owner's manual

Quality. Uncompromised.

ROTEL®

RX-855

AM/FM STEREO RECEIVER

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 RX-855

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 excesssive 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 thinners 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.

SPEAKERS

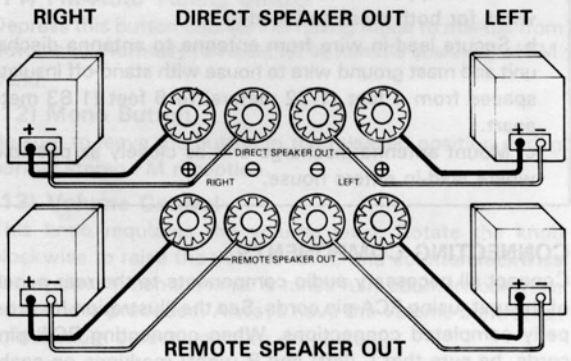
Use speaker systems with impedance ratings of 4-16 ohms, when you hook up 2 sets of speaker systems, be sure to speakers with ratings of 8-16 ohms. Before hooking up your speaker system, check its impedance, which should be indicated either on the back of the speaker, or in the speaker instruction manual.

HOOKING UP SPEAKERS

On the rear panel of the RX-855 are two sets of speaker terminals, "DIRECT" and "REMOTE", to which two speaker systems may be connected. Connect the speaker leads of the right-hand speaker to terminals RIGHT, and the speaker leads of the left-hand speaker to terminals LEFT. 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.

Note: When only one pair of speakers is used, be sure to connect them to DIRECT terminals, which is "straight-path", so headphone circuit is not connected. If wish to listen to headphone and privately, connect the remote speaker terminals and use the speaker remote button on front panel to turn speaker off.



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.

ANTENNA INSTALLATION AND CONNECTION

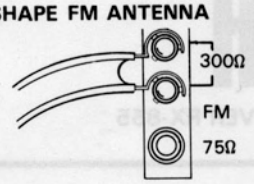
■ FM Antenna

For optimum FM reception, connect your 75-ohm coaxial antenna cable to the coaxial socket provided. For some countries, a 75-ohm→ 300-ohm conversion adapter is available for connection with 300-ohm antenna (external type or indoor T-shape wire type).

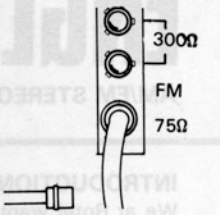
■ AM Antenna

The loop antenna is provided for optimum AM reception. Attach the loop antenna onto the antenna holder on the rear panel, and connect the lead wires to the antenna screw terminals marked "GND" and "AM". If an outdoor antenna is desired for better reception due to difficult reception area, connect such antenna to the same screw terminals as the loop antenna. Please note that the loop antenna should be left connected to the terminals even when the external antenna connected.

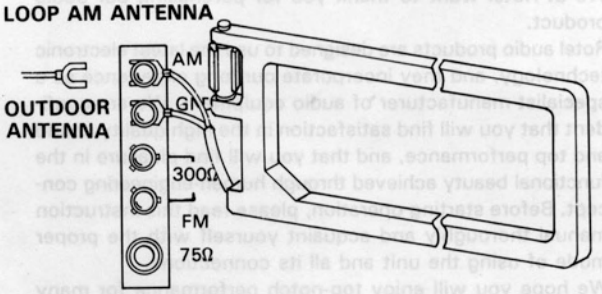
300Ω T-SHAPE FM ANTENNA



75Ω COAXIAL FM ANTENNA



LOOP AM ANTENNA



EXCLUSIVE NOTES FOR THE U.S.A.

