

ROTEL

Owner's manual

RT-1084

AM/FM HD Radio Tuner







CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is to alert the user to the presence of uninsulated dangerous voltages inside the product's enclosure that may constitute a risk of electric shock.



This symbol is to alert the user to important operating and maintenance (service) instructions in this manual and literature accompanying the product.

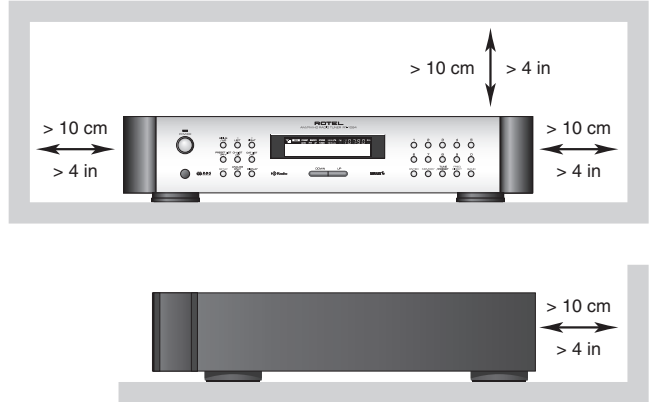
APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, INSERT FULLY.

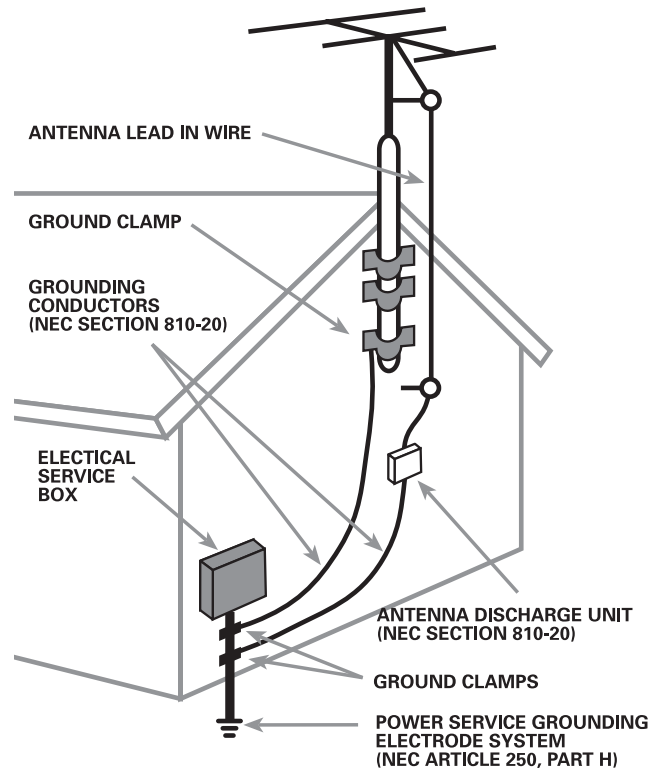
ATTENTION: POUR EVITER LES CHOCES ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS ARTICLE 810: "RADIO AND TELEVISION EQUIPMENT"



Rotel products are designed to comply with international directives on the Restriction of Hazardous Substances (RoHS) in electrical and electronic equipment and the disposal of Waste Electrical and Electronic Equipment (WEEE). The crossed wheelie bin symbol indicates compliance and that the products must be appropriately recycled or processed in accordance with these directives.



This symbol means that this unit is double insulated. An earth or ground connection is not required.

Notice

The **COMPUTER I/O connection** should be handled by authorized person only.

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna. (TV, radio, etc.)
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for additional help.

Caution

This device complies with part 15 of the FCC Rules operation is subject to the following to conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE TO CATV SYSTEM INSTALLER: Call the CATV system or antenna installer's attention to Article 820-40 of the NEC. This provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical. See installation diagram.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio or TV communications. There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the unit and the television tuner.
- Connect the unit to an AC power outlet on a different electrical circuit.
- Consult your authorized Rotel retailer for assistance.

Important Safety Instructions

WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to moisture or water. Do not expose the unit to dripping or splashing. Do not place objects filled with liquids, such as vases, on the unit. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.

Read all the instructions before connecting or operating the component.

Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Clean the enclosure only with a dry cloth or a vacuum cleaner.

Do not use this unit near water.

You must allow a minimum 10 cm or 4 inches of unobstructed clearance around the unit. Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling.

Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel. (USA: 120 V/60Hz)

Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable. A polarized plug has two blades, with one wider than the other. A grounding plug has two blades plus a third grounding prong. These are provided for your safety. Do not defeat grounding and/or polarization safety provisions. If the supplied plug does not fit your outlet, please consult an electrician for replacement of the obsolete outlet. Do not use extension cords.

The main plug of the power cordset is a disconnect device of the apparatus. In order to completely disconnect the apparatus from the supply mains, the main plug of the power cordset should be unplugged from the mains (AC) outlet. The stand-by LED indicator will not be lit up to show the power cord is unplugged.

Do not route the power cord where it will be crushed, pinched, bent, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where the cord exits the back of the unit.

The power cord should be unplugged from the wall outlet during a lightning storm or if the unit is to be left unused for a long period of time.

Use only accessories specified by the manufacturer.

