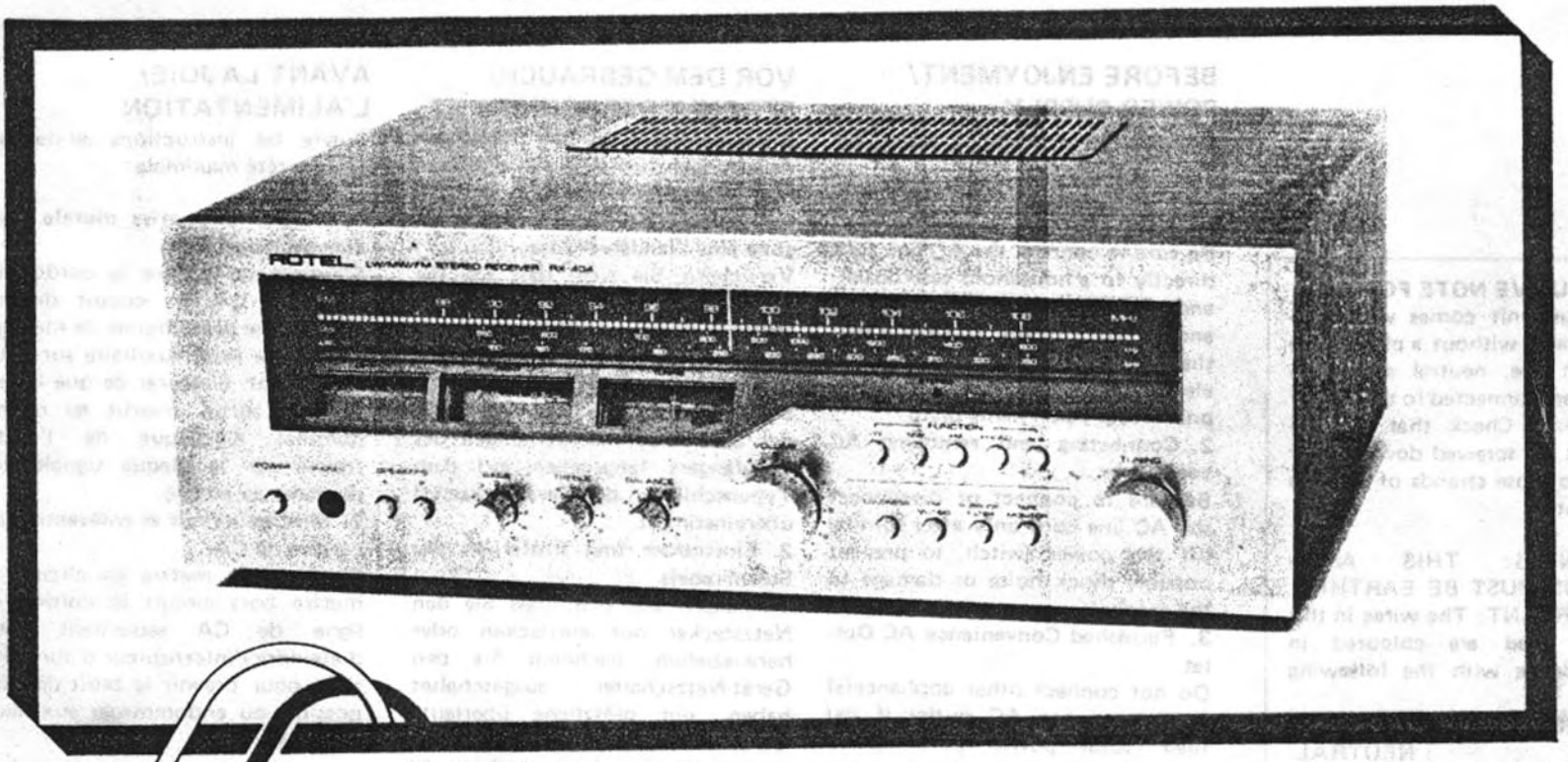
OWNER'S MANUAL

Quality. Uncompromised.

ROTEL®



LW/MW/FM STEREO RECEIVER RX-404

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Write your SERIAL NUMBER here.
The number is located near the name plate on the unit's rear panel.

SERIAL NUMBER

INTRODUCTION

We would like to take this opportunity to thank you for purchasing the Rotel RX series receiver. This component offers both high performance and a wide range of functions, and we at Rotel are confident that you will be greatly pleased with its superb sound qualities.
We urge you to read and follow carefully the instructions in this manual in order that you may fully realize and enjoy the potentials of this fine component.

EXCLUSIVE NOTE FOR U.K.
As your unit comes with a 3-core cable without a plug, make certain live, neutral and earth leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

GREEN/YELLOW: EARTH
BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured makings identifying the terminals in your plug proceed as follows.
The wire which is coloured GREEN/YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ , or coloured GREEN/YELLOW.
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLUE or BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured BROWN or RED.
The apparatus must be protected by a 3 Amp fuse if a 13 Amp (BS 1363) plug is used. If another type of plug is used a 5 Am fuse or lower must be used, either in the plug or adapter or at the distribution board.

BEFORE ENJOYMENT/ POWER SUPPLY

Follow the instructions below for maximum safety:

1. Use a wall outlet for power supply
Be sure to connect the AC line cord directly to a household wall outlet, and not to an auxiliary outlet on another component. Be certain that the outlet voltage matches the electrical rating of the unit, found on the rear panel name plate.

2. Connecting and removing AC cord
Be sure to connect or disconnect the AC line cord only after turning off the power switch, to prevent possible shock noise or damage to the speakers.

3. Furnished Convenience AC Outlet
Do not connect other appliance(s) to convenience AC outlet if its/their total power consumption exceeds maximum rated watts labeled next to the outlet.

4. Ventilate the unit well
Never block any ventilation holes at the top and bottom of the unit. Be sure also to provide ample ventilation space around the unit. Poor ventilation may result in damage due to excessive heat.

5. Do not open the cabinet
In order to avoid electric shock or damage to the component, never open the cabinet. If a foreign object falls inside the unit by mistake, turn the power off, disconnect the wall plug, and consult a qualified electrician or your dealer.

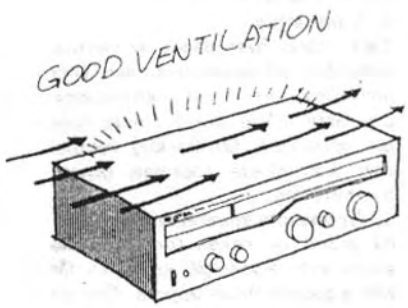
6. Turn the volume control initially to minimum
When lowering the tonearm of your turntable onto a record, an excess of current in the lower frequency range may cause damage to the speakers. To prevent this, always minimize the volume setting initially.

7. Moving the unit
When transporting, remove the AC cord from the wall outlet and all other connected cords on the rear panel to prevent wire breakage and short circuits.