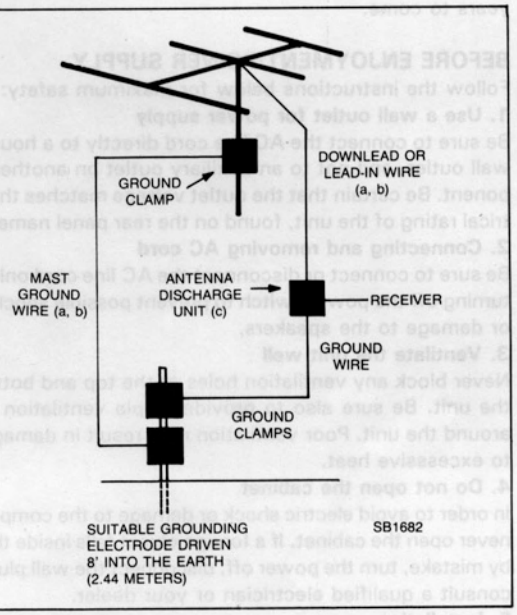
Outdoor Antenna Grounding

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.

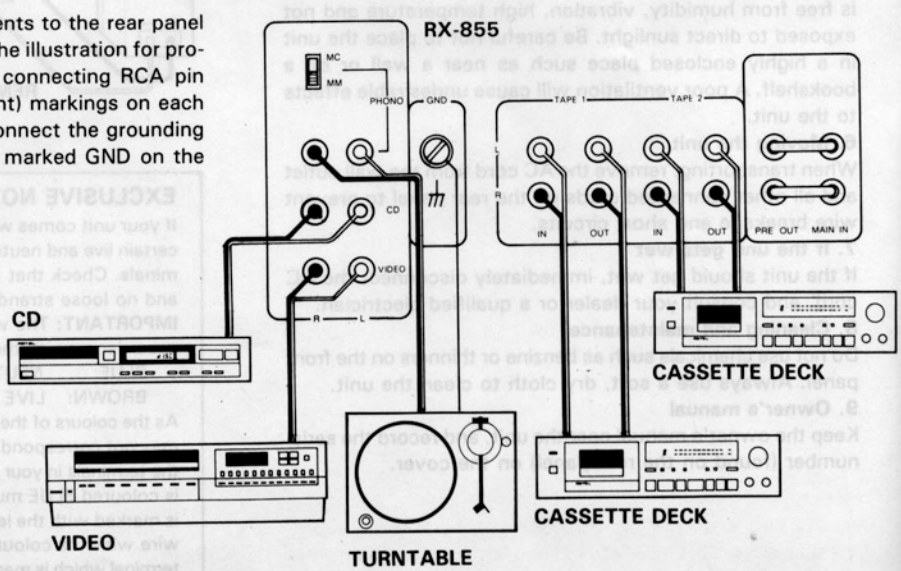
b. Secure lead-in wire from antenna to antenna discharge unit and mast ground wire to house with stand-off insulators, spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.

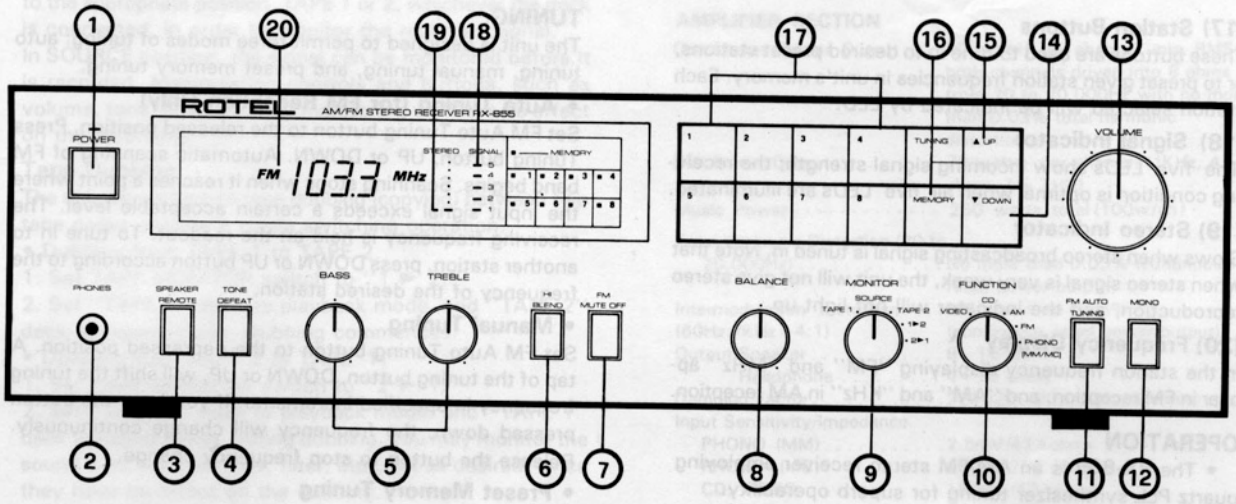
c. Mount antenna discharge unit as closely as possible to where lead-in enters house.