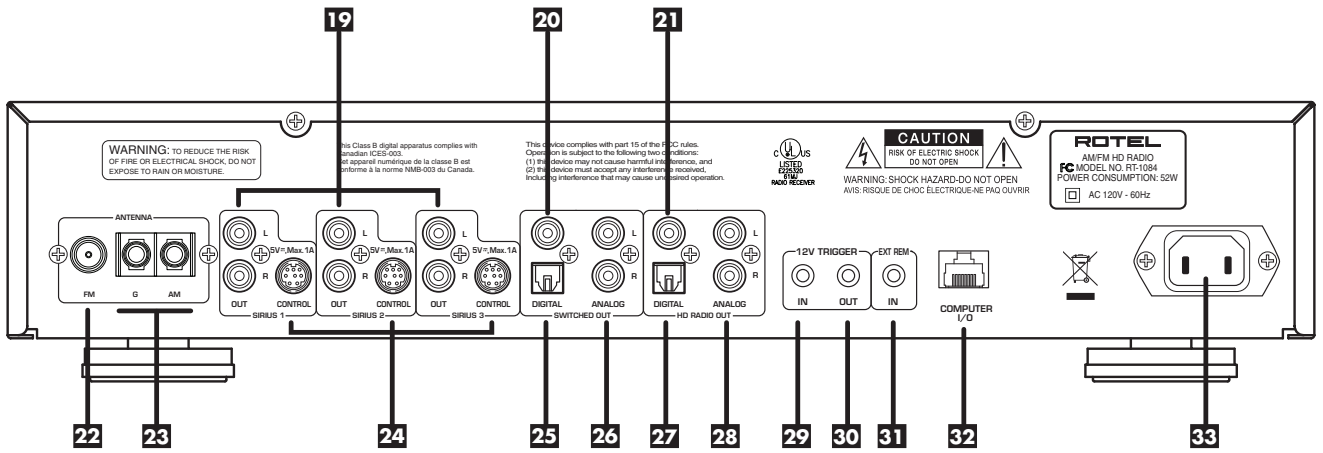
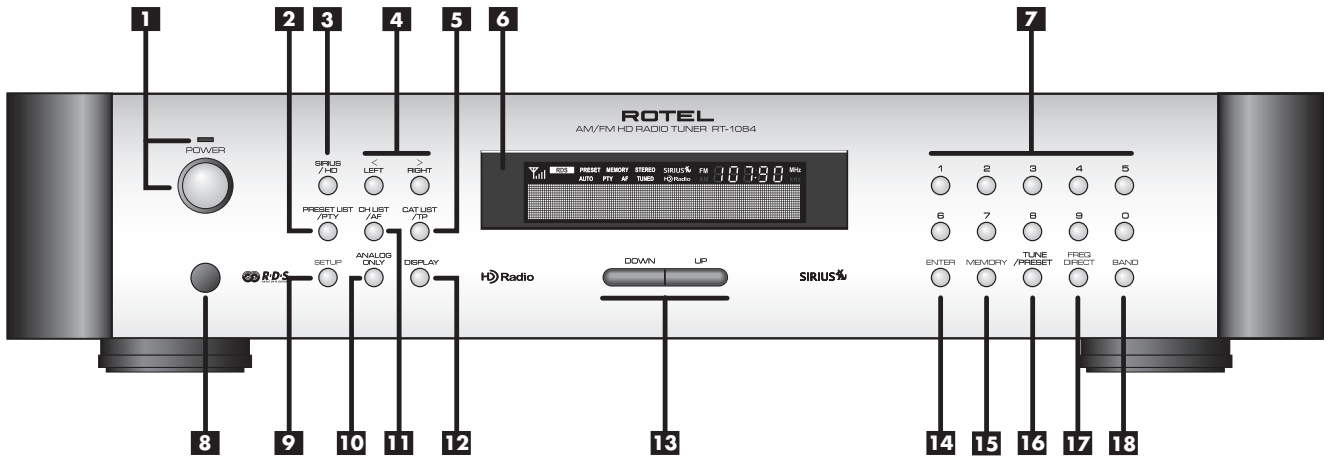
Use only with a cart, stand, rack, bracket or shelf system recommended by Rotel. Use caution when moving the unit in a stand or rack to avoid injury from a tip-over.

Use Class 2 wiring for speaker connections to ensure proper installation and minimize the risk of electrical shock.

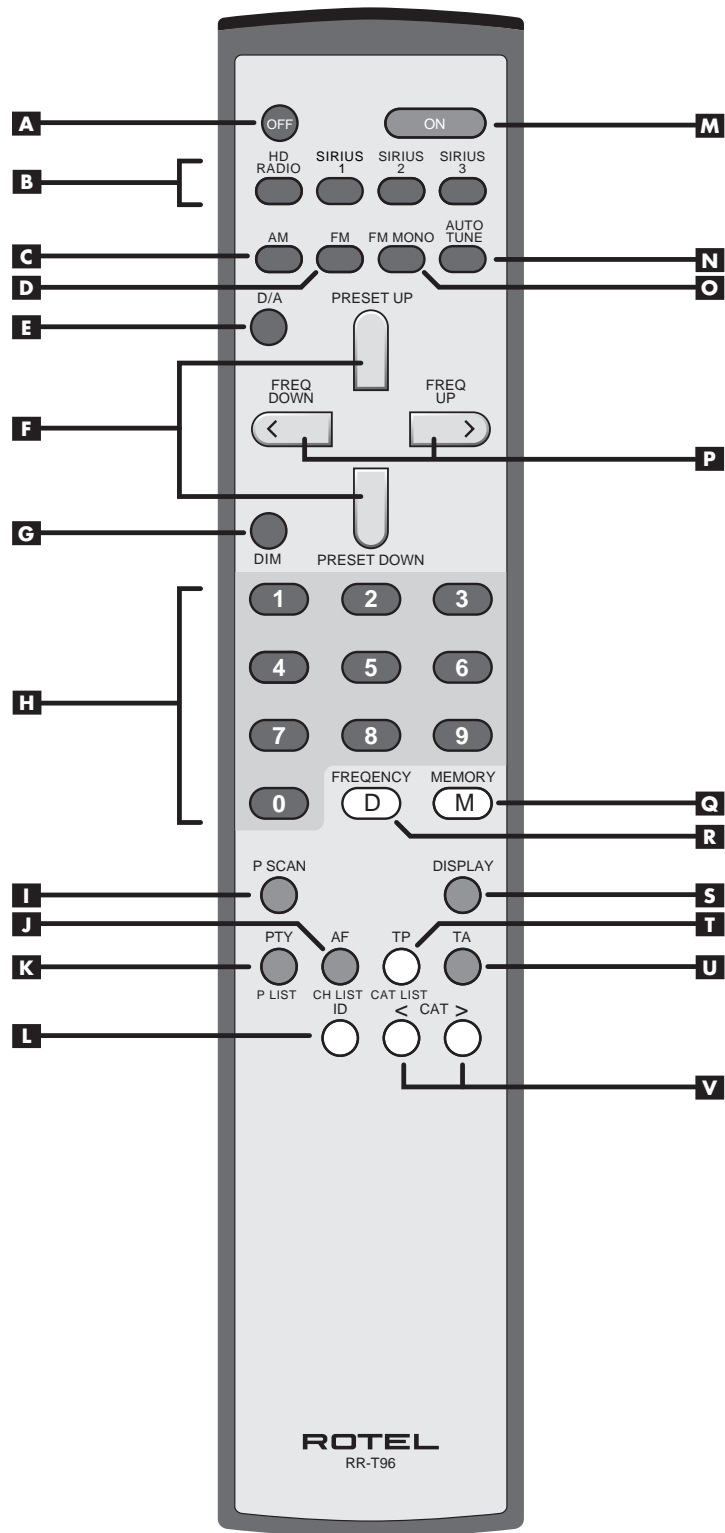
Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:

