

owner's manual



PHOTO: RMX-82L

Quality. Uncompromised.

ROTEL[®]

RMX-82

AM/FM STEREO RECEIVER

RMX-82L

MW/LW/FM STEREO RECEIVER

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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 rear panel.



ENGLISH

AM/FM STEREO RECEIVER RMX-82

MW/LW/FM STEREO RECEIVER RMX-82L

INTRODUCTION

We at Rotel want to thank you for purchasing our audio product.

Rotel audio products are designed to use the latest electronic technology, and they incorporate our long experience as a specialist manufacturer of audio equipment. We are confident that you will find satisfaction in the high quality sound and top performance, and that you will find pleasure in the functional beauty achieved through human-engineering concept. Before starting operation, please read this instruction manual thoroughly and acquaint yourself with the proper mode of using the unit and all its connections.

We hope you will enjoy top-notch performance for many years to come.

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. 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.

4. 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.

5. 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.

6. 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.

7. If the unit gets wet

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

8. Cleaning and maintenance

Do not use chemicals such as benzine or thin-

ners on the front panel. Always use a soft, dry cloth to clean the unit.

9. Owner's manual

Keep the owner's manual near the unit, and record the serial number (found on the rear panel) on the cover.

EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 2-core cable without a plug, make certain live and neutral leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL

BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows. 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.

SPEAKERS

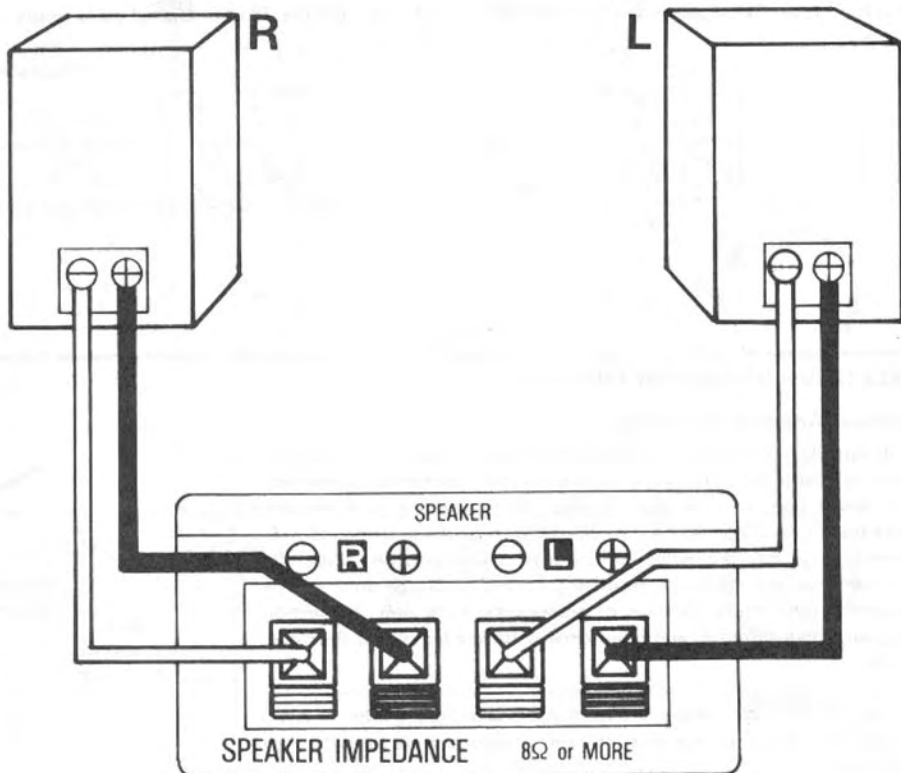
Use speaker systems with impedance ratings of 8-16 ohms. Before hooking up your speaker system, be sure to check its impedance, which should be indicated either on the back of the speaker, or in the speaker instruction manual.

