for MONO operation so that the left and right channels are identical. Normal position for this switch is in the Stereo or "out" position.

The Receiver's FM tuner automatically switches from Stereo to Mono as required. However, the mono mode can be used as a means of reducing unwanted noise or distortion in FM stereo.

The MONO switch can also be used to connect or "mix" both channels together. This is convenient when playing a single channel source (such as a television or portable tape recorder) so that both loudspeakers operate even though only one input signal is used.

The MONO control can also be used to reduce surface noise and distortion when playing mono records or noisy stereo records.

7. MUTING

With the switch released, the static and sound between FM stations is suppressed so that only stations are heard. With the switch depressed, sound appears between each station on the FM band.

When the FM muting is operating, FM stations too weak to override the muting circuitry may not be heard. By depressing the MUTING push button, distant stations can be received.

8. LOUDNESS

This control, although not affecting the overall volume of the sound, activates a "tone compensation" circuit. The circuit automatically boosts lows and high frequencies as the volume control is set to progressively lower settings and restores a more natural tonal balance to music. This compensation is gradually and automatically removed as the volume control is moved toward the 12 o'clock position.

9. TAPE

The Tape push button connects the output of a tape recorder to the Receiver. If your tape recorder has three heads and separate playback electronics, an instantaneous comparison of the tape recording with the program material can be made.

Tape Playback

After completing the connections, operate the "play" mode of the tape machine and press the TAPE monitor button on the receiver. With the tape monitor button depressed, the output of the tape machine is connected to the receiver's amplifying circuitry regardless of the input selected by the four Source selector push buttons. The VOLUME, SOURCE and ROOM COMPENSATION CONTROLS, and MODE switch can now be used to adjust the sound quality.

Tape Recording

The TAPE OUT jacks provide the program material chosen by the SOURCE push buttons (e.g., AM, FM, PHONO, or AUXilliary).

The controls on your tape machine may now be used to make a recording from any program source selected. The program source selected, the mono switch (when used to deactivate the FM stereo circuitry), and the tuning knob are the only receiver controls that affect the signal reaching the TAPE OUT jacks. The other controls on the receiver can be used to adjust the sound coming from the loudspeakers but have no effect on the signal reaching the tape recorder. (Check your Tape Recorder Owner's Manual for further instructions about recording.)

Tape Monitoring (To listen to a tape while it is being recorded)

If you have connected a tape recorder having the tape "monitoring" feature, pressing the TAPE MONITOR push button allows listening to tape playback (regardless of the input selected by the SOURCE push buttons). Pushing the TAPE switch again connects the source selected for recording. If the TAPE MONITOR switch is depressed with no tape recorder connected or with the tape recorder connected but not operating, all sound will stop regardless of the volume control setting or the input selected.

Tape Copying

To copy or "dub" a tape, from one tape recorder to another, connect one tape recorder as directed above. Connect the second tape recorder outputs to the AUX inputs. (A "Y" connector can be used to provide tape output signals to both machines.) Tape Copying is only possible from the recorder connected to the TAPE circuitry.

Warning: Do not connect the tape outputs of the BOSE Receiver together. This will electrically connect both channels of the electronics of the receiver so that stereo performance will not be possible.

10. SOURCE SELECTORS

The program selector push buttons select which of the internal circuits (AM or FM) or external sources (PHONO or AUX) are connected to the amplifying circuitry. Lights on the front panel indicate the Source selected.

1. **Phono**

   The PHONO push button switch selects the turntable or record changer connected to the BOSE Receiver.

2. **FM**

   Pushing the FM switch activates the FM portion of the receiver. (See Section III.B., Receiving FM Radio).

3. **AM**

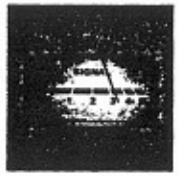
   Pushing the AM switch activates the AM portion of the receiver. (See Section III.C., Receiving AM Radio).

4. **AUXilliary**

   The BOSE Model 550 Receiver is equipped with the stereo auxiliary input (called "AUX") for connecting additional program sources to your high-fidelity system. Almost any stereo or mono high-level source may be plugged into the AUX jacks: Typical examples include an additional tape recorder, a tape player, sound track of a film projector, or the audio output of a television set. After connecting the appropriate cables to the AUX jacks, adjust the volume control of the program source (if possible) so that the sound level is approximately the same as FM or PHONO. If you wish to connect a mono source (for example, a television set), push the MODE switch to connect both speakers.

B. RECEIVING FM

1. Tuning



Select the FM push button on the front panel and rotate the tuning knob to select an FM radio station. For best reception, adjust the tuning knob so the Signal Strength Meter reads as far to the right as possible.

For minimum distortion of FM stereo programs, tune the receiver so that the FM tuning meter reads at the "0" or center point. This will generally provide optimum reception for all FM stations.

When the receiver is accurately tuned to an FM Stereo station, the "STEREO" indicator lettering on the front panel will glow and the program will be heard in Stereo. When the receiver is tuned to a Mono (non-stereo) FM station, the stereo indicator lettering on the front panel will not be lit and the stereo decoding circuits of the tuner will not operate.

In some cases, you may find that an FM Stereo broadcast is noisy or distorted. Reorient the FM antenna or connect the receiver to a better antenna. If a station is some distance from you and you do not have a better antenna, push the MONO switch.