- The power supply cord or plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit shows signs of improper operation
- The unit has been dropped or damaged in any way

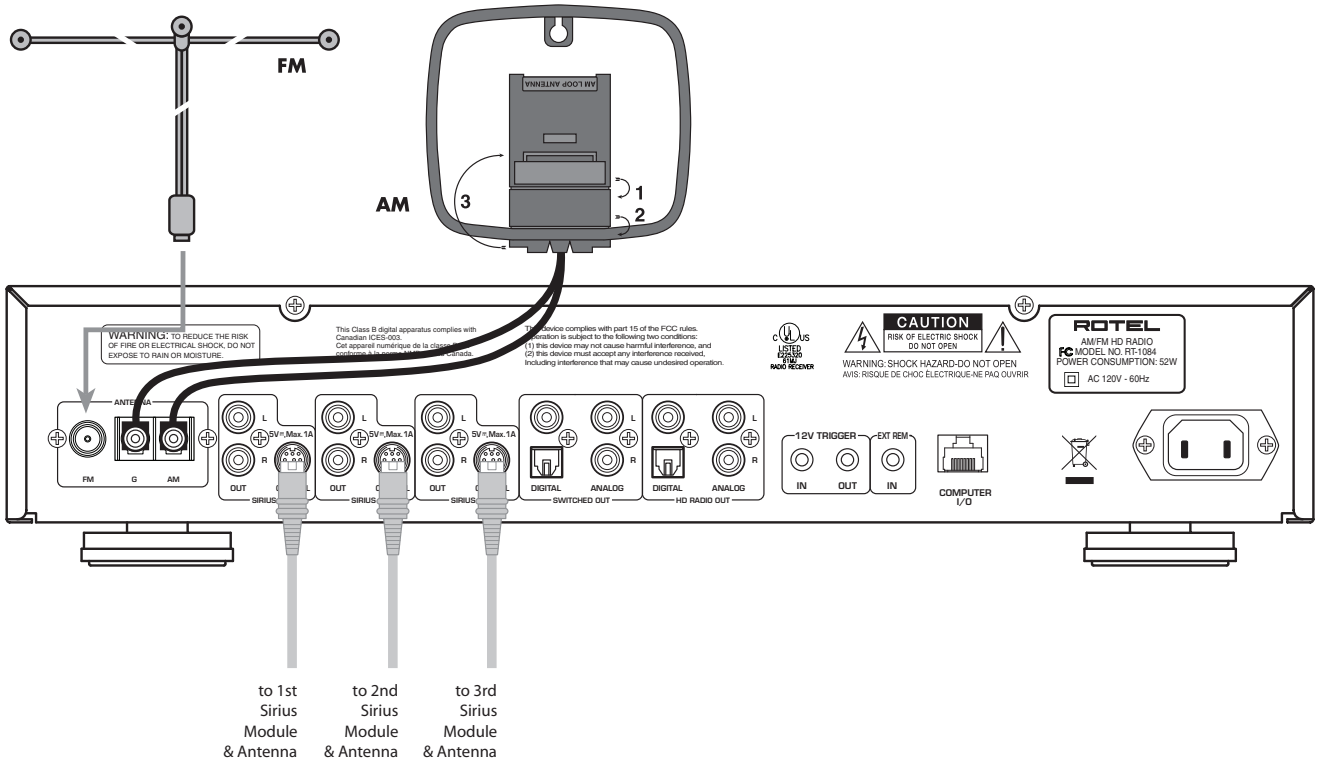
1: Controls and Connections



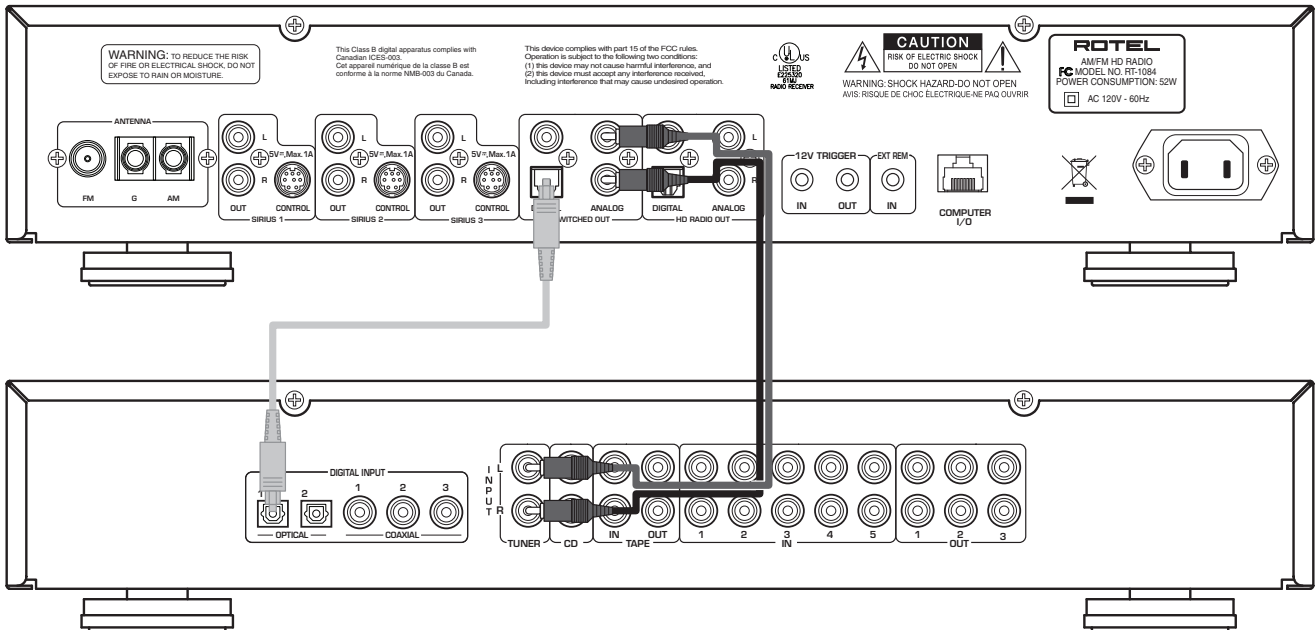
2: RR-T96 Remote