HOOKING UP SPEAKERS

Connect the speaker leads of the right-hand speaker to terminals "R", and the speaker leads of the left-hand speaker to terminals "L". Make sure that the "+" speaker lead is connected to the "+" terminal, and the "-" lead to the "-" terminal.

Strip 1.0cm (3/8") of the polyvinyl chloride insulation from the end of each speaker lead. Twist the exposed strands tightly, and secure the end with a touch of solder.

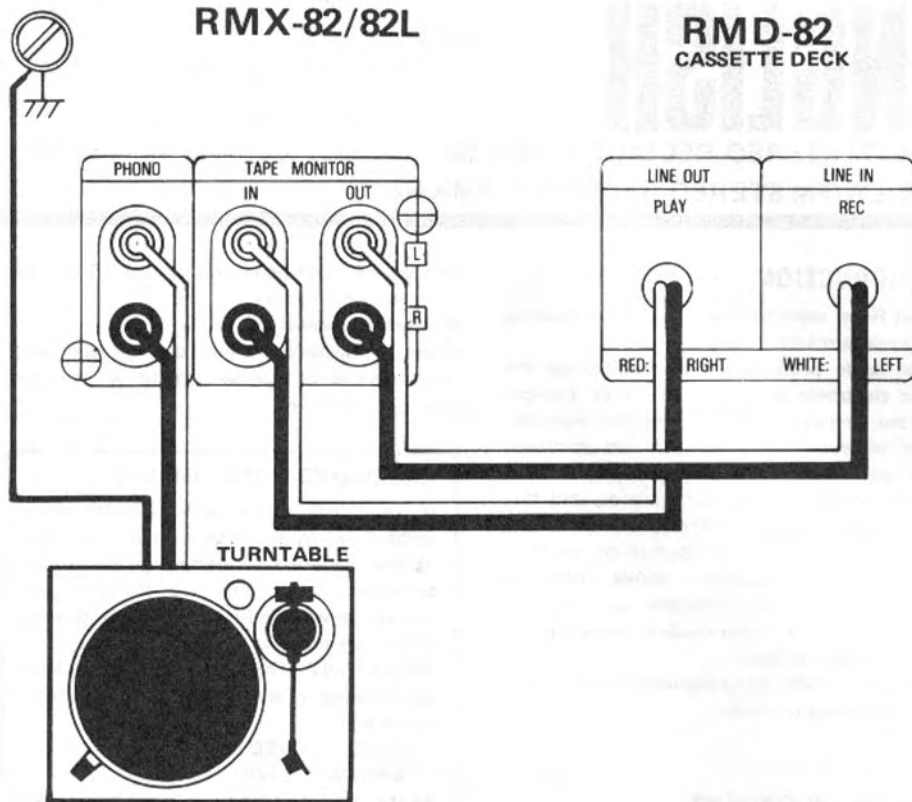
The terminals are the push-insert type. Insert the end of the lead into the hole while pushing on the button. Then release the button; the hole will close and the cord is firmly fixed.



CONNECTING COMPONENTS

Connect all necessary audio components to the rear panel of the unit, using RCA pin cords. See the illustration for properly completed connections. When connecting RCA pin cords, be sure that L (left) and R (right) markings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on RMX-82.

Note: The rear panel of the unit is equipped with a special power supply socket for powering the cassette deck RMD-82. Use this socket for the RMD-82 exclusively, not for any other purposes.



ANTENNA INSTALLATION AND CONNECTION

■ FM Antenna

Proper installation of antenna is the key to smooth signal reception. To install the attached T-shape indoor antenna, stretch it taut and secure horizontally along a wall or the like in a location where signal reception is optimal. Securely connect the antenna to FM antenna terminals marked "300Ω" on the rear panel. If outdoor type FM antenna is installed, the

