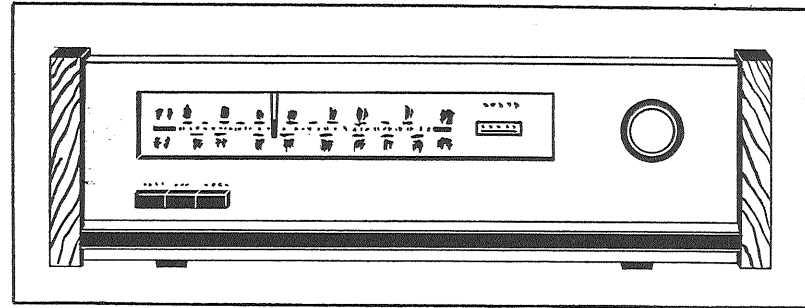


# ROTEL®

SOLID STATE STEREO TUNER

OPERATING MANUAL



# RT-320

## INTRODUCTION

We would like to take this opportunity to thank you for purchasing our ROTEL RT-320 AM/FM STEREO TUNER. We are proud of its quality workmanship — we are sure that it will provide you with incomparable listening pleasure and trouble-free operation for many years to come.

In order to obtain the maximum use out of your unit, please read all of the following pages of this Operation Manual carefully.

Do not attempt to operate the unit until you have made all the connections as specified in this Manual.

## SPECIAL FEATURES

- 1) 4-STAGE IF provides heightened sensitivity and selectivity.
- 2) FET WITH 3-GANG VARIABLE CAPACITOR assures excellent signal-to-noise ratio and cross modulation characteristics.
- 3) 4-STAGE POWER CIRCUIT allows your unit to be operated on 100V, 117V, 220V or 240V line voltages, all at a flick of a switch.
- 4) FM STEREO-MONO AUTOMATIC SWITCHING CIRCUIT switches automatically to stereo whenever an FM Stereo signal of sufficient strength is tuned in.
- 5) LARGE FLYWHEEL TUNING makes for smooth and positive tuning.
- 6) STEREO INDICATOR LIGHT.
- 7) ILLUMINATED TUNING METER.
- 8) ILLUMINATED DIAL BOARD AND DIAL POINTER.
- 9) BUILT-IN AM LOOPSTICK ANTENNA.
- 10) HANDSOME WOOD CABINET.

## **INSTALLATION**

### **IMPORTANT**

Before attempting to operate the RT-320, please read the following instructions carefully. When all the necessary connections are made as specified, the power may be applied.

### **AM LOOPSTICK ANTENNA**

The RT-320 is equipped with a built-in ferrite loopstick antenna for AM reception. With the high sensitivity of the RT-320, the loopstick antenna assures more than adequate reception of most local AM stations.

NOTE: The AM Loopstick Antenna is mounted on a swivel bracket. To obtain maximum effectiveness, carefully pull the antenna bar up and away from the chassis and leave it in extended position.

### **AM OUTDOOR ANTENNA**

If you are in a fringe area, far away from most stations or in a high noise area such as near a highway or airport, an outdoor antenna is required to assure best reception. To utilize an outdoor antenna, simply connect the antenna lead to the terminal designated AM ANTENNA on the back panel.

### **FM ANTENNA**

The high sensitivity and selectivity of the RT-320 provides excellent FM reception in most areas with nothing more than a piece of wire about 48 inches in length as an FM antenna. In difficult reception areas, such as an area with tall mountains or buildings that block or echo the signals, however, an outdoor antenna is recommended. To use an outdoor antenna, connect the antenna leads to the terminals designated FM ANTENNA 300Ω on the back panel.

### **GROUND**

To properly ground your system, connect a wire to the terminal designated GND on the back panel and join this wire with the ground wire from your amplifier.

### **OUTPUT**

The Output Jacks designated LEFT and RIGHT on the back panel should be connected with the corresponding Left and Right Input Jacks on your amplifier designated either Tuner or Aux (Extra). Connecting Cables for this purpose are supplied with the RT-320. Make sure that the LEFT Output on the RT-320 is connected with the Left Input on your amplifier and likewise for the RIGHT Output.