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 the receiver.





SWITCHES AND CONTROLS

(1) Power Button

This button turns on the unit. The LED indicator above it will glow when the power is on. Press the button a second time to turn off the power.

(2) Headphone Jack

Plug your headphones into this jack for private listening. When using headphones, remote speaker button should be in released (OFF) position so that sound is emitted only from the headphones. Volume level of headphone sound can be controlled with the volume control.

(3) Speaker Remote Button

Press the button to activate the speaker system connected to REMOTE speaker terminals on the rear panel. Release the button OFF to cut off sound from remote speakers.

(4) Tone Defeat Button.

Permits you to deactivate the tone control cireuit to provide an absolutely linear response when in ON position.

(5) Bass and Treble Tone Controls

These knobs allow you to regulate frequency response. Use them to tailor your favorite sound. The knob labled BASS is used for low frequency range, and the knob labeled TREBLE is high frequency range. Rotate each knob clockwise to boost the response, and counterclockwise to cut it.

(6) Hi-Blend Button

Allows you to reduce annoying noise mixed in with signal. This switch, however, should not be always left at OFF position unless it is necessary.

(7) FM Mute off Button

Press this button when receiving week FM signal. Leave the button in the released position during normal FM reception. In the released position, interstation noise generated when tuning in an FM station will be reduced.

(8) 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 left decreases the sound from the right speaker.

(9) Tape Monitor Selector

This switch allows you to play back, listen to source (CD or tuner) or dub tape. Be sure to set the knob to SOURCE position when listening to any source except that from tape deck. TAPE 1 or 2 position is used to play back the tape on deck connected to TAPE MONITOR 1 or 2 terminals on the rear. "1►2" or "2►1" position is for dubbing from" TAPE 1" to "TAPE 2" or vice versa

(10) Function Selector

The function selector is used to select program sources you wish to listen to. Note that the selector does not work when the Tape Monitor is activated.

VIDEO:
When playing the connected VCR (video cassette recorder) or (video laser disc player).

CD:
When playing the connected compact disc (CD) player.

PHONO:
When playing the connected turntable.

FM:
When listening to FM broadcast.

AM:
When listening to AM broadcast.

(11) FM Auto Tuning Button

Depress this button change FM tuning mode to manual from automatic. Normally released for automatic scanning of FM Band.

(12) Mono Button

Be sure to leave the button in the released position during normal stereo FM reception.

(13) Volume Control

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

(14) Tuning Button, DOWN

Used when tuning in a station whose frequency is lower than the reading on the frequency display

(15) Tuning Button, UP

Used when tuning in a station whose frequency is higher than the reading on the frequency display.

(16) Memory Button

To enter a given station frequency into the unit's memory circuit, press this button first, and then tap the desired station button. The LED indicator will be Lit while in activation.

(17) Station Buttons

These buttons are used to tune in to desired preset stations, or to preset given station frequencies in unit's memory. Each station selected will be indicated by LED.

(18) Signal Indicator

The five LEDs show incoming signal strength; the receiving condition is optimal when all five LEDs are illuminated.

(19) Stereo Indicator

Glows when stereo broadcasting signal is tuned in. Note that when stereo signal is very weak, the unit will not give stereo reproduction, and the indicator will not light up.

(20) Frequency Display

In the station frequency displaying "FM" and "MHz" appear in FM reception, and "AM" and "KHz" in AM reception.