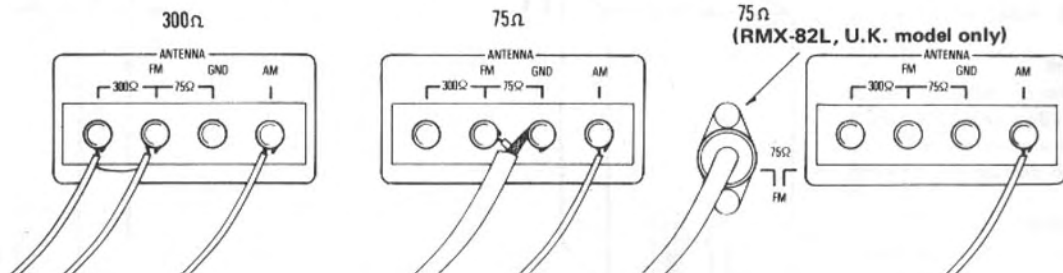
T-shape antenna is not necessary. For proper use of your outdoor FM antenna, follow the instructions below.

1. Be sure to select the most appropriate type of antenna for the signal reception conditions in your area.
2. A 75-ohm coaxial cable is recommended in connecting the antenna to the unit.
3. Set the antenna in a position as high as possible if buildings, mountains or other obstructions nearby affect reception.
4. Connect the 75-ohm coaxial cable to the

antenna terminals located on the rear panel, as shown in the figure.

■ AM Antenna

If you install outdoor AM antenna, connect the antenna lead wire to the antenna terminal marked "AM."

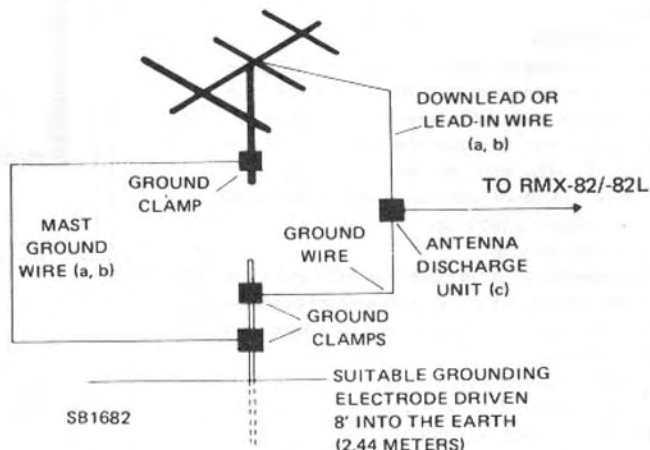


EXCLUSIVE NOTES FOR THE U.S.A.

Outdoor Antenna Grounding

If an outside antenna is connected to the receiver/tuner, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1978, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure.

- a. Use No. 10 AWG copper or No. 8 AWG aluminum or No. 17 AWG copper-clad steel or bronze wire, or larger as ground wires for both mast and lead-in.
- b. Secure lead-in wire from antenna to antenna discharge unit and mast ground wire to house with stand-off insulators, spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
- c. Mount antenna discharge unit as closely as possible to where lead-in enters house.



SWITCHES AND CONTROLS

(1) Power Button

Press the power button to turn on the unit. When the power is on, the frequency display will be illuminated. Press the button a second time to turn off the power.

(2) Headphone Jack

For private listening, plug your headphones into this jack, which cuts off the sound from speakers. The volume of the headphone sound can be regulated with the volume control.

(3) Power Level Indicator

Displays the output levels from the amplifier section of the unit. The wattage marked above each LED is applicable to 8-ohm speakers.

(4) Bass/Treble Tone Controls

Two separate controls regulate bass and treble respectively. BASS is for the low frequency range and TREBLE for high frequency range. Turn each knob clockwise to increase the response, and counterclockwise to reduce it. A flat response is obtained when both controls are at zero position. Use the controls effectively according to your taste or room conditions to achieve optimal sound performance.

(5) 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.

(6) Tape Monitor Button

Depress this button when you wish to listen to the signal from tape deck. In the released position, the unit operates in the mode selected by the function selector.

(7) Function Selector

The Function Selector works only when the Tape Monitor (TAPE) button is in the released (OFF) position. Depress PHONO button to reproduce signal from turntable, and TUNER button to listen to radio broadcasts.