### **AC POWER INPUT CORD**

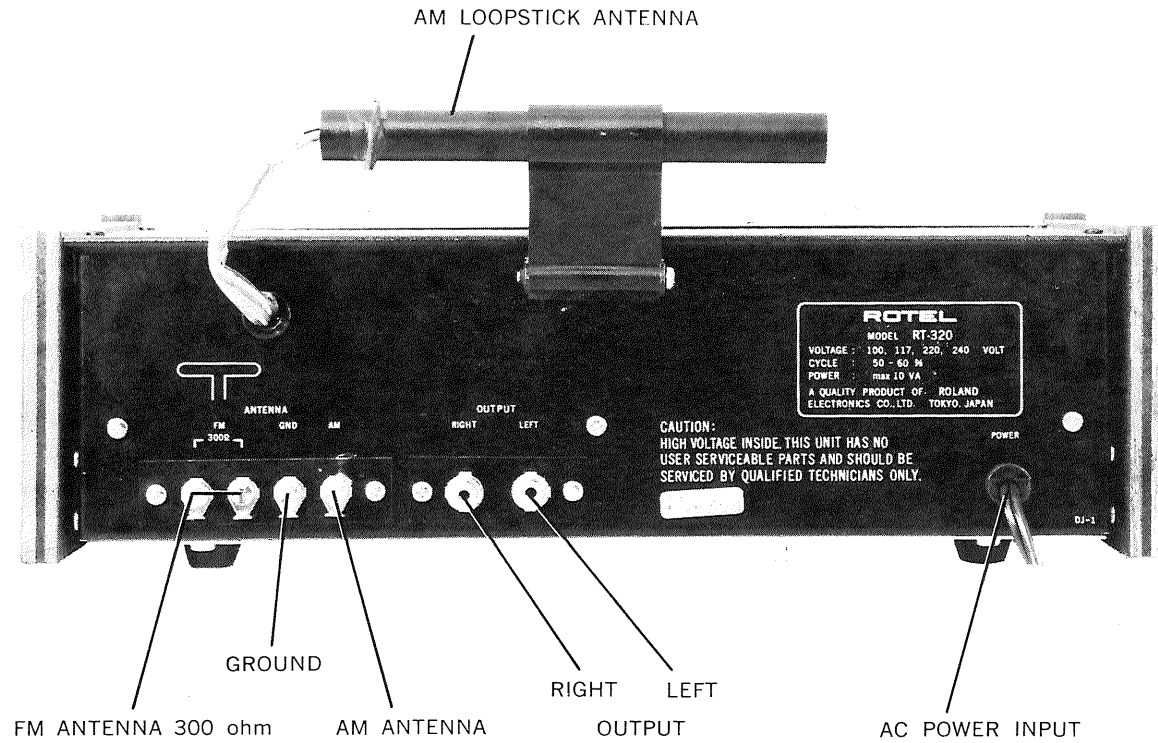
Your RT-320 has been specially designed so that it may be connected to a variety of power sources. You may connect the AC Power Input Cord directly to a wall plug or to a switched or unswitched AC Outlets on your amplifier.

### **VOLTAGE SELECTION**

Your RT-320 comes pre-set at a proper voltage for use in your area; however, if you move to an area where the power supply voltage is different, simply change the voltage selector. The RT-320 is a variable voltage tuner that can run on 100V, 117V, 220V and 240V power supplies.

To change the voltage setting, remove the bonnet cover and locate the Voltage Selector. (CAUTION: Be sure to disconnect your unit from the power source before attempting to remove the bonnet cover.) The Voltage Selector Plug has a white arrow on its top. Reinsert the Voltage Selector Plug so that the arrow lines up with the Pointer Line of the voltage you desire.

# INTERCONNECTING DIAGRAM



## **OPERATION**

When all the connections have been made according to the preceding instructions, you may apply the power by pushing "IN" the POWER button.

If you chose to connect the AC Power Input Cord to your amplifier's Switched Outlet, turning the RT-320 on or off may be done with the controls on your amplifier, in which case you should leave the POWER button on the tuner always in the "IN" position.

If you chose to connect the AC Power Input Cord to your amplifier's Unswitched Outlet or directly to your wall plug, each time you wish to operate the tuner you must push "IN" the POWER button independent of the controls on your amplifier.

### **AM RECEPTION**

To listen to AM broadcast, push the AM/FM button "IN". Select a desired station by adjusting the TUNING KNOB.