If you are attempting to receive an extremely weak station, depress the MUTING switch to disable the muting circuitry. (Distant stations, because of their extremely low signal level, may be excluded from reception by the muting circuitry. Operate the receiver in MONO if the tuner circuitry attempts to switch intermittently to FM stereo.

Your BOSE Receiver incorporates a log scale facilitating easy location of FM stations. (This is particularly useful when living in a large metropolitan area where many stations may be crowded together on the dial.)

2. IMPROVING FM RECEPTION

Excellent FM reception requires a well thought out antenna installation. Because of the technological similarities between FM and Television, you can probably use the quality of your TV picture as a guide. If you find that in your location you must connect a TV set to a cable system or roof antenna in order to get clear, ghost-free reception, then it's likely that an external FM antenna will insure consistently satisfying reception of FM stereo broadcasts as well.

If you have difficulty, try the following procedures to improve your FM reception. They are listed in order or increasing cost and complexity:

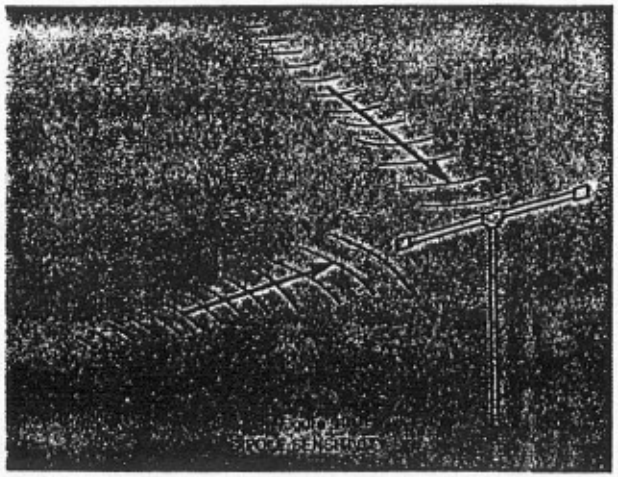
1. Try altering the height and orientation of the folded dipole antenna, remembering that the strongest reception usually occurs when the crossbar of the "T" is perpendicular to the direction of the FM signal (See Figure 9).
2. Replace the folded dipole antenna with a "rabbit ears" TV antenna. For FM reception, the simplest and least expensive "rabbit ears" antenna with the fewest switches, knobs, and coils, is usually the best. Extend each arm horizontally (or at angle not greater than 45 degrees from the horizontal) to a length of approximately 30 inches. Mount the antenna away from the wall so that it is free to rotate, and orient the antenna for optimum reception.
3. If your TV set is connected to an outside antenna, try connecting the FM receiver to the same antenna, using a signal-splitting device designed for this purpose. (Before connecting to an apartment master antenna or community cable system, determine if FM reception is included with the cable signal.) (See Figure 10).
4. Erect your own FM antenna outside, placing it as high as is practical. (Refer to the Grounding information found in the Caution section of this manual when installing the antenna.)

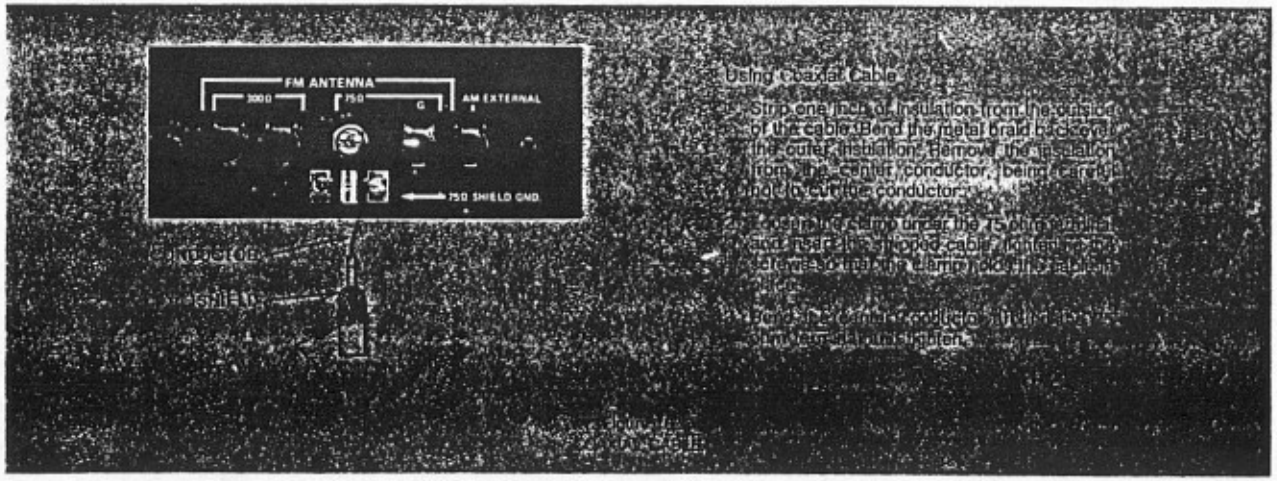
   Excellent FM outdoor antennas are made by several manufacturers. Such antennas have several advantages:

   a. Since FM signals are weakened close to the ground, a roof top antenna pulls in stronger signals. Furthermore, since FM transmission is largely along "line of sight", a roof top antenna can receive stations located further away.

   b. Much interference and distortion in stereo FM reception is caused by the FM signal reflecting from metal objects, (i.e., airplanes, trucks, and steel frame buildings). A roof top antenna may be located above most of these reflected signals; furthermore, since it is designed to be highly directional and to be used with a rotor, it can be aimed to reject most reflected signals while receiving more of the signal direct from the station.