8. If the unit gets wet
If the unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

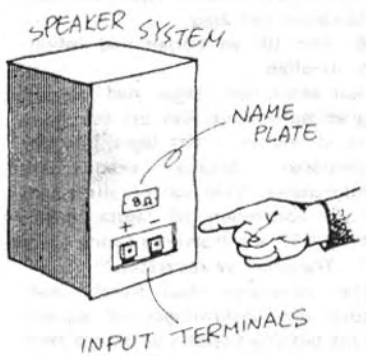
9. Cleaning and maintenance
Do not use chemicals such as benzine or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

10. Retain the owner's manual
Retain te owner's manual near the unit, and write down the serial number (found on the rear panel) on the cover.



INSTALLATION

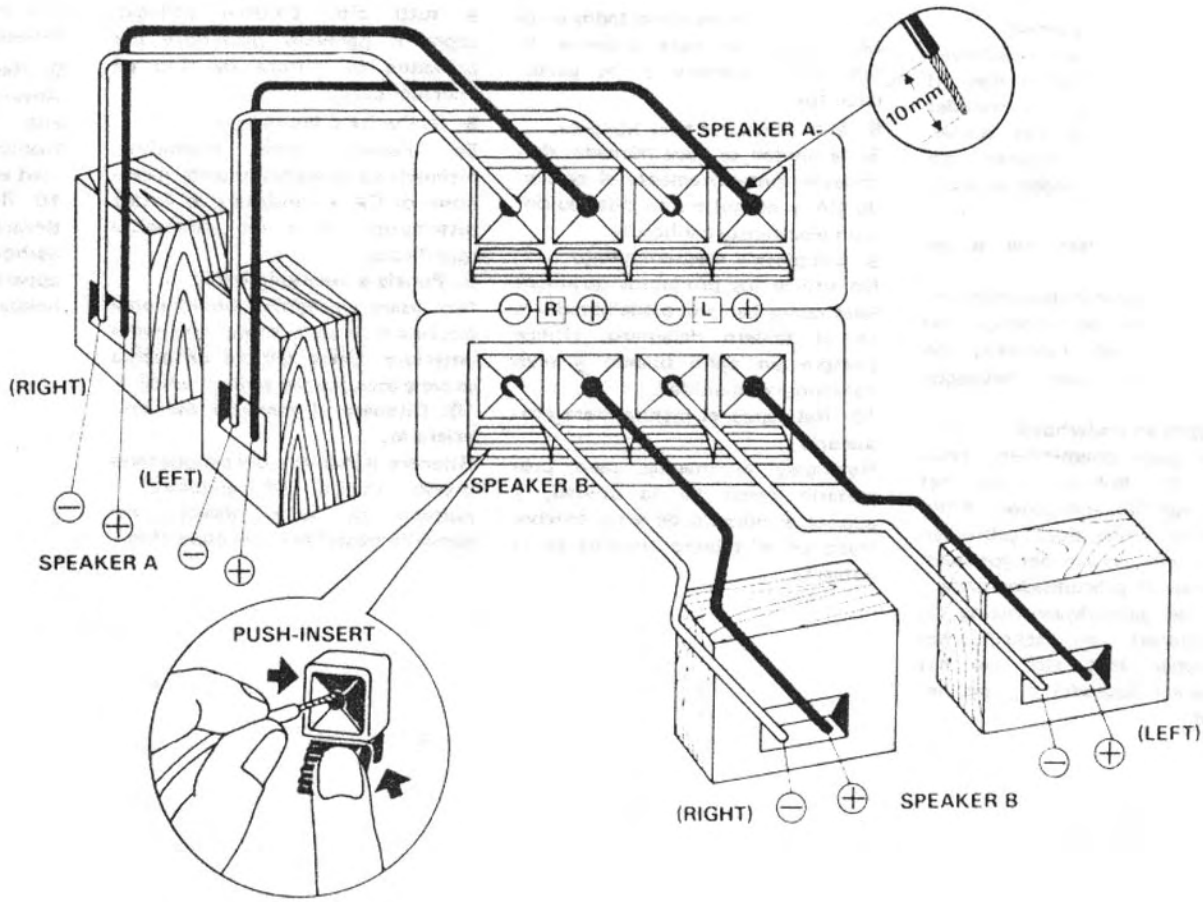
Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not exposed to direct sunlight.
Be careful not to place the unit in a highly enclosed place such as near a wall or on a bookshelf. A poor ventilation will cause undesirable effects to the unit.



SPEAKERS

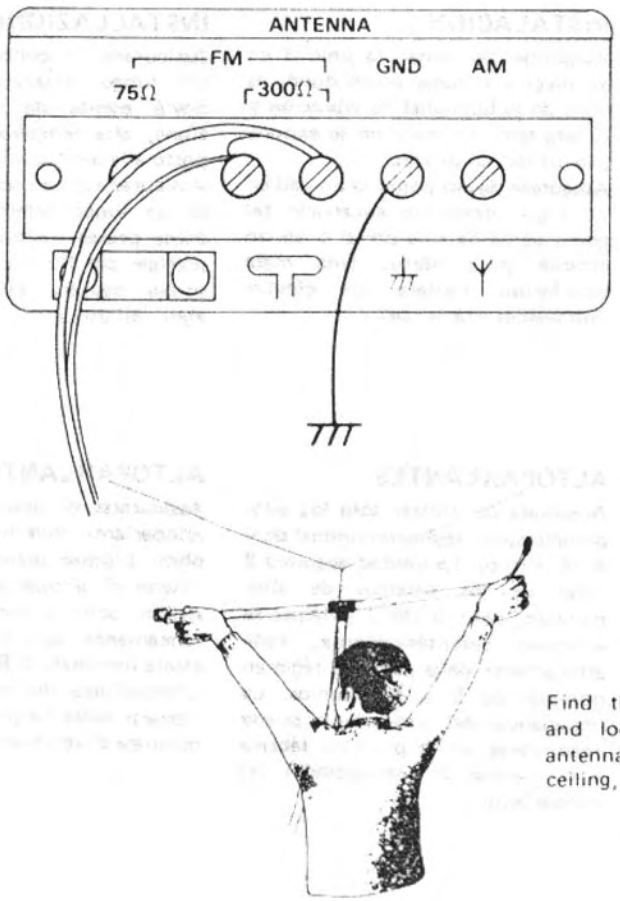
Be sure to use only speakers rated at 4 ~ 16 ohms. The unit will accept 2 pairs of speaker systems, but if the 2 systems are to be driven simultaneously, each speaker should be rated at 8 ~ 16 ohms. The speaker impedance may be found on the name plate or the instruction manual of the speaker.