Your RT-320 is provided with a TUNING METER which measures the strength of a radio signal; thus, to achieve the best possible reception of a station, adjust the TUNING KNOB until you get maximum Meter

deflection. (The TUNING METER is calibrated from 0 — 10, so that its higher numerical reading indicates stronger signal reception.)

### **FM RECEPTION**

To listen to FM broadcast, leave the AM/FM button in the "OUT" position. Select a desired station by adjusting the TUNING KNOB.

Use the TUNING METER in the same way as explained above for AM reception.

### **FM STEREO RECEPTION (MULTIPLEX)**

To listen to FM Stereo broadcast, leave the AM/FM button in the "OUT" position and also make sure to leave the MODE button in the "OUT" position. When you have tuned in on a FM Stereo broadcast, the STEREO INDICATOR LIGHT will light up "STEREO".

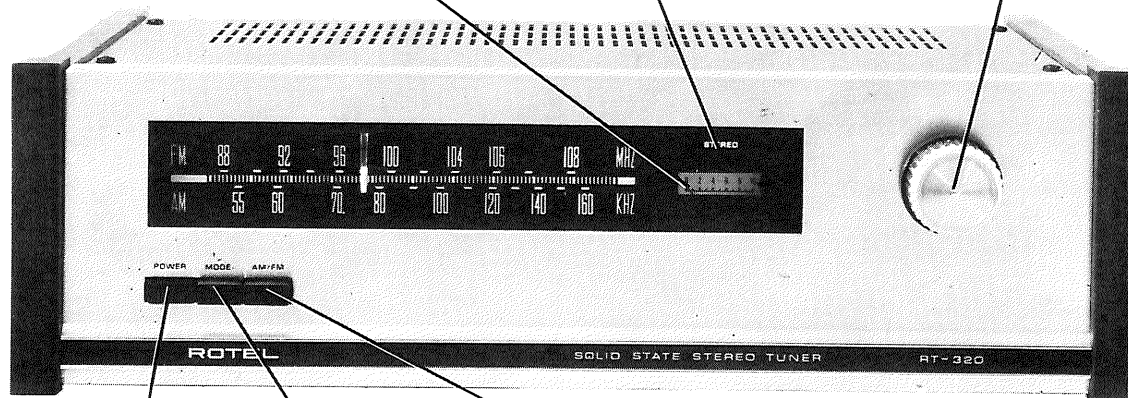
NOTE: Your RT-320 is equipped with an Electronic Switching Circuit that automatically switch the unit to FM Stereo from FM Mono whenever FM Stereo broadcast of sufficient signal strength is tuned in. The MODE button, however, in the "IN" position for monophonic reproduction defeats the automatic switching function; so, unless you wish to specifically defeat the FM Stereo-Mono Automatic Switching and listen to an FM Stereo broadcast in mono, always leave the MODE button in the "OUT" position for stereophonic reproduction.

## CONTROLS AND THEIR FUNCTIONS

TUNING METER indicates the strength of the signal being received. It is used to tune for best possible reception of both AM and FM broadcasts.

STEREO INDICATOR LIGHT automatically lights up "STEREO" to indicate whenever the unit is tuned to an FM Stereo broadcast.

TUNING KNOB allows you to tune for whatever AM or FM station you wish to hear.