For best results, connections for external antennas should be made via shielded cable. Shielded 300-ohm cable is available and connects to the 300-ohm terminals at the rear of the receiver. (Disconnect the dipole antenna from those terminals before connecting any external antenna). In some cases, it will be more convenient to use shielded 75-ohm "coaxial" cable, the type of antenna cable commonly used for master antenna and community cable systems.





C. RECEIVING AM

1. Tuning AM

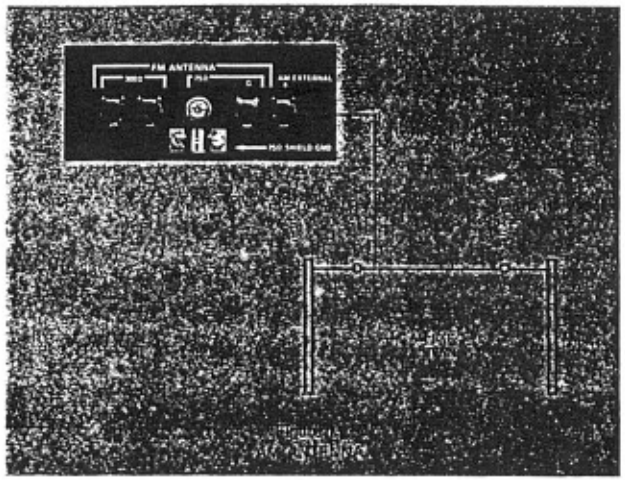
To receive AM radio broadcasts, depress the AM push button on the front panel of the Receiver. Adjust the tuning knob (with the volume set at low level) to an AM station. Adjust for maximum deflection (towards the right) of the signal meter. (AM stations with stronger signals will cause the needle to deflect further to the right than stations having weak signals.) The BOSE receiver contains an internal loopstick antenna designed to combine high sensitivity with good interference rejection. In urban and suburban areas, no external AM antenna should be necessary.

2. Improving AM Reception

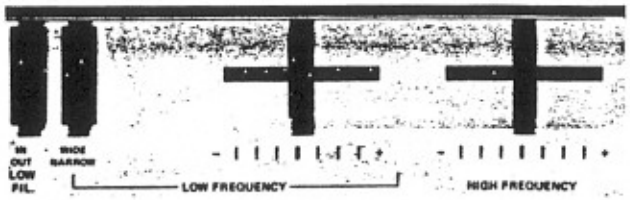
If AM reception is poor, this is usually due to interference or insufficient signal strength.

You can improve reception by eliminating nearby sources of interferences. Switch off fluorescent lights, dimmer controls for lights and household appliances, such as blenders or power tools which contain small electric motors.

If you are located in a rural area with no major sources of electrical interference, try repositioning the receiver. If that is not successful, an external AM antenna can be added to improve reception of distant AM stations. A suitable antenna can be made using a piece of insulated single conductor wire anywhere from 15 to 150 feet in length. Connect one end of the wire to the AM terminal on the rear panel of the receiver. The remaining length of wire should be mounted parallel to the ground, as high as is practical, and extended in a straight line as long as is practical. For best results, the antenna should not be mounted close to any metal objects and should be neither close to nor parallel to power lines which might introduce static into the signal. (See Figure 11.) If using a metal mast, refer to the Grounding information found in the Caution section of this manual when installing the antenna.



D. ADJUSTING THE SOURCE AND ROOM COMPENSATION CONTROLS



1. Select a familiar well-recorded record with a full orchestral passage, or a record with a large number of diverse musical instruments that span the entire frequency range. Select a recorded passage that has sustained music over several seconds allowing you to observe the effects of the controls.
2. Set the HIGH FREQUENCY control to the center and set the WIDE/NARROW pushbutton to the NARROW or "out" position.
3. Move the LOW FREQUENCY Control back and forth several times over the extremes of the control's range and listen to its effect. You will notice a dramatic change in the basic fullness or body of the sound without changing the deep bass or midrange. Starting with the control at the extreme left, slowly move the knob until the balance of the sound is rich and full.

   NOTE THE POSITION OF THE LOW FREQUENCY SLIDE CONTROL.
4. Next, set the LOW FREQUENCY pushbutton to the WIDE position. Move the LOW FREQUENCY control back and forth several times over the extremes of the control's range and listen to the effects. You will notice a dramatic change in the entire deep bass range but not the midrange. Adjust the control for the richest, fullest sound.

   AGAIN NOTE THE POSITION OF THE LOW FREQUENCY SLIDER CONTROL.
5. Next, AUDIBLY compare the WIDE setting of the LOW FREQUENCY control with the NARROW setting. (In most rooms, the difference in the two settings will be subtle as the affected frequencies are below 60 Hz. where little sound energy exists.) Select the control setting which provides the most pleasing balance of sound, without excessive heaviness.
6. Next, move the HIGH FREQUENCY control over the extremes of its operating range several times, listening to its overall effect. Starting with the control at the extreme left, slowly move the control until the sound contains instrumental detail, clarity, and presence without harshness.