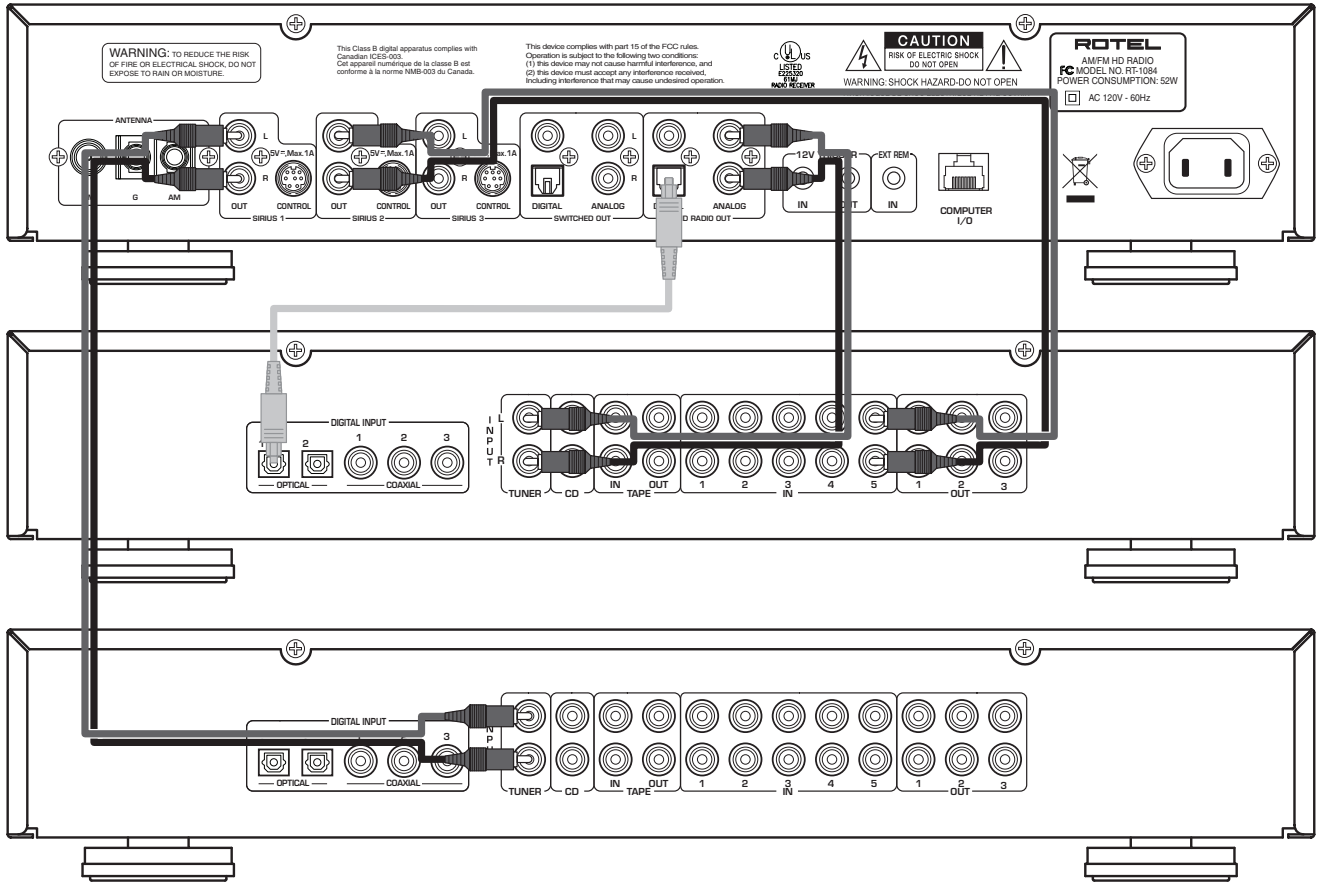
3: Input Connections



4: Single Room Outputs



5: Multi-Room outputs



**Turn off the RT-1084
and the audio system
before making connections!**

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Boxed numbers refer to RT-1084 illustration.
Boxed letters refer to RR-T96 illustration.

