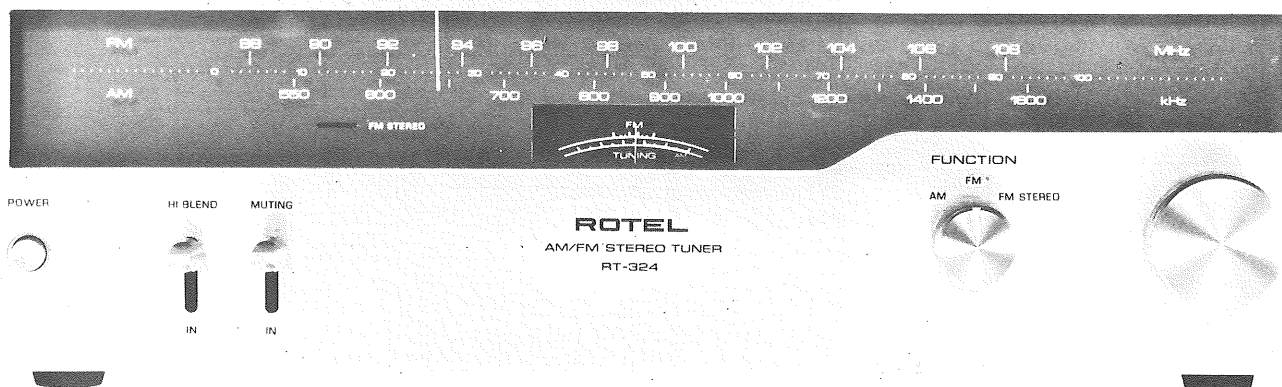


Owner's Manual

AM/FM Stereo Tuner

RT-324



ROTEL®

INTRODUCTION

We would like to take this opportunity to thank you for purchasing our Stereo Tuner. With the high quality design and workmanship that goes into making this equipment, you can be assured of its flawless performance for many years to come.

We have fitted every control and feature you could conceivably need. Designed for both versatility and ease of operation, this piece of equipment will add professional studio flexibility to your Hi-Fi sound center. The performance is exceptional; it

will allow you to experience true high fidelity as never before. Its full and natural stereophonic reproduction offers you musical entertainment approaching that of live performances. We sincerely hope you will treasure this professional equipment. In order to obtain the maximum use out of your unit, please read the following pages of this Owner's Manual carefully. Do not attempt to operate the unit until you have made all the necessary connections.

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

Installation & System Connections

INSTALLATION

**First, make sure that all the necessary connections are properly made.

AM ANTENNA CONNECTION

No external antenna will generally be required for AM broadcast listenings, since a ferrite loopstick antenna is supplied at the rear of the unit. For best possible reception, extend the loopstick fully away from the tuner chassis.

If you live in a **difficult reception area**, the use of an external or outdoor antenna may be desirable.

Connect a single wire antenna lead to the terminal marked AM on the rear chassis. The single wire antenna ("hay" or a kind of "whip") should then be longer as possible, and oriented for best reception. It must be kept away from large metal objects, power lines or electrical machinery to insure better reception to avoid extraneous noises.

FM ANTENNA CONNECTION

Owing to the high sensitivity of the FM Tuner stage of the unit, the antenna wire ("twin-T" shape, window sheath) supplied is sufficient for most locations.

Connect this feed line ends to both terminals marked 300 ohms; FM ANT, and mount this twin-T horizontally, for example, by tacking both ends to the shelf front edge on which the receiver is located. In case weak signal area, the use of an outdoor type exclusive FM antenna may prove necessary. Follow its instructions for proper connections.

When using a 75-ohm unbalanced coaxial cable to feed signals from antenna, connect them to terminal posts marked a 75-ohm and G-terminal with the outer conductor or shielding blade of the cable, or use the coaxial adaptor socket marked 75-ohm.