SINCE NO ROOM IS TYPICAL, DIFFERENT CONTROL SETTINGS WILL BE APPROPRIATE IN DIFFERENT LISTENING ENVIRONMENTS. YOUR CAREFUL ADJUSTMENT OF THESE CONTROLS CAN RESULT IN A SIGNIFICANT IMPROVEMENT IN THE PERFORMANCE OF YOUR HIGH FIDELITY SYSTEM.

E. RECORD CARE

For maximum musical pleasure, keep your records in optimum condition.

When handling records, avoid placing your fingers on the grooved area. (With a little practice you can become accustomed to picking up records while touching only the edge and the label.)

Don't leave records lying around unprotected. Store records in their jackets with protective paper or plastic-lined inner sleeves.

Do not stack records in a pile. This may cause warpage and the pressure may embed loose dirt permanently into the record groove walls. Records should be stored vertically, standing on edge, and should never be placed near a hot object such as a radiator.

To keep a record sounding like new, it should be cleaned every time it is played, using a brush designed to remove microscopic dust particles from the grooves. Never "blow" on your records, or use silicone-treated record cloths or sprays.

IV. TECHNICAL INFORMATION

A. Specifications

AMPLIFIER

Power Output:	40 watts per channel minimum RMS continuous power, with both channels driven into 8 Ohms, THD < .3% from 20 Hz to 20 kHz.
IHF Power Bandwidth:	20 Hz to 20 kHz, both channels driven, THD < .19%.
Intermodulation Distortion:	.09% IHF (60 Hz/7 kHz mixed 4:1 at rated output)
Total Harmonic Distortion:	.09% from .5 watts to 40 watts
Frequency Response:	20 Hz - 20 kHz ± 0.5 dB Phono RIAA ± 0.5 dB
Input Sensitivity/Impedance:	Phono: 2.75 mV/47K Ohm Aux & Tape: 150 mV/50 K Ohm
Signal to Noise Ratio:	Amplifier: 87 dB A weighted, below rated output, inputs shorted. 91 dB A weighted, below rated output, min. volume. Phono: 76 dB A weighted, below rated output, inputs shorted.
Channel Separation:	Aux & Tape: 60 dB @ 1 kHz (at tape output) Phono: 55 dB @ 1 kHz (at tape output)
Phono Overload:	100 mV
Loudness Contour:	8 dB @ 100 Hz ± 2 dB 6 dB @ 12 kHz ± 2 dB

Source and Room Compensation Controls:

Low Filter:	– 3 dB at 100 Hz. – 7 dB max. at 20 Hz.
Low Frequency Control, Narrow Position:	± 8 dB at 140 Hz. (center frequency) ± 1 dB at 20 Hz and 1 kHz.
Low Frequency Control, Wide Postion:	± 3 dB at 350 Hz. ± 8 dB at 50 Hz.
High Frequency Control:	± 8 dB at 15 kHz. ± 3 dB at 2.2 kHz.

FM TUNER

IHF Useable Sensitivity:	2.0 µV/11.25 dBf (Mono), 3.5 µV/16.11 dBf (Stereo)
50 dB Quieting Sensitivity:	3.8 µV/16.82 dBf (Mono), 40µV/37.27 dBf (Stereo)
Frequency Response:	30 Hz - 15 kHz +1, – 3 dB
Signal to Noise Ratio (65 dBf):	65 dB (Mono), 60 dB (Stereo)
THD at 65 dBf	.25% (Mono), .50% (Stereo)
Capture Ratio	1.9 dB
Alternate Channel Selectivity:	60 dB
Spurious Response Rejection:	80 dB
Image Rejection:	65 dB
AM Rejection:	50 dB
Stereo Separation, 1 kHz	40 dB