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About Rotel

A family whose passionate interest in music led them to manufacture high fidelity components of uncompromising quality founded Rotel over 45 years ago. Through the years that passion has remained undiminished and the family goal of providing exceptional value for audiophiles and music lovers regardless of their budget, is shared by all Rotel employees.

The engineers work as a close team, listening to, and fine tuning each new product until it reaches their exacting musical standards. They are free to choose components from around the world in order to make that product the best they can. You are likely to find capacitors from the United Kingdom and Germany, semi conductors from Japan or the United States, while toroidal power transformers are manufactured in Rotel's own factory.

Rotel's reputation for excellence has been earned through hundreds of good reviews and awards from the most respected reviewers in the industry, who listen to music every day. Their comments keep the company true to its goal – the pursuit of equipment that is musical, reliable and affordable.

All of us at Rotel, thank you for buying this product and hope it will bring you many hours of enjoyment.

Getting Started

Thank you for purchasing the Rotel RT-1084 AM/FM HD Radio Tuner. When used in a high-quality music audio system, it will provide years of musical enjoyment.

The RT-1084 is a full featured, high performance component. All aspects of the design have been optimized to retain the full dynamic range and subtle nuances of your music. Rotel's Balanced Design Concept combines advanced circuit board layout, comprehensive parts evaluation, and extensive listening tests for superior sound and long term reliability.

The printed circuits are designed with Symmetrical Circuit Traces so that the precise timing of the music is faithfully preserved. Metal film resistors and polystyrene or polypropylene capacitors are used in important signal paths. All aspects of this design have been examined to ensure the most faithful music reproduction.

The main functions of the RT-1084 are easy to install and use. If you have experience with other stereo systems, you shouldn't find anything perplexing. Simply plug in the associated components and enjoy.

Key Features

- Multicast capable HD Radio® for high quality stereo AM and CD-quality FM broadcasts.
- Provisions for controlling up to three optional Sirius® satellite radio modules.
- RBDS (Radio Broadcast Data Service) capability for the USA.
- Analog and digital outputs.
- Switched outputs (AM/FM/HD Radio, Sirius 1, Sirius 2, and Sirius 3) for connection to a single stereo system.
- Multiple simultaneous outputs allow different radio stations (AM/FM/HD Radio, Sirius 1, Sirius 2, Sirius 3) to be sent to separate stereo systems.
- Full-function wireless remote control.

- User-friendly Fluorescent Display.
- 30 Station Presets each for AM/FM/HD Radio, Sirius 1, Sirius 2, and Sirius 3 to memorize favorite stations.
- 12 volt trigger connections for remote turn on/off by Rotel preamplifiers and surround processors.
- Computer I/O connection for operation of the unit from a home automation controller or a computer with special software.

Unpacking

Carefully remove the RT-1084, the remote control, and accessories from the shipping carton. Save the shipping carton and all enclosed packing material for future use. Shipping or moving the unit in anything other than the original packing material may result in severe damage.

Keep the original sales receipt. It is your best record of the date of purchase, in the event warranty service is ever required.

Placement

Like all audio components that handle low-level signals, the RT-1084 can be affected by its environment. Avoid placing the RT-1084 on top of other components.

The RT-1084 generates some heat as part of its normal operation. **Allow 10 cm (4 inches) of clearance around the chassis, and reasonable airflow through the installation location, to prevent overheating.**

Place the unit on a solid shelf. We recommend installing the RT-1084 in furniture designed to house audio components. Such furniture is designed to reduce or suppress vibration which can adversely affect sound quality. Ask your authorized Rotel dealer about component furniture and proper installation.

The RT-1084 is supplied with an RR-T96 remote control and must be placed where the infrared signal from the remote can reach the front panel Remote Sensor.

Cables

Keep power cords, digital cables, and audio cables away from each other. This will minimize the chance of the audio signal cables picking up noise or interference from the power cords or digital cables. Using high quality, shielded cables will also help to prevent noise or interference. If you have any questions see your authorized Rotel dealer for advice about the best cable to use with your system.

Remote Control

The RT-1084 is supplied with an RR-T96 remote control to operate many of the features of the tuner.

Remote Sensor **8**

The remote sensor receives infrared signals from the remote control. It must be unobstructed or the remote control will not work properly. Do not cover or block the sensor.

The operation of the remote sensor can also be affected if exposed to bright sunlight or certain types of lighting (such as halogen lights) that emit infrared light. In addition remote control functions may not work reliably if the batteries in the RR-T96 are weak.

NOTE: To use the remote, aim it at the remote sensor on the front panel of the RT-1084.

Remote Control Batteries

Three UM-4/AAA size batteries (supplied) must be installed before the remote control can be used. To install the batteries, remove the cover on the back of the RR-T96. Install the batteries observing polarity as shown in the battery well. Test the control for proper operation, then replace the cover. When the batteries become weak, the remote control won't operate the RT-1084 consistently.

NOTE: Remove the batteries from the remote if it will not be used for a long period of time. Do not leave run down batteries in the remote control; they can leak corrosive chemicals which will damage the unit.