SPEAKERS CONNECTION

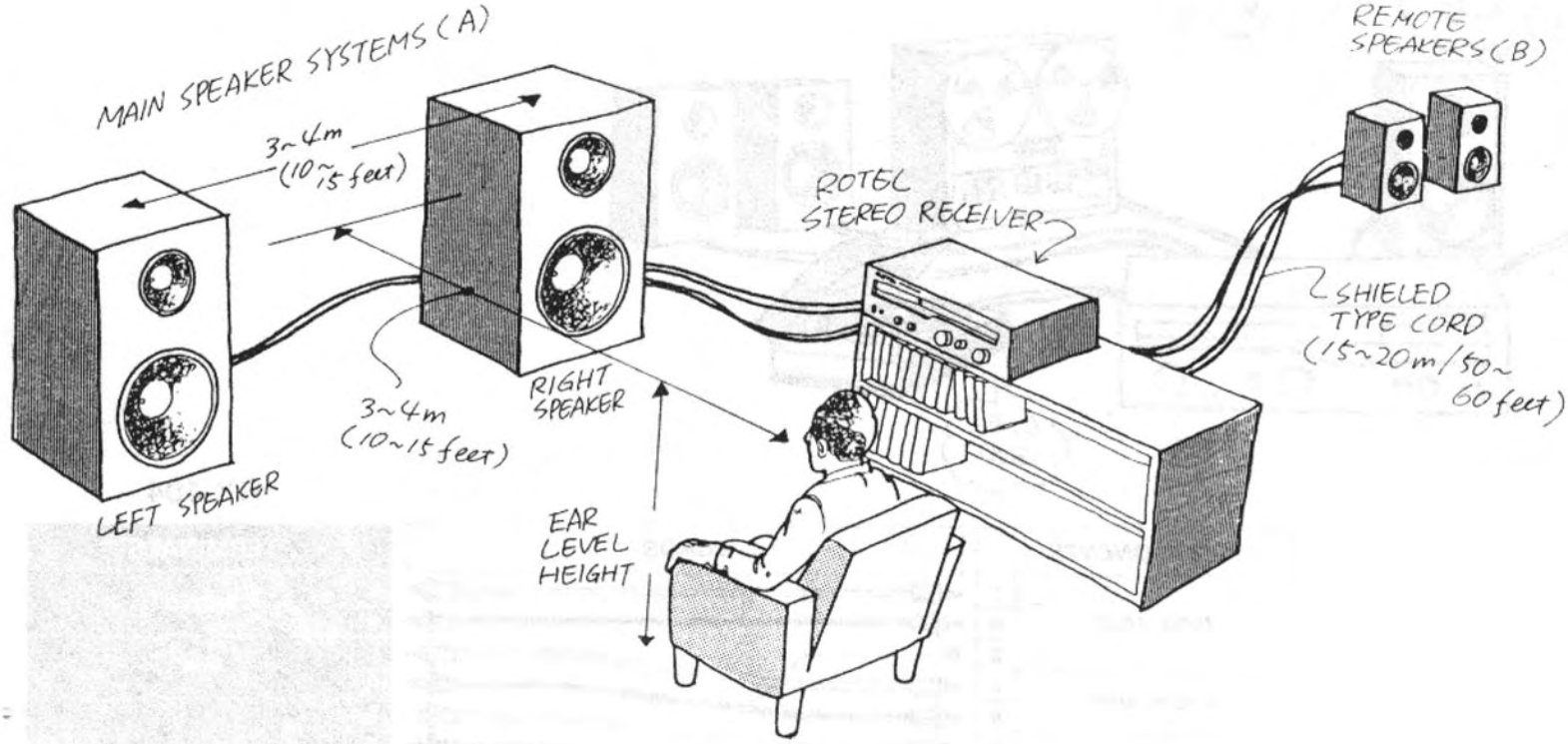


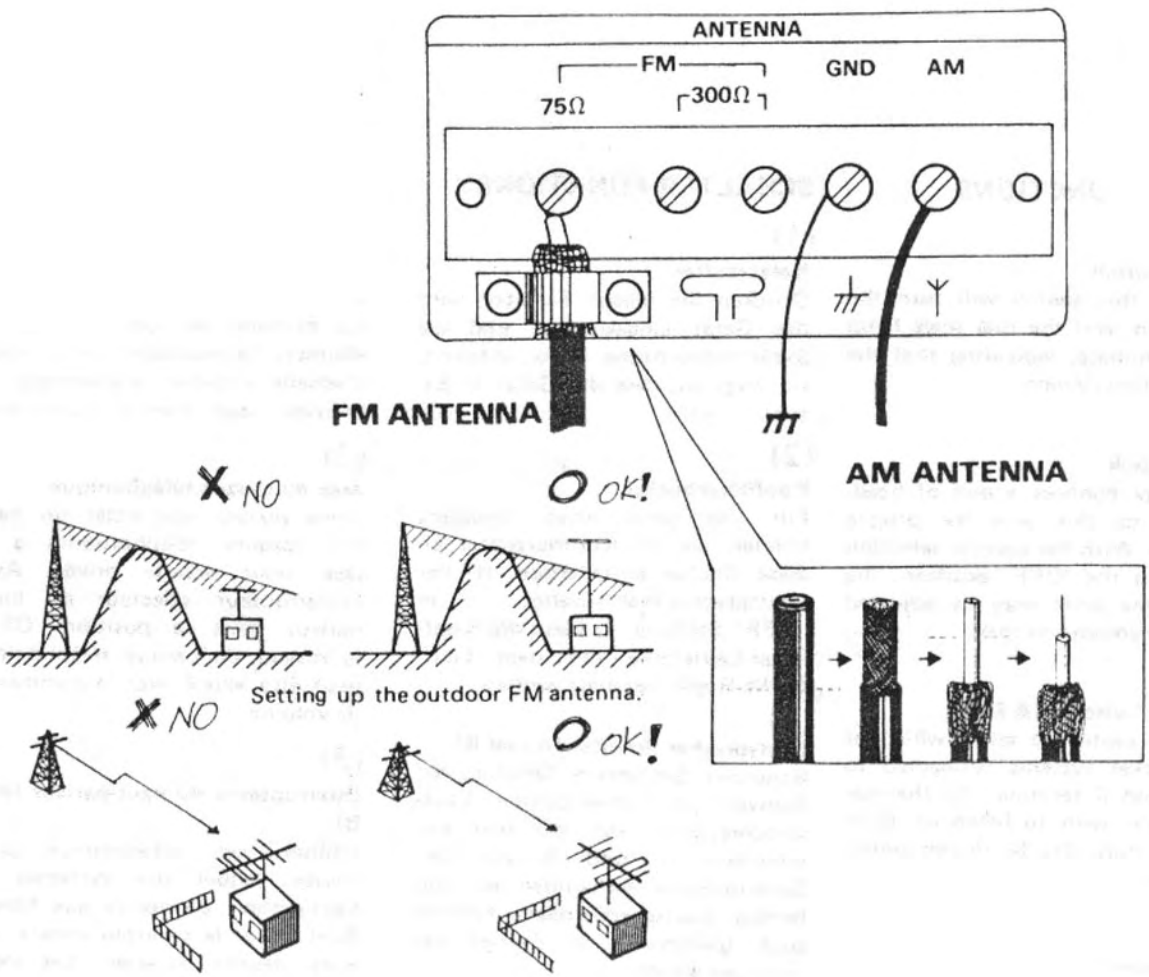
ANTENNA

■ When using the auxiliary T-shape FM antenna and the built-in AM antenna.