OPERATION

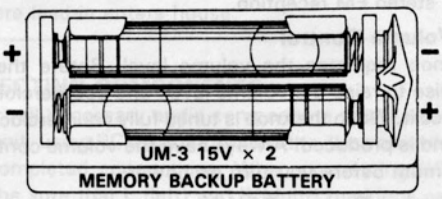
• The RX-855 is an AM/FM stereo receiver employing quartz PLL synthesizer tuning for superb operability.

By presetting the broadcasting frequency, optimum tuning will be obtained every time by simply pressing the selector button.

When the power switch is set to ON, power will be provided to the memory circuit from the AC mains. In the event of a power failure, or when the power switch is set to OFF or when the power cord is unplugged from the wall outlet, the memory circuit will be powered by dry batteries housed in the rear panel of the receiver. Consequently, the memory circuit will continue to function when the receiver is not being used, throughout the life of the batteries.

One presetting button can be used to memorize one AM and one FM stations. A total of 8 AM and 8 FM stations can be preset.

• Insert the SUM-3 ("AA") dry batteries (two) provided into the battery holder in the rear panel of the receiver, ensuring that the polarities agree with the markings inside the battery holder. This will ensure that power will be continuously supplied to the memory circuit. When the AC mains power is cut off the batteries will maintain the memory circuit energized instead. The life of the batteries is about one year. When is time to replace the batteries, replace them both with new ones.



Note: Replace the batteries with the power cord plugged in and the power switch set to ON. If the AC mains power is cut off during this operation, the contents of the memory circuit will disappear.

• 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.

Radio Listening

1. Set the Tape Monitor control in SOURCE position.
2. Select AM or FM on the function selector.
3. Tune in to the desired station by means of tuning or station buttons. (See section on "Tuning".)
4. Raise the volume to the desired level.

TUNING:

The unit is designed to permit three modes of tuning: auto tuning, manual tuning, and preset memory tuning.

• Auto Tuning (for FM Reception Only)

Set FM Auto Tuning button to the released position. Press Tuning button, UP or DOWN. Automatic scanning of FM band begins. Scanning stops when it reaches a point where the input signal exceeds a certain acceptable level. The receiving frequency is held on the readout. To tune in to another station, press DOWN or UP button according to the frequency of the desired station.

• Manual Tuning

Set FM Auto Tuning button to the depressed position. A tap of the tuning button, DOWN or UP, will shift the tuning frequency in specified increments. If you keep the button pressed down, the frequency will change continuously. Release the button to stop frequency change.

• Preset Memory Tuning

Tune in to the desired station in either auto or manual tuning mode. Press the Memory Program button. The MEMORY indicator will light up. Then, press any station button, 1 through 8, to enter the frequency into the memory circuit. Thereafter, you may recall the same frequency any time simply by pressing the same button.

Note that the MEMORY indicator remains on for several seconds only; you should press the appropriate station button to enter the station frequency during that time. If the MEMORY indicator turns off before you press the station button, entry cannot be made. In that case start again, following the above procedures. The above procedures should also be followed to change the station preset for a given station button.

Note: If you have turned off the unit, and turn it on again, the unit will tune in to the station frequency to which it was tuned immediately before turn-off.

Turntable Listening

1. Set the Tape Monitor Control in SOURCE position.
2. Select PHONO on the function selector.
3. Start the play, then raise the volume.

Phono MM/MC Selector

The unit has a built-in MC head amplifier. This selector is used to receive MM (moving magnet) or MC (moving coil) phono cartridge signal with an appropriate gain. In MC position, the built-in MC head amplifier is activated. When your turntable uses an MC cartridge, set the slector to MC position. When MM cartridge is used, set the selector to MM position.

Listening from Compact Disc Player or Video Cassette Recorder

1. Set the Tape Monitor Control in SOURCE position.
2. To listen to a compact disc, select CD on the function selector: select VIDEO to play video cassette tape.
3. Put the compact disc player or video cassette recorder in the play mode according to instructions given for the equipment.
4. Raise the volume to the desired level.

Tape Deck Playback

1. Turn the Monitor Control to TAPE 1 or TAPE 2, according to the tape deck you wish to use.
2. Start playback.
3. Raise the volume.