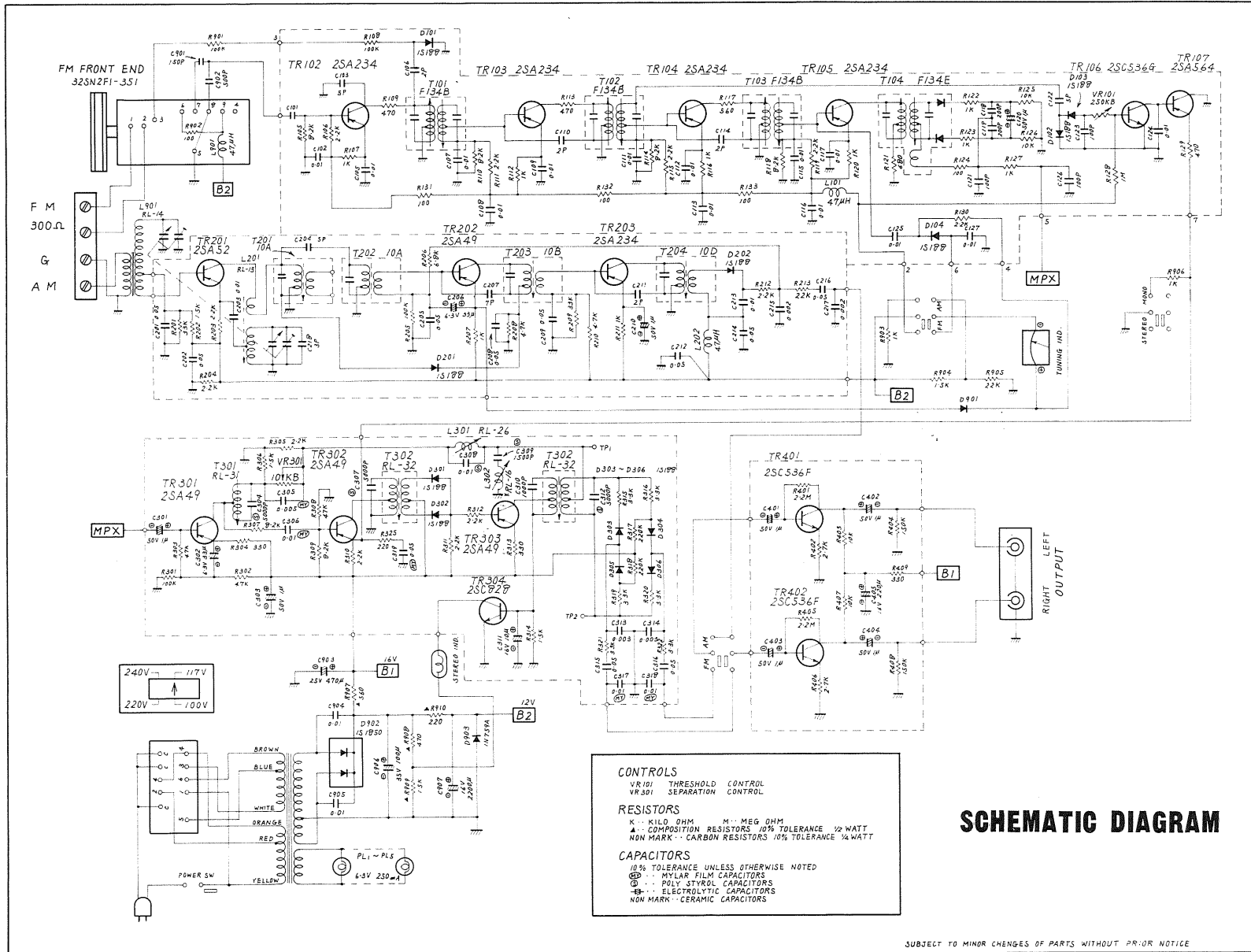
POWER in "IN" position activates the tuner.

MODE in "IN" position is for monophonic program material, and in "OUT" position it is for stereophonic program material.

AM/FM in "IN" position is for AM broadcast reception, and in "OUT" position it is for FM broadcast reception.

## SPECIFICATIONS

FM Antenna Impedance:	300 ohms balanced, 75 ohms unbalanced.
Sensitivity (IHF):	2.5 $\mu$ V.
Harmonic Distortion:	less than 1% (400 Hz 100% Mod.).
Signal to Noise Ratio:	better than 60 dB.
Capture Ratio:	4 dB.
Image Rejection:	better than 60 dB.
IF Rejection:	better than 60 dB.
Selectivity (Alt. Channel):	35 dB.
Stereo Separation:	better than 35 dB at 1,000 Hz.
Spurious Response Rejection:	70 dB.
AM Sensitivity (IHF):	30 $\mu$ V at 1,000 kHz.
Image Rejection:	40 dB at 1,000 kHz.
Selectivity:	better than 30 dB.
Power Voltage:	AC 100, 120, 200, 240V, 50/60 Hz.
Dimensions:	13-7/8" W, 4-5/16" H, 9-1/8" D.
Weight:	8.8 lbs.





**ROTEL**®

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TOKYO ————— JAPAN

**RT-320**

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