Find the most suitable direction and location for the FM indoor antenna, and attach it to the wall, ceiling, etc., with thumbtacks.

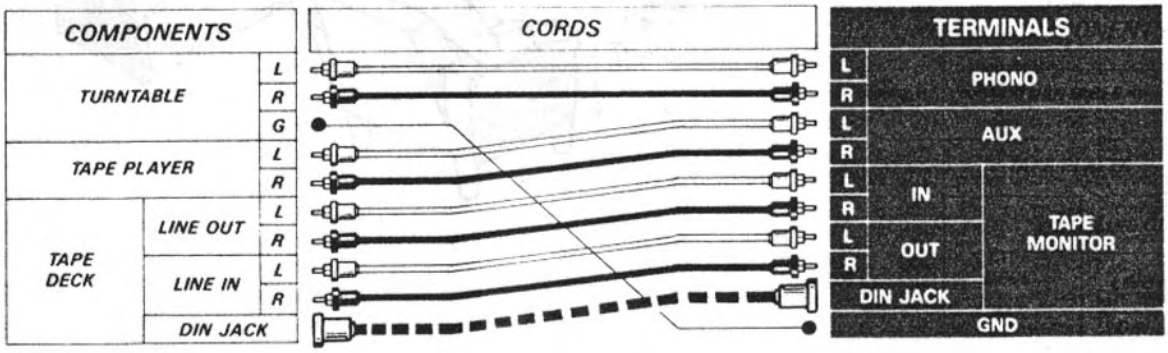




Setting up the outdoor FM antenna.

COMPONENTS CONNECTION

RX-404



SWITCH FUNCTIONS

(1)

Power Switch

Pressing this switch will turn the power on, and the dial scale lamp will illuminate, indicating that the unit is functioning.

(2)

Phones Jack

You may connect a pair of headphones to this jack for private listening. With the speaker selection switch in the 'OFF' position, the headphone level may be adjusted with the volume control.

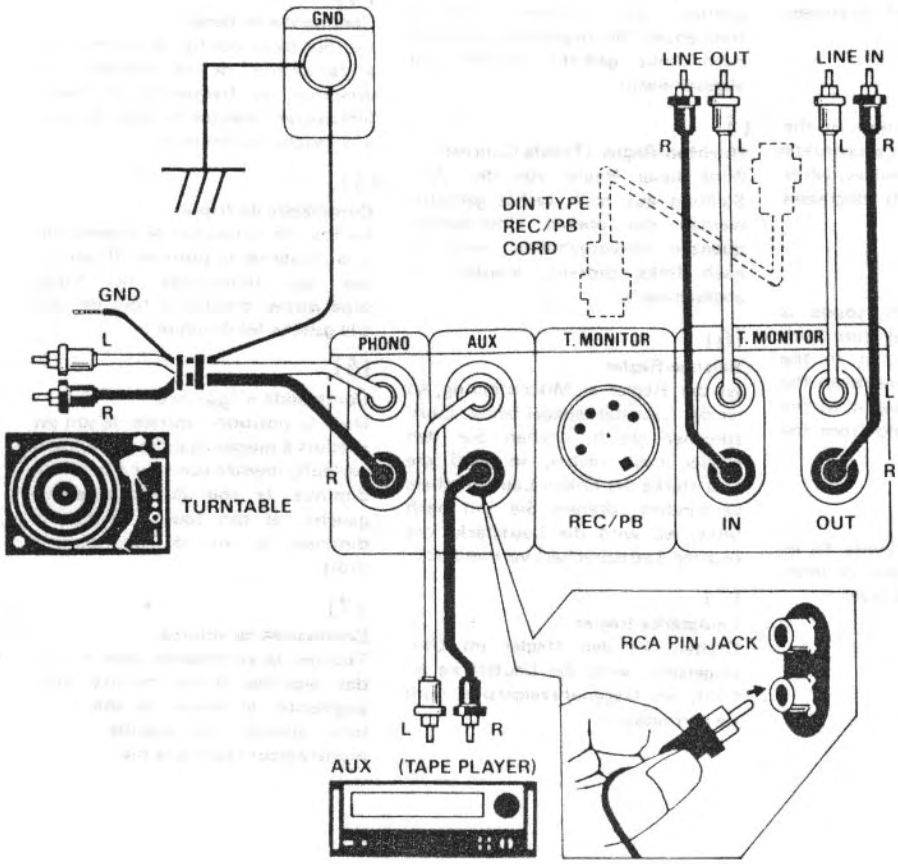
(3)

Speaker Switches (A & B)

Use this switch to select which of the speaker systems connected to the A and B terminals on the rear panel you wish to listen to. Both systems may also be driven simultaneously.

(4)

Bass Control



When using DIN type cords, no connections are made using the RCA type pin terminals.

Turning this control knob to the right of the 'O' position accentuates the lower bass frequencies, while turning it to the left decreases them.

(5)

Treble Control

Turning the control knob to the right of the 'O' position accentuates the upper treble frequencies, while turning it to the left decreases them.

(6)