CONNECTIONS

The RT-1084 provides a set of switched outputs for use with a single-room stereo system. These outputs allow you to listen to AM/FM/HD Radio, or three optional Sirius satellite radio modules.

Alternatively, separate AM/FM/HD Radio outputs and outputs for three optional Sirius modules can be independently connected for simultaneous use with a multi-room system.

Input connection include FM antenna, AM antenna, and connections for three optional Sirius modules.

Additional connections include computer interface, a remote IR connection, 12V trigger connections for remote turn-on and AC power input.

NOTE: Do not plug any system component into an AC source until system hookup is complete and you are sure that all connections have been properly made.

Antenna Connections

Two antennas provide AM, FM, and HD Radio reception. In addition, up to three optional Sirius Radio modules can be connected to the RT-1084.

AM Loop Antenna **23**

The RT-1084 includes a loop antenna to receive AM radio signals. Remove this antenna from the box and locate it near the RT-1084.

Connect the 300 ohm twin-conductor wire from the loop antenna to the pair of screw terminals labeled AM LOOP, attaching one wire to each terminal. It does not matter which wire attaches to which terminal, but make sure that the connections are solid and that the two wires do not touch.

You may need to rotate or otherwise reorient the antenna to find the best position.

NOTE: To use an outdoor antenna, connect its 300 ohm twin-conductor wire instead of the loop antenna, only after a professional contractor has installed the antenna system in accordance with local electrical codes.

FM Antenna **22**

The RT-1084 is supplied with a T-shaped indoor FM antenna. Connect the attached coax F-type plug to the FM antenna connector on the RT-1084. For best reception, unfold the T-shaped antenna. Eyelets at both ends of the T allow tacking the antenna to a wall, if desired. Experiment with positioning for best reception.

NOTE: To use an outdoor antenna, connect its 75 ohm coax lead wire to the FM connector instead of the indoor wire antenna, only after a professional contractor has installed the antenna system in accordance with local electrical codes.

Sirius Radio Modules **24**

The RT-1084 can control up to three optional Sirius satellite radio modules. To connect a Sirius module:

1. Connect the first module's supplied 8-pin control cable to the module and to the SIRIUS 1 CONTROL connector on the back of the RT-1084.
2. Connect the antenna to the Sirius module and orient the antenna for best satellite reception. See additional details in the Sirius section at the end of this manual. Alternatively, connect an outdoor Sirius antenna to the module.

Repeat for additional modules, connecting the second module to the SIRIUS 2 CONTROL connection and the third module to the SIRIUS 3 CONTROL connection.

Output Connections for Single-Room System

The RT-1084 is several tuners in one: an AM/FM/HD Radio tuner and up to three Sirius satellite radio tuners (with optional modules).

When connecting the RT-1084 to a single-room audio system, it is generally best to use the SWITCHED OUT connections. Signals from currently selected tuner (AM/FM/HD Radio, or Sirius modules) are sent to the audio system.

With the SWITCHED OUT connections, whichever type of tuner is currently selected is automatically sent to the audio system.

Analog Outputs 26

A pair RCA outputs sends a fixed-level analog stereo signal from the RT-1084 to a pre-amplifier, surround processor, or integrated amplifier.

1. Connect an RCA audio cable from the *left* SWITCHED OUT ANALOG connector of the RT-1084 to the *left* channel tuner input on your system controller.
2. Connect the *right* SWITCHED OUT ANALOG connector to the *right* channel tuner input on your system controller.

NOTE: Analog outputs must be used for AM/FM or Sirius radio signals. Analog outputs may also be used for HD Radio signals.

Digital Outputs 20 25

A choice of two digital connectors (optical or coaxial) sends a digital HD Radio signal to a preamp or surround processor that has its own digital decoding.

Connect either the optical or coax digital output (depending on which type of input you have available on your surround processor) to one of the digital inputs on the surround processor.

You may need to configure the surround processor to associate the digital input with the Tuner source. Configure the Tuner source to use the digital input when a digital signal is available or analog inputs when a digital signal is not.

NOTE: The digital outputs send only HD Radio signals. Analog outputs must be used for analog AM/FM or Sirius radio signals.

Output Connections for Multi-Room System

There are separate connections for HD Radio (inc. AM/FM) and the three Sirius modules. These outputs allow simultaneous use of these tuners when connected to multiple audio systems or a multi-room audio system. When connected in this fashion, a listener in one room could listen to HD Radio while a listener in another room listens to Sirius radio.

Unswitched HD Radio Connections 21 27 28

Use the unswitched HD Radio outputs for AM, FM, or HD Radio signals when connecting the RT-1084 to multiple audio systems or to a whole-house audio system.

Analog Outputs:

1. Connect an RCA audio cable from the *left* HD RADIO OUT ANALOG connector of the RT-1084 to the *left* channel tuner input on your system controller.
2. Connect the *right* HD RADIO OUT ANALOG connector to the *right* channel tuner input on your system controller.

NOTE: Analog outputs must be used for AM/FM radio signals. Analog outputs may also be used for HD Radio signals, using the digital to analog converters in the RT-1084.

Digital Outputs:

Connect either the optical or coax digital output (depending on which type of input you have available) to one of the digital inputs on the surround processor or audio controller.

You may need to configure the surround processor to associate the digital input with the Tuner source. Configure the Tuner source to use the digital input when a digital signal is available or analog inputs when a digital signal is not.

NOTE: The digital outputs send only HD Radio signals. Analog outputs must be used for analog AM/FM radio signals.

Unswitched Sirius Connections 19

Use the unswitched Sirius outputs for Sirius signals from up to three optional modules when connecting the RT-1084 to multiple audio systems or to a whole-house audio system.