AM TUNER

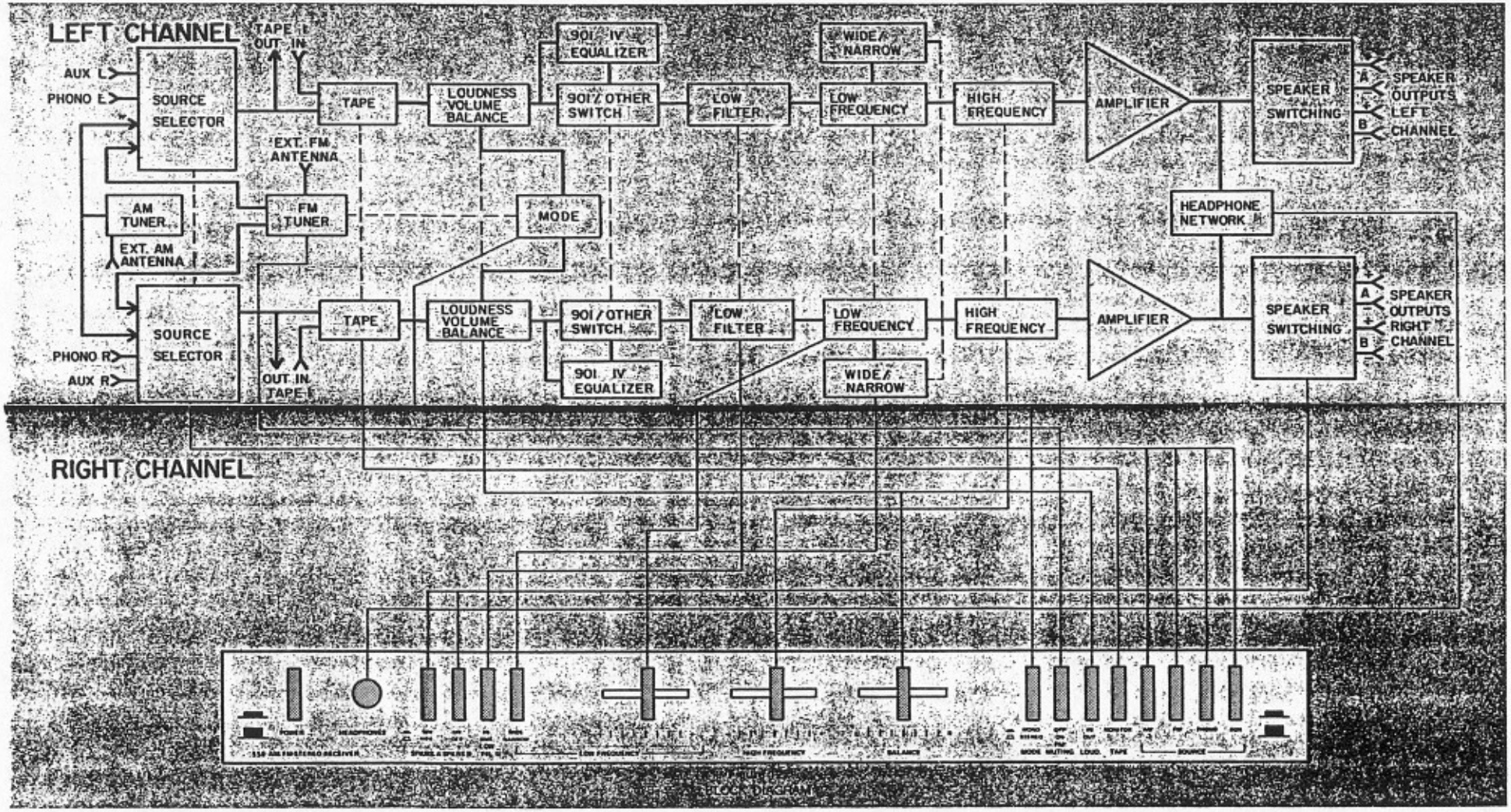
20 dB Useable Sensitivity	350 µV/M w/ferrite loopstick
Adjacent Channel Selectivity	35 dB
Distortion	.9% (400 Hz @ 30% modulation)
Image rejection	37 dB
IF rejection	45 dB
Signal to Noise Ratio	40 dB

GENERAL

Power Requirements	120 volts AC, 60 Hz (domestic model) 240 volts AC, 50 Hz (export model)
Power Consumption	360 watts at rated power
AC Outlets	1 Switched, 1 Unswitched 400 Watts Max.
Dimensions	46.4 (W) x 14.6 (H) x 31.1 (D) cm. 18¼ x 5¾ x 12¼ in.
Weight	7 kg (15½ lbs.)

B. Care and Maintenance

The receiver's front panel may be easily cleaned using a high-quality glass cleaner. The cabinet is made with a walnut veneer finish. Use a high quality furniture polish. Occasionally, to maintain the lustrous appearance, rub the cabinet with linseed oil and polish with a dry cloth.


LEFT CHANNEL
TAPE OUT IN
AUX L
PHONO L
SOURCE SELECTOR
EXT. FM ANTENNA
AM TUNER
FM TUNER
EXT. AM ANTENNA
MODE
TAPE
LOUDNESS VOLUME BALANCE
901 IV EQUALIZER
901 / OTHER SWITCH
LOW FILTER
WIDE / NARROW
LOW FREQUENCY
HIGH FREQUENCY
AMPLIFIER
SPEAKER SWITCHING
A
B
SPEAKER OUTPUTS LEFT CHANNEL
HEADPHONE NETWORK
PHONO R
AUX R
SOURCE SELECTOR
OUT IN TAPE
TAPE
LOUDNESS VOLUME BALANCE
901 / OTHER SWITCH
LOW FILTER
LOW FREQUENCY
HIGH FREQUENCY
AMPLIFIER
SPEAKER SWITCHING
A
B
SPEAKER OUTPUTS RIGHT CHANNEL
901 IV EQUALIZER
WIDE / NARROW
RIGHT CHANNEL
BLOCK DIAGRAM

D. IN CASE OF DIFFICULTY

If you suspect a problem in operation of one or more components in your high-fidelity system, please take a few minutes to determine whether the defect is an improperly set switch or connection difficulty. If you need assistance after performing these checks, please contact your BOSE dealer. He will arrange to service or check the unit for proper operation. The complete procedure for obtaining service is outlined in the warranty found in Section V of this manual.

Phono Hums:

Check cartridge connections.

Check turntable and receiver connection cables.

Connect turntable ground wire to receiver.

Reposition turntable connection cables away from all AC line (mains) sources.

Reverse AC plugs of receiver and/or turntable.