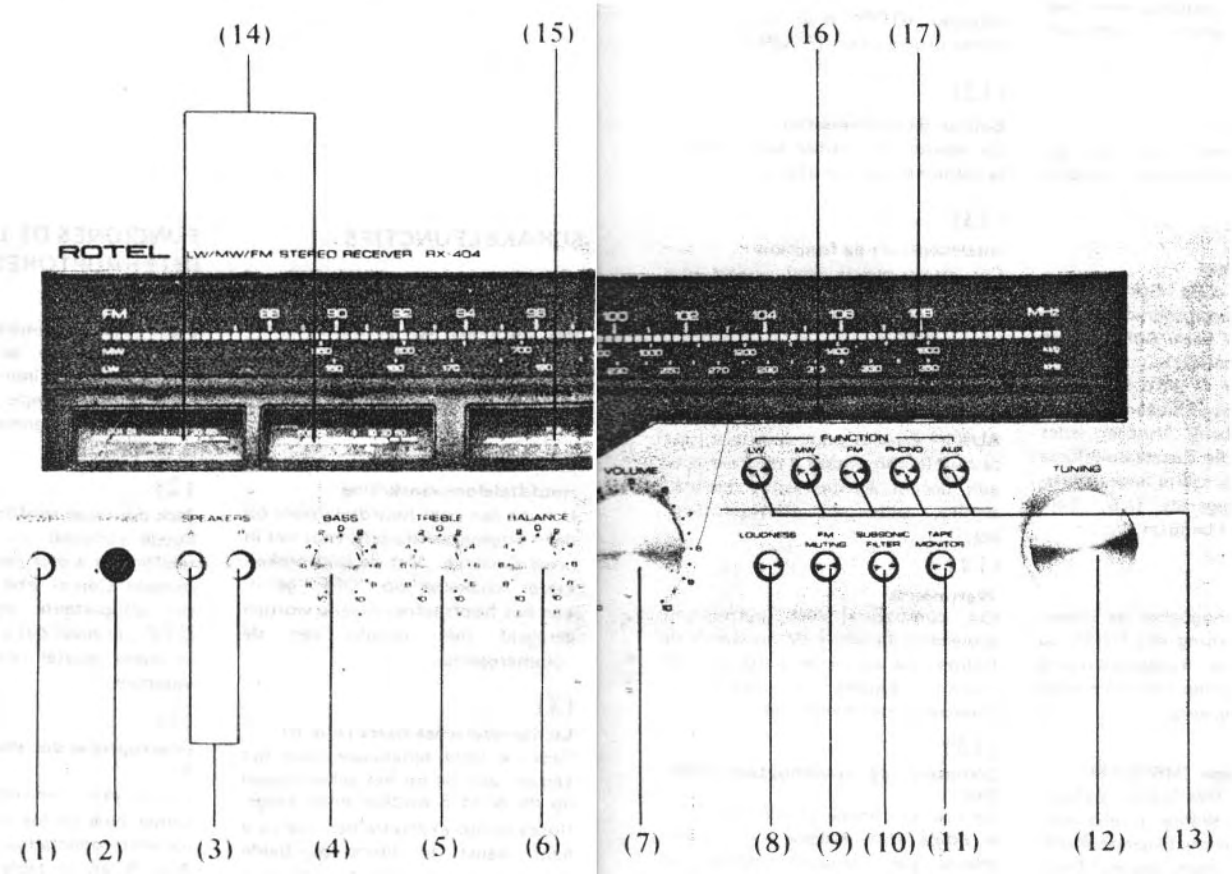
Balance Control

In the central position, sound is produced in equal level from both speakers, while turning it to the right decreases the sound from the left speaker, and turning it to the left decreases the sound from the right speaker.

(7)

Volume Control

Turn the control clockwise to increase the sound level and counter-clockwise to reduce the level.



(8)

Loudness Switch

This switch is employed when listening at decreased volume levels, to help overcome the human ear's loss of sensitivity to low and high frequencies. Using this switch boosts bass and treble frequencies, to provide natural sound quality.

(9)

Subsonic Filter

This filter is employed to cut ultra-low frequencies which are below the range of hearing. Depressing this switch will cut unfavorable low frequencies such as those produced by turntable motor rumble.

(10)

FM Muting Switch

This switch is used to cut interstation noise when tuning FM stations.

(11)

Tape Monitor Switch

Use this switch to select for tape playback or for other programs. Push this switch on when tape playback. Push the switch again (OFF) to listening the other programs (SOURCE).

(12)

Tuning Knob

This knob is used to select the desired radio broadcast station.

(13)

Function Switches

These switches are used when listening to programs other than those from the tape deck.

PHONO – Use for turntable listening.

FM, MW, LW – Use for radio broadcasts.

AUX – Use for listening to whatever component has been connected to the rear panel auxiliary terminals, such as tape player, etc.

(14)

Watt Meters

These meters allow you to observe the power output of the unit. Power output of the left and right channels is individually shown.

(15)

Tuning Meter (AM/FM)

When tuning an AM station, the farthest point to the right reached by the needle indicates the strongest reception point. When tuning an FM station, the central position of the needle indicates the point of best reception.

(16)

Stereo Indicator (FM only)

This indicator will automatically illuminate whenever an FM stereo program is being broadcast.

(17)

Dial Scale

The upper scale indicates FM frequencies, the middle scale MW frequencies, and the lower scale LW frequencies.

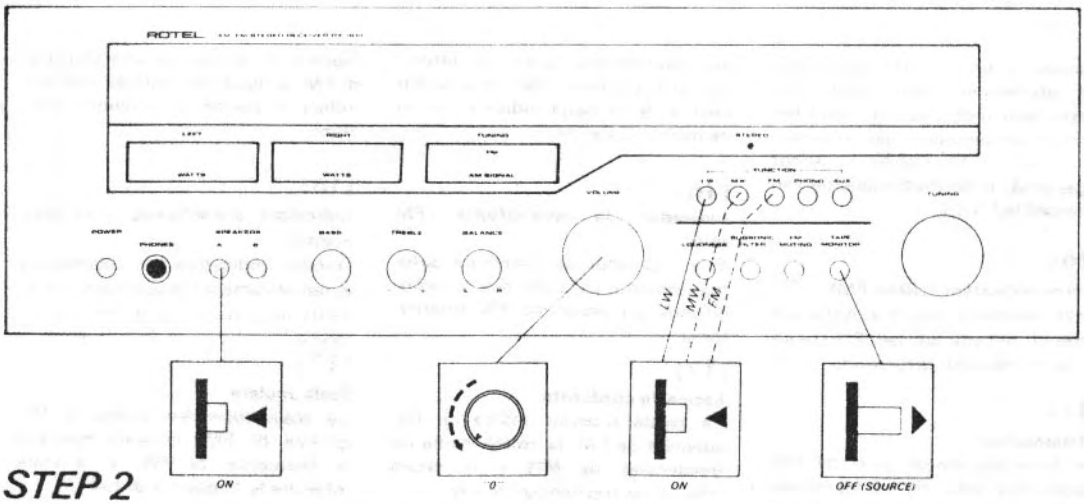
BASIC OPERATION

Before turning your system on, please check the following points:

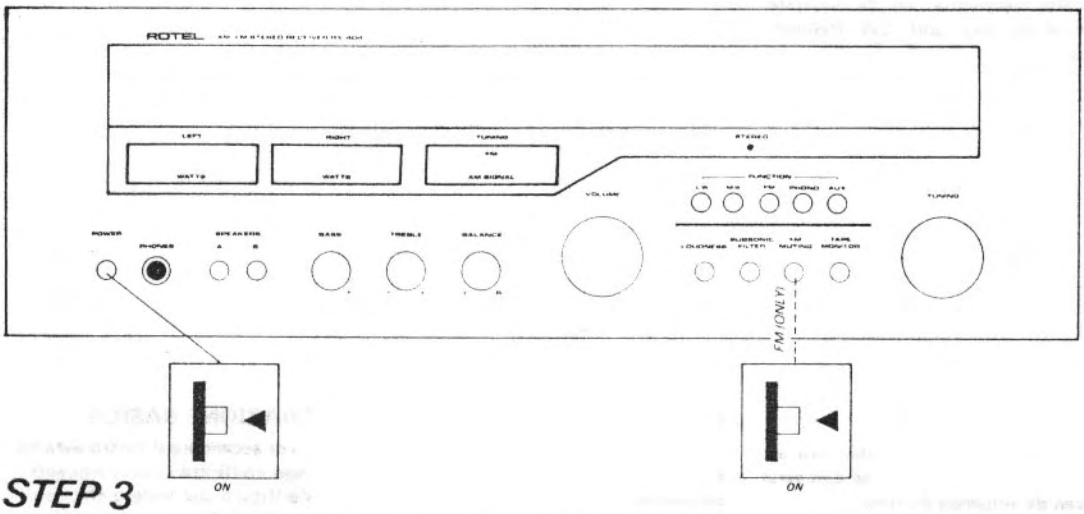
1. Check to see that all the connections between the various components and speakers have been made properly.
2. Always turn the volume control to the minimum setting before switching on the power.
3. Be sure that you clearly understand the functions of the various switches and controls. Refer to the instruction manual for any that are unclear.
4. Be sure the electric outlet voltage matches that designated for the components.