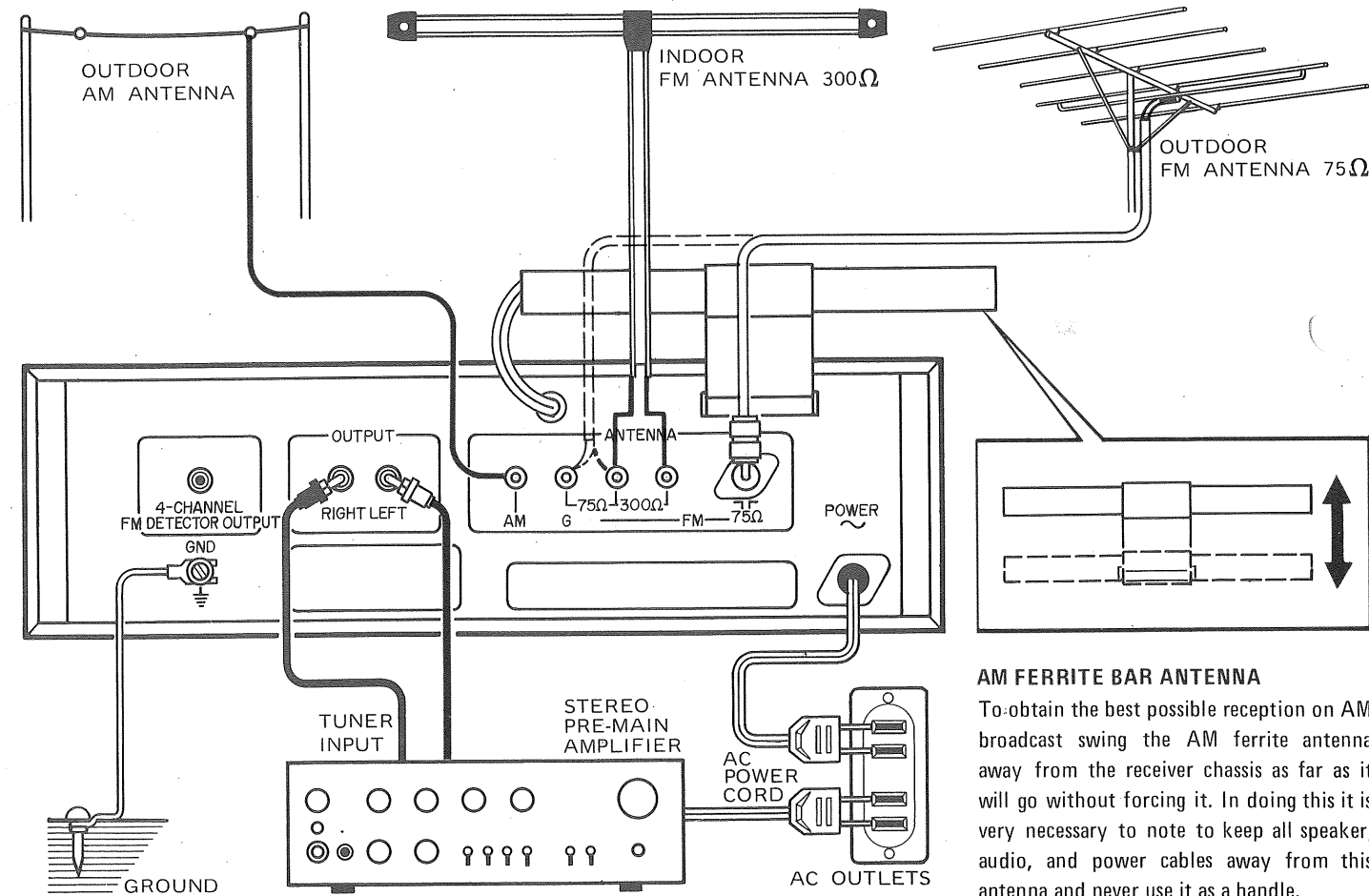
GROUND

Although it is not necessary to do so, however, if you wish to take the tuner to be

earthed to eliminate unwanted noises possible, connect a wire from the terminal designated GND on the rear chassis to the ground terminal on your amplifier or to a nail buried under ground.