No Sound, No Lights:

Be certain that the receiver is plugged into a working AC outlet.

Be sure power is on.

Turn the unit on.

Check the AC fuse on rear panel. (See Section E.2.)

No Sound, But Lights Operate:

Turn the VOLUME up.

Select an operating program source.

Check the speaker fuses (See Section E.1.)

Depress SPEAKERS A or B.

Check speaker wiring connections at receiver and speaker.

Release TAPE MONITOR if depressed.

Sound On One Channel Only:

Set BALANCE control at midpoint.

Check speaker wiring and connections. Try interchanging the left and right cables. If the trouble remains in the same speaker, the wire or speaker may be defective.

Check the speaker fuses. (See Section E.1.)

Hum In All Modes Of Operation:

Check equipment connected to tape outputs.

Reverse AC line cord to power supply for battery operated tape recorders connected to the receiver.

E. REAR PANEL FUSES

WARNING:

TO AVOID THE HAZARD OF SEVERE ELECTRICAL SHOCK, ALWAYS DISCONNECT THE POWER LINE CORD FROM THE WALL WHEN REMOVING, REPLACING, OR CHECKING ANY FUSE.

1. **The Speaker Fuses (250V 4 Ampere Fast Blo Fuses)**

   The Right and Left Speaker Fuses found on the rear panel of the Receiver are designed to protect the amplifying circuitry from overloads and shorts in the cables connecting the speakers. The fuses are located under a snap-on plastic cover and are adjacent to the AC outlets.

   The Fuses are held in by spring clip holders and can be easily removed for examination. Repeated blowing of one or both of these fuses indicates one of the following possibilities:

   Operation of the Receiver at high volumes with total speaker impedances less than 4 ohms.

   A short in the speaker or cables connecting either Speakers A or Speakers B.

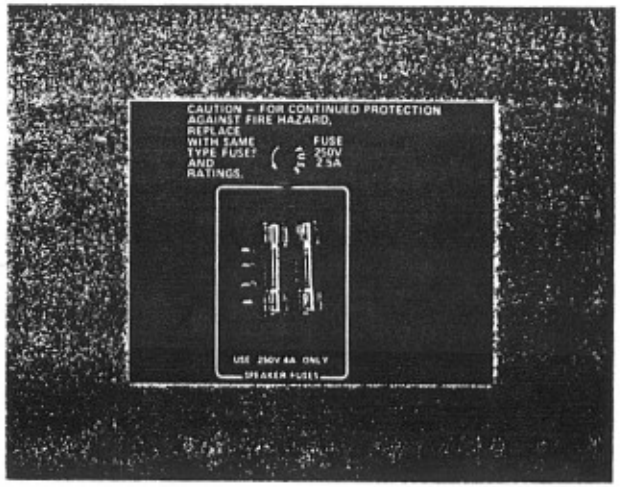
   A component failure in the Receiver requiring Authorized Service.

2. **The AC Line Fuse (250V 2.5 Ampere Fast Blo)**

   The AC Line Fuse is located on the Rear Panel of the Receiver above the speaker fuses. This fuse protects the Receiver's Power Supply circuitry from possible damage.

   To replace the fuse, unscrew the fuse holder (cap). Remove the fuse held in the cap. Gently push a replacement fuse into the cap and screw it back into the fuse holder body.

DO NOT REPLACE EITHER FUSE WITH A HIGHER AMPERAGE FUSE OR OTHERWISE BYPASS THE FUSE. FUSES PROTECT THE RECEIVER: DEFEATING THE FUSE RISKS SEVERE DAMAGE TO THE RECEIVER.



V. WARRANTY

FULL 2-YEAR WARRANTY

BOSE warrants this unit to be free from defects in materials and workmanship for a period of two years from the original date of purchase. During that period, BOSE will remedy all such defects, without charge for parts or labor, upon return of the unit together with the original sales receipt or other proof of purchase to BOSE or to an authorized BOSE service agency. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse, or to exterior appearance.

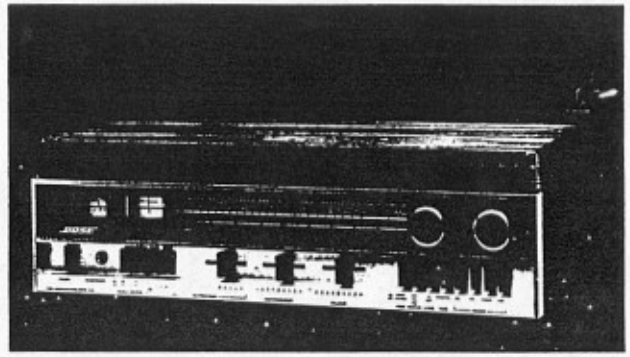
IN NO EVENT SHALL BOSE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