RECEIVING MW/LW/FM BROADCASTS

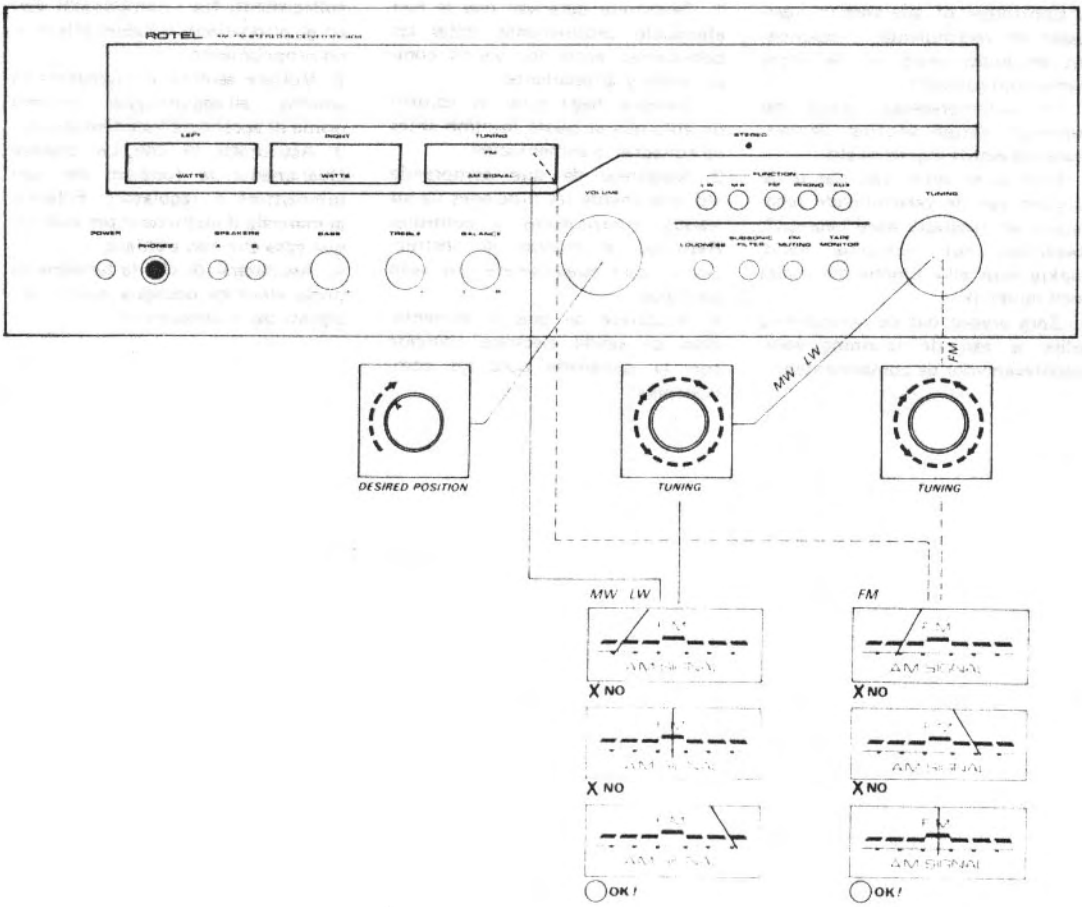
STEP 1



STEP 2



STEP 3



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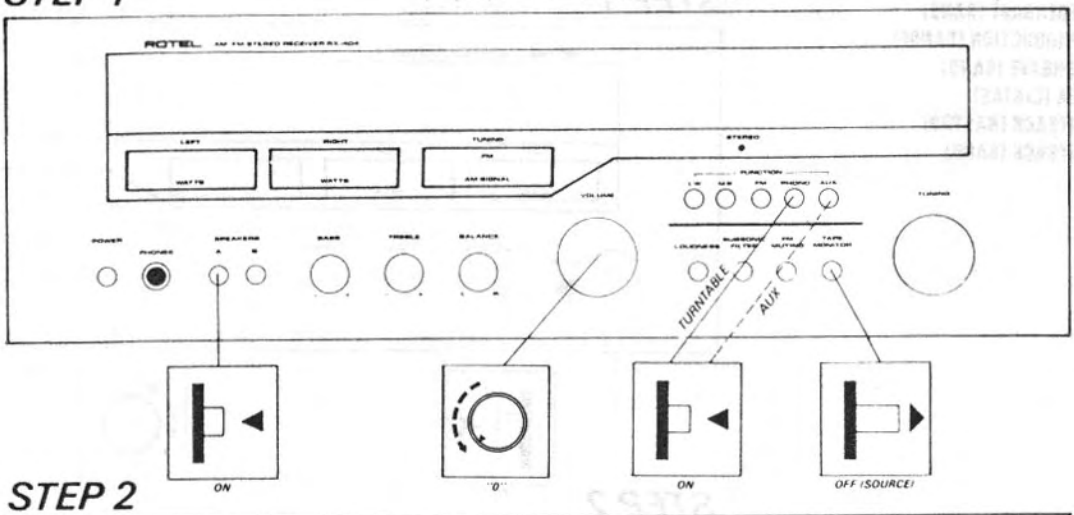