Recording Program Source

Play record or tune in desired station. The signal from the source will appear at TAPE MONITOR "OUT" terminals. Set the tape deck to the record mode to record the signal. If

your deck is the 3-head type, set TAPE MONITOR switch to the appropriate position, TAPE 1 or 2, whichever the deck is connected, in order to monitor the recorded signal.
In SOURCE position, the signal can be monitored before it is recorded. Manipulating controls and buttons, such as volume, tone, filter, etc., for monitoring will have no effect on the recording.

Tape Dubbing

The unit allows tape-to-tape dubbing (copying) between two tape decks only by a single switching operation.

• Dubbing from TAPE 1 to TAPE 2.

1. Set TAPE MONITOR switch to "1 ► 2."
2. Set "TAPE 1" deck to playback mode, and "TAPE 2" deck to record mode. Dubbing commences.

• Dubbing from TAPE 2 to TAPE 1.

1. Set TAPE MONITOR switch to "2 ► 1."
2. Set "TAPE 2" deck to playback mode, and "TAPE 1" deck to record mode. During dubbing, you may monitor the sound with volume, tone, filter, etc., set as desired, since they have no effect on the dubbing.

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 canot 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.

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Power Output	50 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000Hz with no more than 0.03% total harmonic distortion.
DIN Power Output	70 watts per channel (1KHz, 4 ohms, 1% THD)
Music Power	250 watts total (100w/ch)
Total Harmonic Distortion (20 to 20,000Hz)	No more than 0.03% (continuous rated power output)
Intermodulation Distortion (60Hz:7KHz = 4:1)	No more than 0.05% (continuous rated power output)
Output:Speaker	8—16 ohms
Headphone	4—16 ohms
Damping Factor	280 (20—20,000Hz, 8 ohms)
Input Sensitivity/Impedance	
PHONO (MM)	2.5mV/47 kohms
PHONO (MC)	200μV/200 ohms
CD, VIDEO	150mV/47 kohms
TAPE	150mV/47 kohms
Overload Level (THD 0.5%, 1KHz)	
PHONO	27mV (MC), 300mV (MM)
TAPE, CD, VIDEO	5V
Frequency Response	
PHONO	20 to 20,000Hz, ±0.2dB (RIAA STD)
TAPE, CD, VIDEO	20 to 30,000Hz +0dB, −1.0dB
Tone Control	
BASS	±10dB (100Hz)
TREBLE	±10dB (10kHz)
Signal-to-Noise Ratio (1HF, A network)	
PHONO	70dB (MC), 80dB (MM)
TAPE, CD, VIDEO	102dB

FM TUNER SECTION

Usable Sensitivity (mono)	10.8dBf/0.95μV (75 ohms)
DIN Sensitivity (26dB S/N, 75 ohms)	
50dB Quieting Sensitivity	
Mono	15.2dBf/1.5μV (75 ohms)
Stereo	37.2dBf/20μV (75 ohms)
Signal-to-Noise Ratio (at 65dBf)	
Mono	80dB
Stereo	75dB
Harmonic Distortion (at 65dBf)	
1kHz	0.07% (mono), 0.25% (stereo)
Frequency Response	30 to 15,000Hz, +1dB, −1dB
Capture Ratio	1.0dB
Alternate Channel Selectivity (±400kHz)	63dB
Spurious Response Ratio	95dB
Image Response Ratio	70dB
IF Response Ratio	95dB
AM Suppression Ratio	58dB
Stereo Separation 100Hz/1kHz /10kHz	43dB/46dB/38dB
Subcarrier Product Ratio	60dB

AM TUNER SECTION

Sensitivity	350μV/m
Selectivity	27dB (Wide), 42dB (Narrow)
Signal-to-Noise Ratio	60dB
Image Response Ratio	40dB
IF Response Ratio	40dB

MISCELLANEOUS

Power Consumption	200 watts
Dimensions (overall)	430(W) × 117(H) × 340(D) 16-15/16" × 4-19/32" × 13-3/8"
Weight (net)	11.5kg/25.3 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).