AC POWER INPUT CORD (AC MAINS)

Your tuner has been specially designed so that it may be connected to a variety of power sources. You may connect the AC Power Input Cord directly to a wall outlet in case when the power will be supplied to the tuner independently from your amplifier. Or, you may connect it to your amplifier's switched or unswitched AC outlet. If it is connected to a switched outlet, by leaving the power button of the tuner on, you will be able to maintain switching control for the tuner with your amplifier together. If it is connected to an unswitched outlet, like connecting to a wall outlet you must use the tuner's own power button for switching control.



AM FERRITE BAR ANTENNA

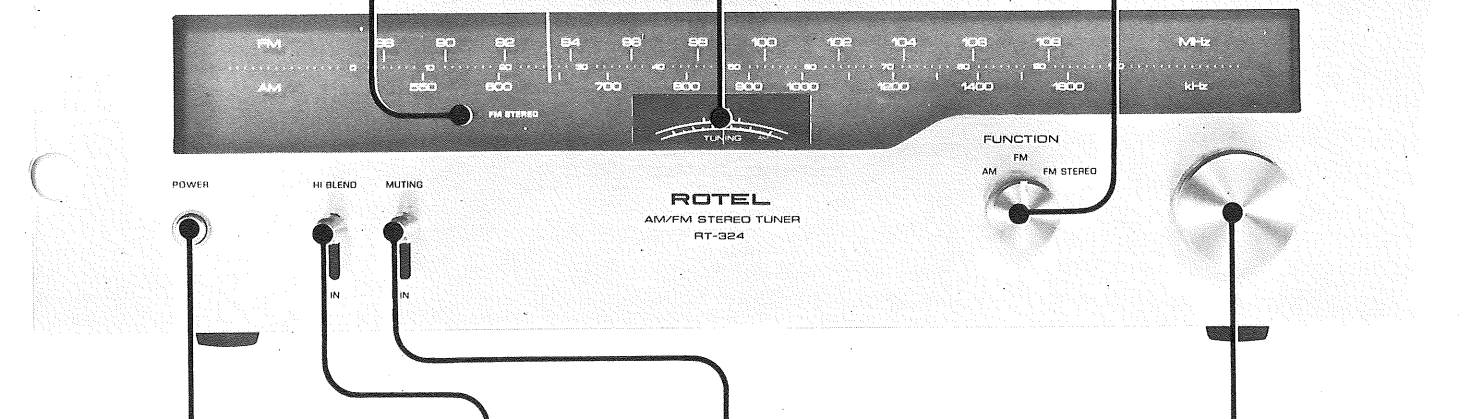
To obtain the best possible reception on AM broadcast swing the AM ferrite antenna away from the receiver chassis as far as it will go without forcing it. In doing this it is very necessary to note to keep all speaker, audio, and power cables away from this antenna and never use it as a handle.

Function & Controls

STEREO INDICATOR LIGHT: automatically lights up on the dial glass to visually indicate whenever an FM stereo broadcast is tuned in.

SIGNAL TUNING METER: shows the level of the incoming signal. When used with the TUNING KNOB tune for maximum pointer deflection to the right for best possible reception of AM broadcast. For FM tuning, when meter read zero at the center of the scale that indicates the proper and sharpest tuning of FM.

FUNCTION SELECTOR CONTROL: enables you to select the program you desire from AM, FM, and FM STEREO.



POWER SWITCH: supplies power to the tuner. When the switch is ON, dial scale will be illuminated.

MUTING SWITCH: in an IN position activates a circuit which reduces audible interstation noise when tuning from station to station in FM band. Since very weak signals may be muted at the same time, leave the switch in OUT position when you wish to pick up a very weak station.