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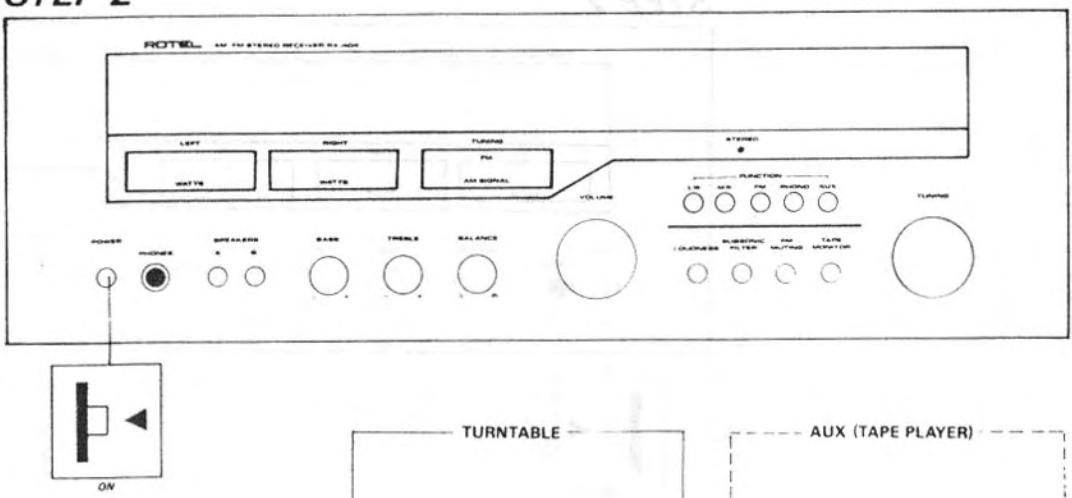

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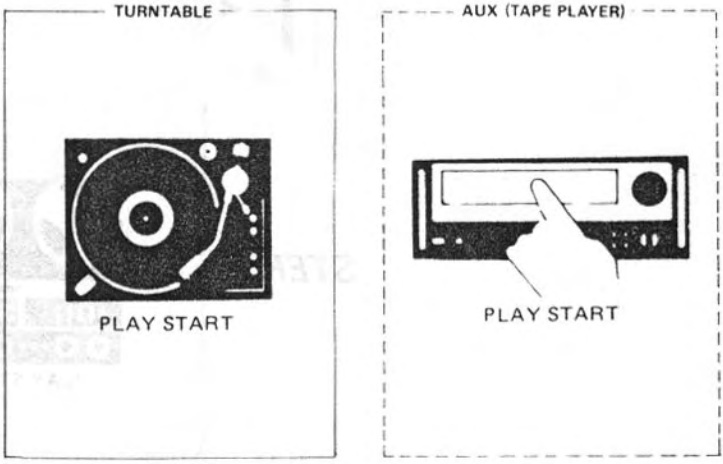
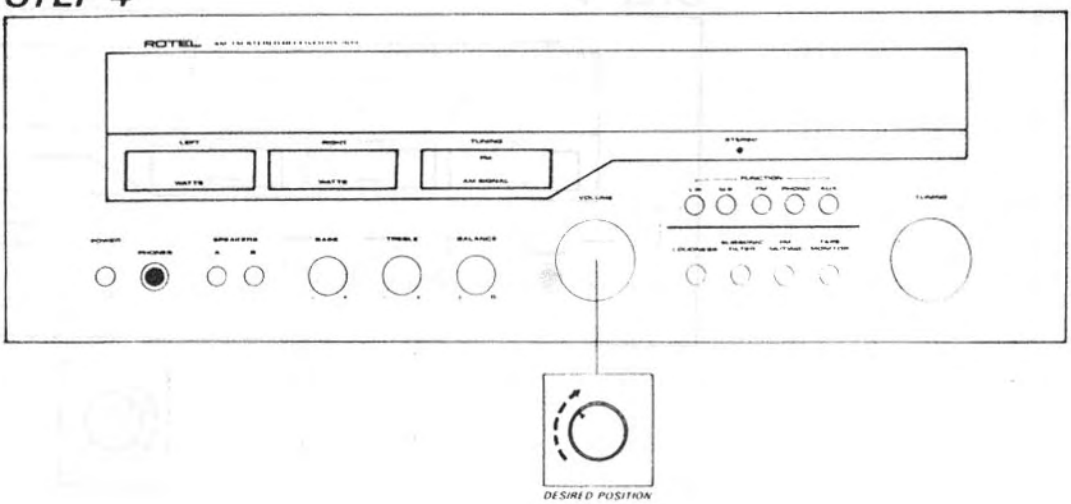
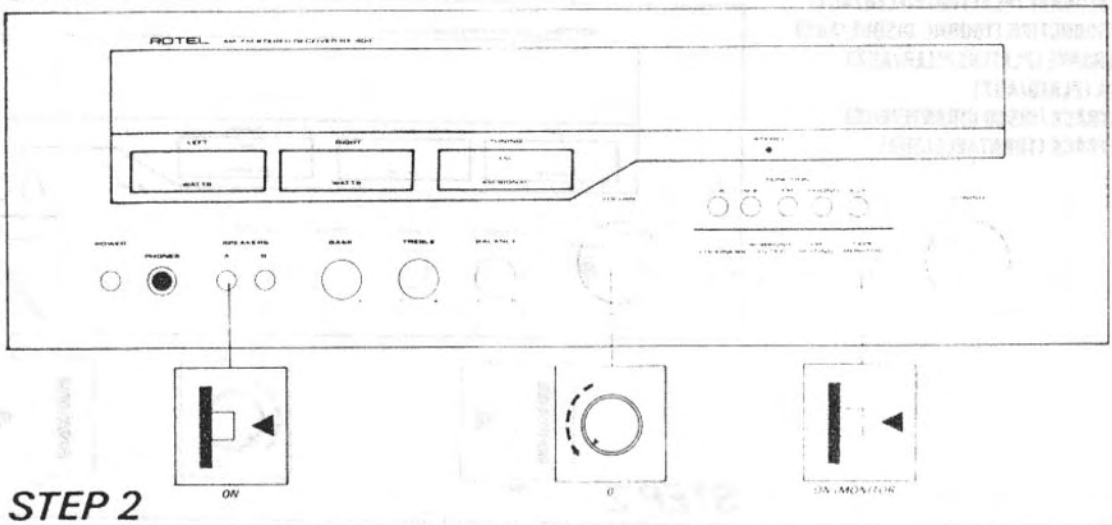


STEP 4

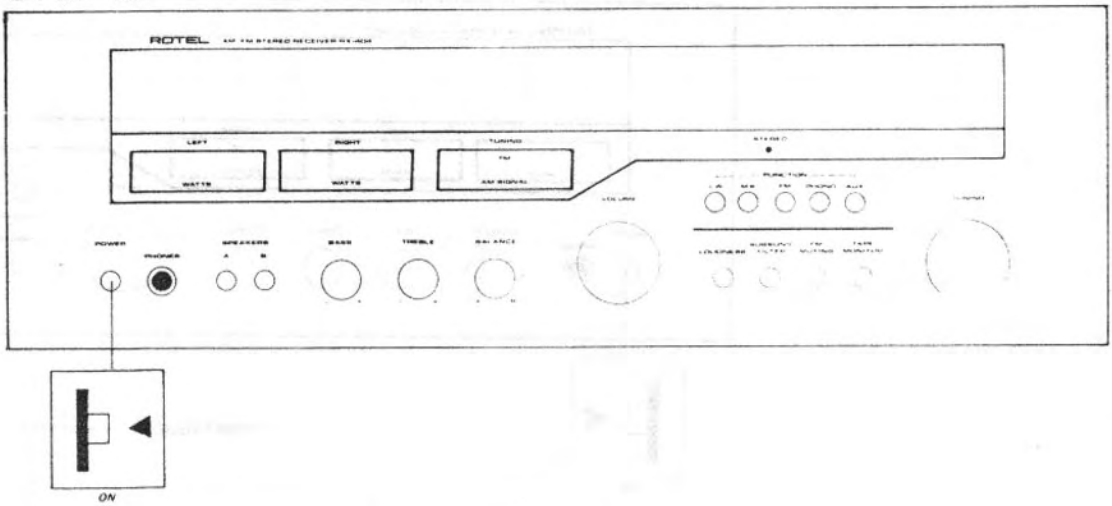


PLAYBACK (TAPE)