1. Connect an RCA audio cable from the *left* SIRIUS 1 ANALOG connector of the RT-1084 to the *left* channel tuner input on your system controller.
2. Connect the *right* SIRIUS 1 ANALOG connector to the *right* channel tuner input on your system controller.

Repeat, using the SIRIUS 2 outputs for a second module and the SIRIUS 3 outputs for a third module.

Other Connections

AC Input 33

Your RT-1084 is configured at the factory for the proper AC line voltage in the country where you purchased it (120 volts/60Hz in the USA and 230 volts/50Hz in Europe). The AC line configuration is noted on a decal on the back of your unit. Make sure that your unit is configured properly for your AC voltage.

Plug the supplied cord into the AC input receptacle on the back of the unit. Once all other rear panel connections are completed, plug the power cord into an AC wall outlet or switched AC outlet on another component.

12V TRIGGER Connections 29 30

The RT-1084 can be activated by a 12 volt trigger signal from a Rotel preamplifier.

These two connections provide an input to receive the 12 volt trigger signal from the preamp and an output to pass through the trigger signal to another component such as a Rotel power amplifier.

The trigger input accepts any control signal (AC or DC) ranging from 3 volts to 30 volts. When a cable is connected to the input and a trigger signal is present, the tuner is activated. When the trigger signal is interrupted, the tuner goes into standby mode. The front panel indicator light remains lit, but the display goes dark and the unit will not operate.

EXT REM. IN Jack 31

This 3.5mm jack receives command codes from industry-standard infrared receivers via hard-wired connections. This feature could prove useful when the unit is installed in a cabinet and the front panel sensor is blocked. Consult your authorized Rotel dealer for information on external repeaters and the wiring of a jack to fit the receptacle.

COMPUTER I/O Interface 32

The unit can be operated from a home automation controller or a computer running audio system control software from third-party developers. This control is accomplished by sending the operating codes normally sent by the RR-T96 remote over a hard-wired network connection from the computer.

The COMPUTER I/O input provides the necessary connection on the back panel. It accepts standard RJ-45 8-pin modular plugs, such as those commonly used in 10-BaseT UTP Ethernet cabling.

For information on the connections, software, and operating codes for computer control, contact your authorized Rotel dealer.

OPERATING THE TUNER

The following explanations will help you get familiar with the features and controls. When a function is available on both the front panel and the remote, a number (see front panel illustration) and a letter (see remote control illustration) are shown in the instructions. When only one identifier appears, that control is available only on the front panel or the remote, but not both.

This section covers basic controls. Following sections provide instructions for AM/FM HD Radio tuner functions, RDBS instructions, and Sirius radio instructions.

**POWER Button 1
ON/OFF Buttons A M**

The front panel POWER button is a master power switch. Press this button to activate the unit. The LED above the POWER button lights when the tuner is activated.

With the front panel POWER button in the ON position, the power ON and OFF buttons on the remote provide discrete ON and OFF commands to activate the unit or put it in standby mode.

NOTE: *The front panel POWER button must be in the on position for the remote control ON and OFF buttons to work.*

Sirius Modules: When activating the tuner, optional Sirius modules may take several seconds to complete their power on sequence and lock on to a satellite signal.

Remote Sensor 8

This sensor receives IR signals from the remote control. Do not block this sensor.

Front Panel Display 6

The fluorescent display in the center of the RT-1084 provides status information used in operating the tuner.

**DIM Button G
DISPLAY Button 12 S**

Available only on the remote, the DIM button selects four display brightness settings: NORMAL, DIM1, DIM2, or OFF. When the display is OFF, pressing POWER ON/OFF buttons return it to the NORMAL mode. Press the button to cycle through the four settings.

You can also turn off the front panel display by pressing and holding for several seconds the DISPLAY button on the front panel remote. Pressing any control or button returns the display to its previous brightness setting.

NOTE: *When the tuner is turned off and back on, the display reverts to its normal setting.*

Tuner Select Buttons 3 B

Four Tuner Select buttons on the remote (HD RADIO, SIRIUS 1, SIRIUS 2, SIRIUS 3) determine the tuner to operate and the signal sent to the audio system through the switched outputs.

- **Press HD RADIO** to operate the AM/FM HD Radio tuner. Select AM or FM mode by pressing the AM or FM buttons on the remote.
- **Press SIRIUS 1, 2, or 3** to operate one of optional Sirius modules.

From the front panel:

The front panel has a single Tuner Select button, labelled SIRIUS/HD. Press this button to toggle through the four options: SIRIUS 1, SIRIUS 2, SIRIUS 3, or AM/FM HD RADIO. Indicators in the front panel display show the currently selected tuner. When listening to the AM/FM HD Radio, toggle between AM or FM modes by pressing the BAND button on the front panel

NOTE: *Switching to mono mode can be a useful way to improve the reception of weak or distant analog FM signals. Less signal strength is required for clean mono reception than for stereo reception.*

HD Radio AM/FM Tuning

The RT-1084 features a digital synthesized AM/FM tuner with RBDS and automatic HD Radio capabilities, including multicast capability.

HD Radio is an additional digital signal broadcast on the same frequency as standard analog AM and FM broadcasts. The HD Radio signal improves the sound quality and reduces reception problems such as multiplex interference. In addition, some stations broadcast two or more different programs, called multicasting.

HD Radio Operation

HD Radio reception is automatic. Just operate the RT-1084 as a standard AM/FM tuner. When you tune to a station that is broadcasting an HD Radio digital signal, the tuner will automatically switch from the conventional analog signal to the HD Radio signal. An HD Radio logo lights in the display to indicate digital reception. There may be a momentary pause as the tuner switches to the digital signal; this is completely normal.