(8) Loudness Button

The human ear has a tendency to become less sensitive to very low or high frequencies when listening at reduced volume levels. This button activates a compensation function that boosts those frequencies so that a more natural sound is heard.

(9) Volume Control

This knob regulates the volume level. Rotate the knob clockwise to raise the volume level, and counterclockwise to reduce it. When the knob is turned fully counterclockwise, no sound is produced. Always have the volume control set to minimum before you turn on power.

(10) Tuning Knob

Use this knob to tune in to radio broadcasts.

(11) FM Mode/Muting Button

When this button is pressed to ON, any FM broadcast is received monaurally. Be sure to leave the button in the released (OFF) position during normal stereo FM reception. In the OFF position, interstation noise generated when tuning in an FM station will be reduced.

(12) AM/FM Selector

Depress AM button for AM signal reception, and FM button for FM signal reception. The RMX-82L receives AM broadcasts in either MW or LW mode. In addition to the AM/FM selector button, the unit also has an MW/LW selector button. For FM reception, depress the

AM/FM selector button. For MW or LW reception, first release the AM/FM selector button and then leave the MW/LW selector button in released position for MW reception, or depress it for LW reception.

(13) Frequency Display

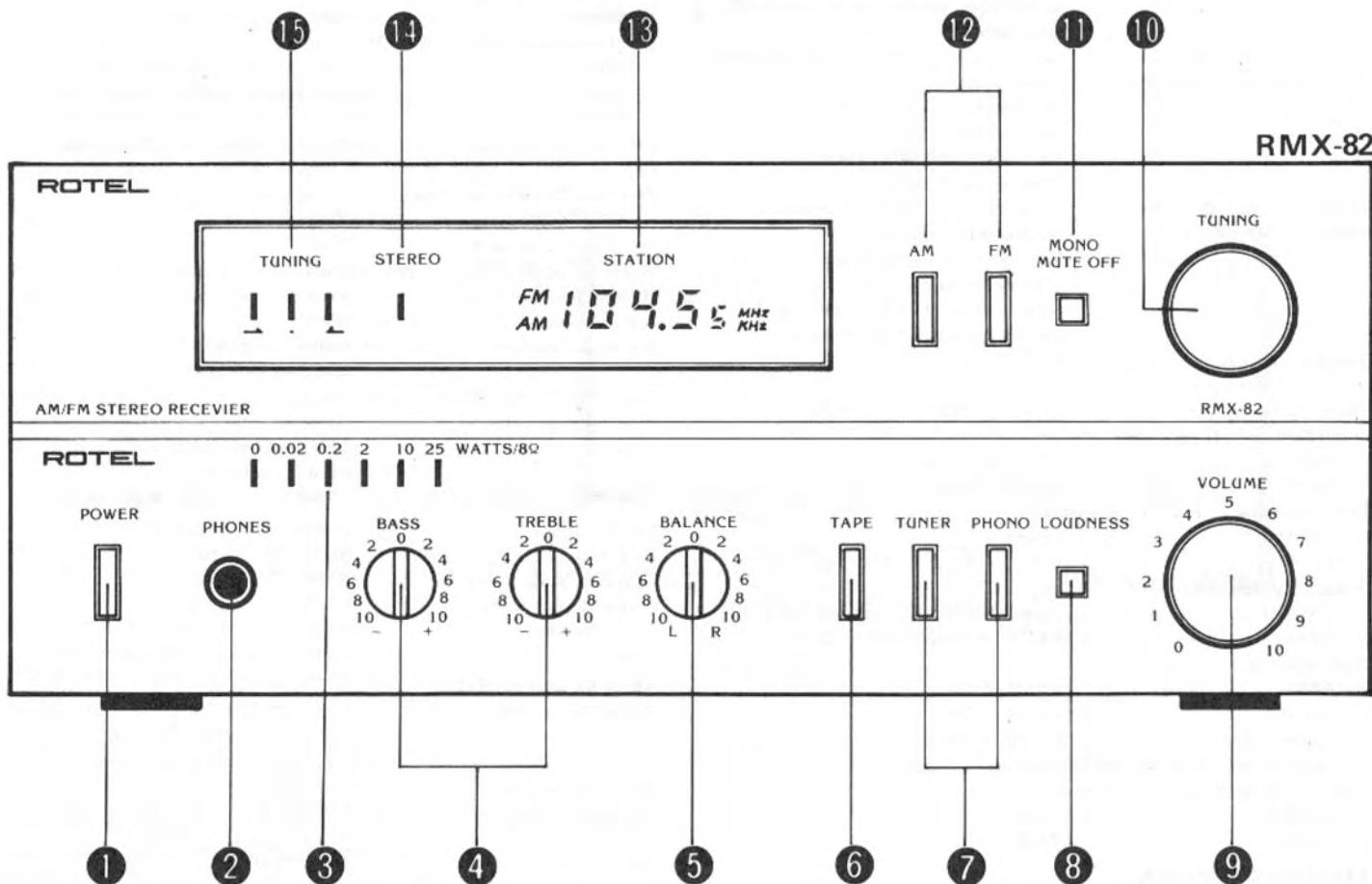
Indicates frequency currently tuned in, along with notations "FM" and "MHz" in FM reception, or "AM" and "kHz" in AM (or MW/LW) reception.