TUNING KNOB TUNING DIAL KNOB: a heavy flywheel action allows you to obtain the easy and precise tuning both on FM and AM broadcasts.

HIGH BLEND FILTER SWITCH: allows you to reduce annoying noise mixed in with signal. This switch, however, should not always be left at IN position unless it is very necessary.

CONNECTING TO POWER SUPPLY

Prior to connection ensure that the voltage selector is set correctly for your local AC mains supply, and a suitable plug fitted. If you need to fit a plug, make sure also that a live, neutral and (where appropriate) earth leads are connected to the proper terminals. If in any doubt about connection to the mains supply, consult a qualified technician.

COAXIAL CABLE:

Mate and plug in the cable connector to a chassis socket of the tuner firmly and gently tighten the outer connector cover turning it clockwise. Advantage of using coaxial cable is to shut off external noise fed through feed line which usually affects tuner's front-end.

If you live in U.K., please read EXCLUSIVE NOTE FOR U.K. on the last page.

Operation

Having made all connections according to the preceding instructions and become familiar with the functions of the unit, you are ready to operate the equipment. Apply power by plugging into the power source and pushing in the POWER button.

RECEIVING FM AND AM BROADCASTS

1. FM STEREO

Under normal use for all FM broadcasts the source selector control should be placed in the FM STEREO position. This tuner is equipped with a stereo sensing circuit which will automatically determine whether your unit is receiving monophonic or stereophonic broadcasts, and then automatically adjust the mode of operation. If the station is transmitting stereo, your tuner will automatically switch on the multiplex section and you will hear the broadcast in full stereo. Should the station conclude broadcasting in stereo, your tuner will automatically switch back to monophonic reception.

2. FM

Should you wish to receive monophonic signal, or weak stereo signal whose quality has been degraded by noise and poor signal conditions and so may be necessary to be heard in mono, turn the source selector

control to FM. Tune for the desired station with the tuning knob, using the tuning meters to assure the strongest possible reception.

3. AM

Should you wish to listen to AM broadcasts, turn the source selector control to AM. Though AM gives only monophonic signal, the tuner will convert the signal to two channels (each channel with same signal) enabling you to listen from two speakers as in stereo.

MUTING

Whenever you tune for an FM station, you will hear rather loud interstation noise; this is normal for all highly sensitive FM tuners and is not peculiar to this tuner.

To reduce this bothersome interstation noise, your tuner is equipped with a MUTING SWITCH. The switch should normally be turned OUT when you have tuned in the desired station, but it may be left IN without causing perceptible effect upon program reproduction. Again, however, the switch should be turned OUT to assure strongest possible signal reception if you wish to listen to a station of very weak signal.

EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 3-core cable without a plug, make certain live, neutral and (where appropriate) 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 of this apparatus may not correspond with the coloured markings 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 \perp , or coloured GREEN or 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 of plug is used a 5 Amp fuse or lower must be used, either in the plug or adapter or at the distribution board.

Note:— Features and specifications are subject to change without prior notice.

— When production design improvements are made there may be case(s) which having slightly different photographs and/or illustrations.

SPECIFICATIONS

FM Sensitivity (IHF)	1.9 μ V
Frequency Range	88 - 108 MHz
Harmonic Distortion	MONO: less than 0.3% STEREO: less than 0.6%
Signal to Noise Ratio	more than 65 dB
Capture Ratio	2.0 dB
Selectivity	more than 50 dB (alternate channel)
Stereo Separation	40 dB at 1 kHz
Image Rejection	60 dB
IF Rejection	more than 70 dB
Spurious Response Rejection	more than 70 dB
AM Suppression	more than 50 dB
AM Sensitivity (IHF)	200 μ V/m
Frequency Range	535 - 1605 kHz
Image Rejection	50 dB at 1 MHz
IF Rejection	40 dB at 1 MHz
Signal to Noise Ratio	50 dB
Selectivity	more than 25 dB

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