STEP 1

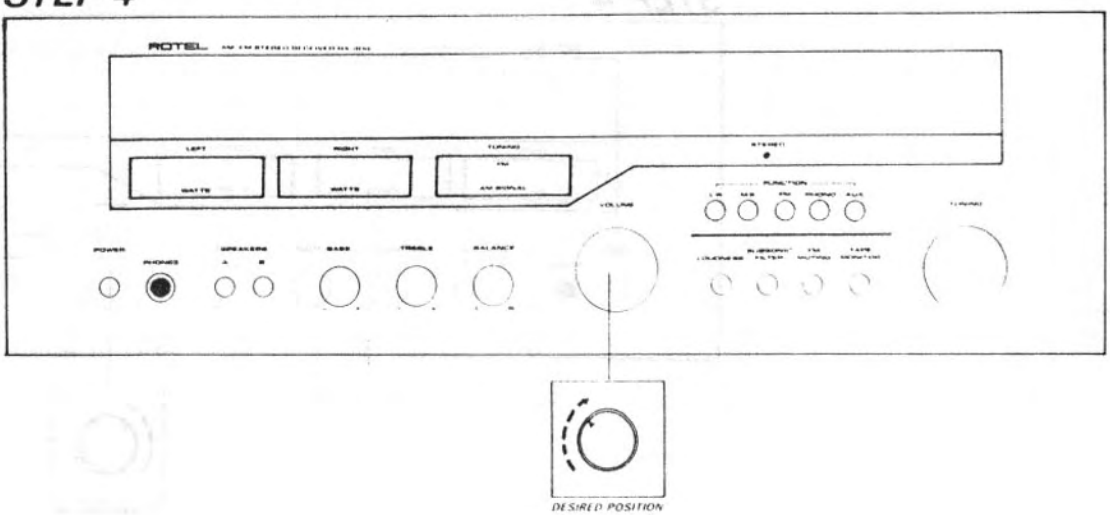


STEP 2



STEP 3

STEP 4



SPECIFICATIONS

POWER AMPLIFIER SECTION:

Continuous Power Output: 30 watts* per channel, min. RMS, both channels driven at 8 ohms or 34 watts* per channel both channels driven at 4 ohms from 20 to 20,000 Hz with no more than 0.1% total harmonic distortion.

Total Harmonic Distortion: (20 to 20,000Hz, AUX)	No more than 0.1% (continuous rated power output)
	No more than 0.05% (15 watts per channel power output 8 ohms)
	No more than 0.05% (1 watt per channel power output 8 ohms)
Intermodulation Distortion (50Hz: 7,000Hz=4:1, from AUX)	No more than 0.1% (continuous rated power output 8 ohms)
	No more than 0.05% (15 watts per channel power output 8 ohms)
	No more than 0.05% (1 watt per channel power output 8 ohms)
Output: Speaker	A, B (4 - 16 ohms)
	A + B (8 - 16 ohms)
Headphone	4 - 16 (ohms)
Damping Factor	40 (20 to 20,000Hz, 8 ohms)

PRE AMPLIFIER SECTION:

Input Sensitivity/Impedance:	
PHONO (MAG)	2.5mV/47 kohms
AUX	150mV/33 kohms
TAPE IN	150mV/33 kohms
Overload Level (Max. Input Level) (T.H.D. 0.5%, 1kHz)	
PHONO	160mV
AUX	Not less than 5V
Output Level/Impedance:	
TAPE OUT	300mV/600 ohms
TAPE OUT (DIN)	100mV/90kohms
Frequency Response:	
PHONO	30Hz to 15,000Hz ±0.4dB(RIAA)
AUX, TAPE IN	8Hz to 45,000Hz +0.3dB, -2.0dB
Tone Control:	
BASS	±10dB (50Hz)
TREBLE	±10dB (20kHz)
Filter:	
LOW (Subsonic)	16Hz (12dB/oct)
Loudness Contour	+10dB(100Hz), +4dB (10 kHz)
(Volume control set -40dB position)	
Hum and Noise (IHF, a network rated power):	
PHONO	75dB
AUX, TAPE IN	85dB

FM TUNER SECTION:

Usable Sensitivity:	
Mono	1.9μV (10.8dBf)
Stereo	4.8μV (18.8dBf)
50dB Quieting Sensitivity:	
Mono	3.8μV (16.8dBf)
Stereo	44μV (38.2dBf)
Signal-to-Noise Ratio (at 65dBf):	
Mono	70dB
Stereo	65dB
Distortion (65dBf):	
100Hz	0.15% (mono), 0.25% (stereo)
1kHz	0.15% (mono), 0.25% (stereo)
6kHz	0.25% (mono), 0.35% (stereo)
Frequency Response	30Hz to 15,000Hz +1.0dB, -3dB
Capture Ratio	1.0dB
Alternate Channel Selectivity	60dB
Spurious Response Ratio	70dB
Image Response Ratio	50dB
IF Response Ratio	65dB
AM Supression Ratio	55dB
Muting Threshold	12.8dBf
Stereo Separation	40dB (1kHz) 30dB (50 to (15,000Hz)
Subcarrier Product Ratio	55dB
SCA Rejection Ratio	60dB
Antenna Input	300 ohms balanced, 75 ohms unbalanced

AM TUNER SECTION:

Sensitivity MW	250μV/m
LW	550μV/m
Selectivity	23dB
Signal-to-Noise Ratio	45dB
Image Response Ratio	38dB
IF Response Ratio	40dB
Antenna	Built-in ferrite loopstick antenna (inside chassis)

MISCELLANEOUS:

Power Requirements	120V/60Hz or 220V/50Hz or 240V/50Hz or 100, 120, 220, 240V/50 - 60Hz (switchable)
Power Consumption	220 watts (Max.)
Dimensions (Overall)	430(W) x 145(H) x 316(D) mm
Weight (Net)	8.0kg

NOTE: Specifications and design subject to possible modification without notice.

*Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers. (Applicable to the U.S.A. only)