(14) Stereo Indicator

Glowes when stereo broadcasting signal is tuned in. Note that when stereo signal is very weak, the unit gives only monaural reproduction. In that case, the indicator will not light up even though the unit is tuned to a stereo program.

(15) Tuning Indicator

Use this indicator when tuning in to an FM station. The center LED will light up when the FM station is correctly tuned in. If the LED on either side lights up while tuning, that means the unit is slightly mistuned. To achieve correct tuning, turn the tuning knob a little to the left if the right-hand LED is illuminated, and to the right if the left-hand LED is on, until the center LED lights up.



OPERATION

- Before commencing operation, check to see that all connections are properly made.
- Always be sure to set the volume control to the minimum position before turning on power.
- Set tone controls and loudness button as desired.

Listening from Turntable

1. Set Tape Monitor button to released (OFF) position.
2. Depress PHONO button on the function selector.
3. Start the play, then raise the volume.

Listening to Radio Broadcasts

1. Set Tape Monitor button to released (OFF) position.
2. Depress TUNER button on the function selector.
3. Depress AM or FM button.
(On RMX-82L, set the AM/FM selector button to AM or FM. For AM reception, also set the MW/LW selector button to the appropriate position.)
4. Tune in to the desired station with the tuning knob.
5. Raise the volume to the desired level.

Playing Back Tape Deck

1. Depress Tape Monitor button to ON.
2. Start playback.
3. Raise the volume.

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Power Output . . . . .	.25 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000Hz with no more than 0.08% total harmonic distortion.
Total Harmonic Distortion	No more than 0.08% (continuous rated power output) No more than 0.02% (continuous 1/2 rated power output) No more than 0.04% (1 watt per channel power output, 8 ohms)
Intermodulation Distortion	No more than 0.05% (continuous rated power output) No more than 0.09% (continuous 1/2 rated power output) No more than 0.05% (1 watt per channel power output, 8 ohms)
Output: Speaker	8-16 ohms
Headphone	4-16 ohms
Damping Factor . . . . .	.35 (20 to 20,000Hz, 8 ohms)
Input Sensitivity/Impedance:	
PHONO . . . . .	.25mV/47 kohms
TAPE . . . . .	.150mV/42 kohms
Overload Level (T.H.D. 0.5%, 1kHz):	
PHONO . . . . .	.185mV
TAPE . . . . .	.5V
Frequency Response:	
PHONO . . . . .	.30 to 15,000Hz, ± 0.5 dB (RIAA STD)
TAPE . . . . .	.5 to 70,000Hz, +0dB, -1.0dB
Tone Control:	
BASS	± 10 dB, 50Hz
TREBLE	± 10 dB, 15kHz
Loudness Contour	+10dB (100Hz), +4dB (10kHz) (volume control set at -40dB position)
Signal-to-Noise Ratio (IHF, A network):	
PHONO . . . . .	.75dB
TAPE . . . . .	.95dB