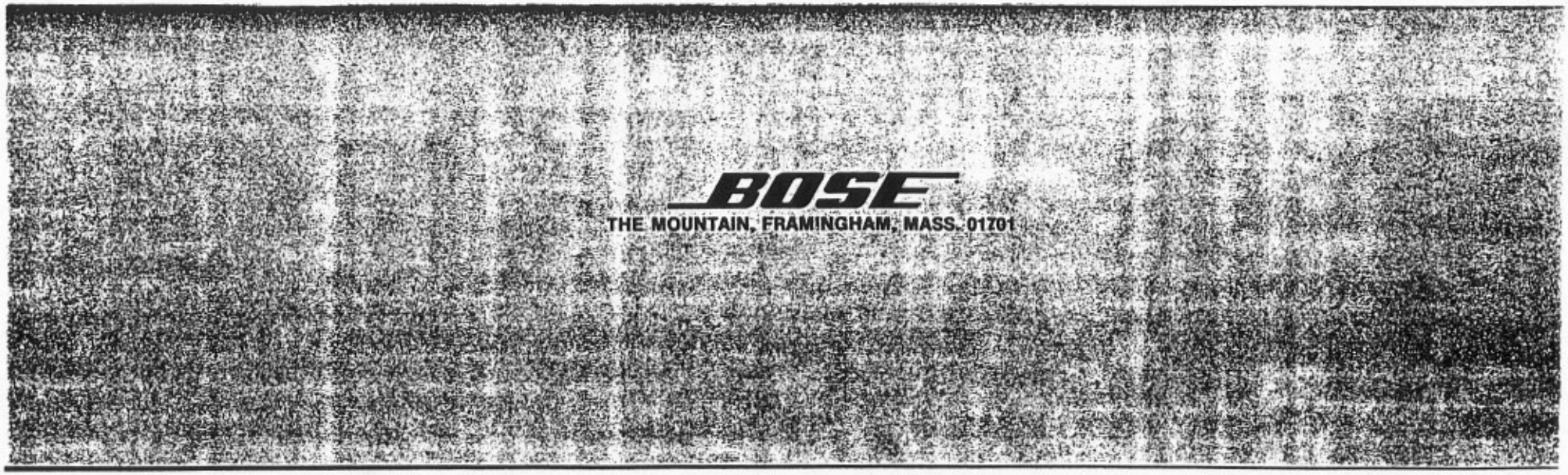
Should this unit fail within the warranty period, you should contact your nearest BOSE dealer for service instructions. The dealer may ask you to return the unit together with proof of purchase to him, or direct you to return the unit together with proof of purchase to the nearest authorized BOSE service agency. Alternatively, you may elect to send the unit directly to BOSE by carefully following this procedure:

1. Obtain a "Return Authorization" number from the BOSE Customer Service Department, 100 The Mountain Road, Framingham, Massachusetts 01701.
2. Return the unit together with proof of purchase to BOSE Corporation, 100 The Mountain Road, Framingham, Massachusetts 01701, *freight prepaid*, in its original shipping carton. If you need a new carton, your dealer or BOSE Corporation will provide a free replacement carton. Any damage in transit due to improper packing is not covered by the warranty and will not be recognized as an insurance claim by the transportation companies.

Your unit will be repaired and returned to you at BOSE's expense. If the defects cannot be repaired after a reasonable number of attempts by BOSE to do so, you may elect to receive a refund or replacement, but only if the unit is returned to BOSE free and clear of all liens and other encumbrances.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above limitation may not apply to you.





REAR PANEL FEATURES

(1) EXTERNAL FM ANTENNA INPUT

Provides a balanced 300 ohm input for connection of DIPOLE antenna or external 300 ohm antenna.

Provides an unbalanced 75 ohm input designed for coaxial cable FM antennas. This input incorporates a ground connection for the cable shield.

(2) EXTERNAL AM ANTENNA INPUT

Provides an AM signal input for indoor or outdoor single wire antenna connection.

(3) GROUND TERMINAL CONNECTION

Provides a chassis ground connection for record players having separate ground wires.

(4) AUX. INPUT

Connection jacks for equipment such as a second tape recorder or television set.

(5) PHONO

Connection jacks for record playing equipment using magnetic cartridges.

(6) TAPE INPUT AND OUTPUT

Connection jacks for tape recorders providing both high level input and output signals.

(7) SPEAKERS B OUTPUT

Connectors for speakers wired to the rear panel terminals marked Speakers B.

(8) 901-OTHER SWITCHES

Controls the connection of the 901 Series IV Internal Equalizer when playing Speakers A or B.

(9) SPEAKERS A OUTPUT

Connectors for speakers wired to the rear panel terminals marked Speakers A.

(10) SPEAKER FUSES

Fuses located under snap-on plastic cover protect the amplifiers from possible damage.

(11) SERIAL NUMBER

Provides the Serial Number used for Warranty Registration.