FM TUNER SECTION

Usable Sensitivity (mono)11.2dBf/2.0 μ V

Recording Program Source

Play the desired program source according to the procedures noted above. The signal from the source will appear at TAPE MONITOR OUT terminals on the unit rear panel. Put the tape deck in the recording mode to record the signal. During recording, manipulating volume control, tone controls, etc. will have no effect on the signal being sent through the TAPE MONITOR OUT terminals.

PROTECTION CIRCUIT

To prevent accidental damage to the unit or speakers, a protection circuit is installed in the unit. If no sound is produced, a blown fuse may be the cause. Turn off the unit, disconnect the plug from the electrical outlet, and consult your dealer or qualified electrician.

HUM AND NOISE

In any high fidelity installation, hum may be caused by the interconnection of a turntable, tuner and amplifier, and speakers as the result of wiring, different grounding or locations of components.

If hum is experienced with your unit, disconnect everything but the speakers from the unit. Plug in the turntable and if hum or howling appears, move the turntable away from the

speakers as much as possible.

Note hum may also be induced by defective cable connections or by running the cables too close to a strong AC field.

When your unit picks up noise during the reception of broadcasts, causes are mostly due to external objects such as fluorescent lamps and house appliances using motor or thermostat, or others that may induce the noise.

Either relocating the unit away from the noise sources or using an improved outdoor antenna may readily solve the problem.

In the event you cannot find the cause, consult your dealer or a qualified electrician.

VOLTAGE SELECTION

Not available for U.K., Canada and Scandinavia
The unit is a variable voltage equipment that can run on 120V, 220V or 240V power supply. Your unit should already be preset at the proper voltage for use in your area. However, if you move to an area where the power supply voltage is different, consult your dealer.

50dB Quieting Sensitivity:

Mono . . . . .	.15.2dBf/3.2 μ V
Stereo . . . . .	.36dBf/35 μ V

Signal-to-Noise Ratio (at 65dBf):

Mono . . . . .	.75dB
Stereo . . . . .	.65dB

Harmonic Distortion (at 65dBf):

100Hz . . . . .	.0.1% (mono), 0.25% (stereo)
1kHz . . . . .	.0.1% (mono), 0.25% (stereo)
6kHz . . . . .	.0.2% (mono), 0.35% (stereo)

Frequency Response

.30 to 15,000Hz, +1.0dB, -1.5dB

Capture Ratio

.1.0dB

Alternate Channel Selectivity

(± 400 kHz)60dB

Spurious Response Ratio

.70dB

Image Response Ratio

.40dB

IF Response Ratio

.75dB

AM Suppression Ratio

.55dB

Stereo Separation

.100Hz/1kHz/10kHz,
35dB/45dB/35dB

Subcarrier Product Ratio

.45dB

SCA Rejection Ratio

.70dB

Antenna Input

.300 ohms balanced,
75 ohms unbalanced

AM TUNER SECTION

MW LW (RMX-82L)

Sensitivity200 μ V/m 600 μ V/m

Selectivity35dB 35dB

Signal-to-Noise Ratio50dB 50dB

Image Response Ratio50dB 50dB

IF Response Ratio40dB 40dB

AntennaBuilt-in ferrite loopstick antenna

MISCELLANEOUS

Power Requirement120V/60Hz, 220V/50Hz, 240V/50Hz

or 120, 220, 240V/50-60Hz

(depending on destinations)

Power Consumption160 watts

Dimensions (overall)279 (W) x 120 (H) x 206 (D) mm

11" x 4-23/32" x 8-1/8"

Weight (net)5.0kg/11.0 lbs.

• 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).