(12) AC OUTLETS

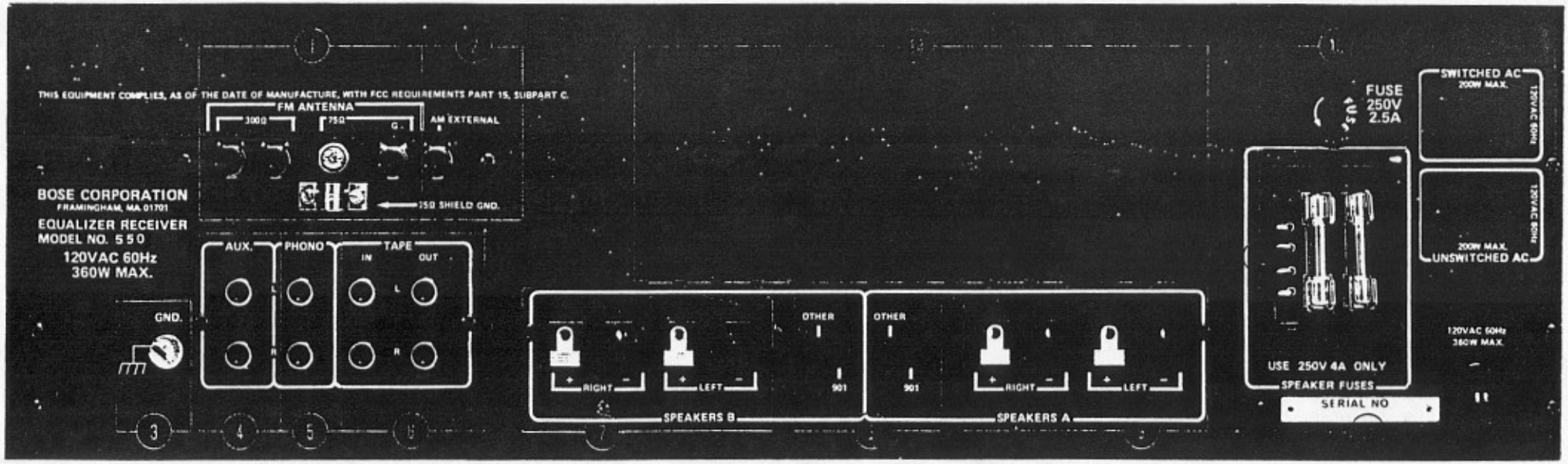
Used to connect equipment requiring AC power. Both Switched and Unswitched outlets are provided.

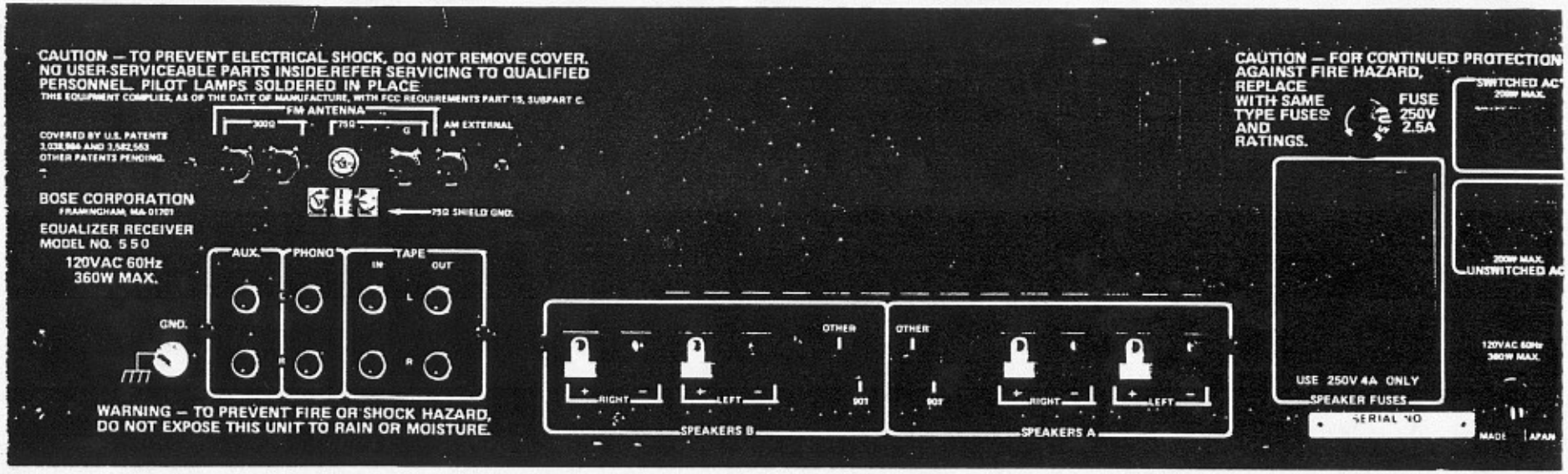
(13) AC LINE FUSE

Protects the receiver from severe internal damage.

(14) HEATSINK

Provides convectional cooling for the output transistors.




CAUTION — TO PREVENT ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL. PILOT LAMPS SOLDERED IN PLACE
THIS EQUIPMENT COMPLIES, AS OF THE DATE OF MANUFACTURE, WITH FCC REQUIREMENTS PART 15, SUBPART C.
COVERED BY U.S. PATENTS 3,038,984 AND 3,562,563 OTHER PATENTS PENDING.
FM ANTENNA
300Ω
75Ω
AM EXTERNAL
75Ω SHIELD GND.
BOSE CORPORATION
FRAMINGHAM, MA 01701
EQUALIZER RECEIVER
MODEL NO. 550
120VAC 60Hz
360W MAX.
AUX.
PHONO
TAPE
IN
OUT
GND.
WARNING — TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
OTHER
RIGHT
LEFT
90°
SPEAKERS B
SPEAKERS A
CAUTION — FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE WITH SAME TYPE FUSES AND RATINGS.
FUSE 250V 2.5A
USE 250V 4A ONLY
SPEAKER FUSES
SERIAL NO
MADE IN JAPAN
SWITCHED AC
200W MAX.
200W MAX. UNSWITCHED AC
120VAC 60Hz
360W MAX.