Multicasting:

If a station is multicasting more than one HD Radio program, the front panel display shows the first program (HD1) with forward or backward arrows indicating the presence of additional programs. Pressing the < CAT > buttons on the remote or the < LEFT/RIGHT > buttons on the front panel advances to the next program (HD2) instead of advancing to the next frequency.

Because HD Radio reception is automatic, the following instructions apply to both conventional AM/FM reception and HD Radio reception, except where noted.

Analog-only reception

D/A Button **E**

Analog Only Button **IO**

You can prevent automatic tuning of HD Radio digital signals and force reception of only conventional analog AM/FM signals by pressing either the D/A button on the remote or the ANALOG ONLY button on front panel. Press either button again to switch back to automatic reception of HD Radio digital signals.

Selecting AM/FM

BAND Button **I3**

AM and FM Buttons **C D**

To select AM or FM from the front panel, press the BAND button to toggle between AM and FM. An indicator will light at the left portion of the display to confirm your choice.

Using the remote, press the AM or FM buttons to select the desired tuning band.

Overview of Tuning Options

The RT-1084 offers a wide range of tuning options. Here is an overview of the tuning options (more detailed information is provided in subsequent sections of this manual):

- **Manual frequency tuning** tunes up or down to the next station frequency (when in frequency tuning mode). Press and release a TUNING button (< FREQ DOWN/FREQ UP > on the remote) to tune.
- **Automatic frequency tuning** searches up or down to find the next receivable broadcast signal. Press and hold a TUNING button (< FREQ DOWN/FREQ UP > on the remote) for at least one second to search up or down.
- **Direct frequency tuning** lets you enter the desired station frequency digits. Press the DIRECT button (or the FREQUENCY DIRECT) button on the remote) and enter the digits using the NUMERIC buttons.
- **Numeric preset tuning** lets you directly enter the number of a memorized station preset. Enter the number of the memorized preset using the NUMERIC buttons.
- **Preset tuning** jumps up/down to the next memorized station preset. When in PRESET mode, pressing the UP/DOWN buttons on the front panel selects the next station preset. Press the TUNE/PRESET button on the remote to select PRESET tuning mode. Press the TUNE/PRESET button again to return to FREQUENCY tuning mode.

There is no need to switch tuning modes when using the remote. Press the PRESET UP/DOWN buttons to advance to the next station preset. Press the < FREQ DOWN/FREQ UP > buttons on the remote for frequency tuning.

- **Preset scan tuning** automatically scans through the memorized station presets, playing each for 5 seconds. Press the P. SCAN button on the remote to begin preset scanning. Press the button again to stop the scanning and listen to the desired preset.
- **RBDS (USA) tuning** provides a range of special tuning and search features based on data codes encoded with the broadcast signal. See the RBDS section of this manual for detailed information.

Manual Frequency Tuning

2 I3 N P

Manual frequency tuning advances to the next numeric station frequency, for example from 107.1 MHz to 107.2 MHz.

From the remote:

1. Make sure that AUTO is not illuminated in the front panel display. If necessary, press the AUTO TUNE button to turn the Auto feature off.
2. Press the < FREQ DOWN or FREQ UP > buttons on the remote to tune.

From the front panel:

1. Make sure that AUTO is not illuminated in the front panel display. If necessary, press the AUTO TUNE button on the remote to turn the Auto feature off.
2. Make sure that PRESET is not illuminated in the front panel display. If necessary, press the TUNE/PRESET button on the front panel to turn the Preset tuning feature off.
3. Press the UP or DOWN buttons on the front panel to tune.

Automatic Frequency Tuning

2 I3 N P

Automatic frequency tuning advances to the next frequency with a receivable broadcast signal.

From the remote:

1. Make sure that AUTO is illuminated in the front panel display. If necessary, press the AUTO TUNE button to turn the Auto feature on.
2. Press the < FREQ DOWN or FREQ UP > buttons on the remote to tune.

From the front panel:

1. Make sure that AUTO is illuminated in the front panel display. If necessary, press the AUTO TUNE button to turn the Auto feature on.
2. Make sure that PRESET is not illuminated in the front panel display. If necessary, press the TUNE/PRESET button on the front panel to turn the Preset tuning feature off.
3. Press the UP or DOWN buttons on the front panel to tune.

Direct Frequency Tuning FREQ DIRECT Button **17** **R** Numeric Buttons **7** **H**

If you know the frequency of the desired station, you may tune it directly using the FREQUENCY DIRECT button and the NUMERIC buttons.

1. Press the FREQ DIRECT button on the front panel or the FREQUENCY D button on the remote to change the NUMERIC buttons from station preset to Direct Access mode. The station frequency in the front-panel display will change to a series of bars, representing the digits of a station frequency, with the first bar flashing.
2. Enter the first digit of the station frequency using the NUMERIC buttons. The digit will appear in the frequency display and the second bar will flash. Enter the remaining digits of the frequency. When all of the necessary digits have been entered, the receiver will tune to the displayed station frequency. Note that entering a station frequency is slightly different for the USA and Europe:

In the USA:

FM87.5 MHz Press: 8>7>5
FM101.9 MHz Press: 1>1>9
AM1410 kHz Press: 1>4>1

Storing Station Presets **7** **15** **H** **Q**

The RT-1084 can store up to 30 station presets for recall at any time using the NUMERIC buttons on the front panel. To memorize a station:

1. Tune to the desired station, AM or FM.
2. Press the MEMORY button on the front-panel or remote. Two dashes following the station frequency prompt you to enter a preset number.
3. Press the number of the preset where you wish to store the station frequency. For example, to memorize the station as preset 3, press the 3 button. To memorize preset 15, press the 1 button followed by the 5 button.
4. A previously stored frequency is erased from memory when a new frequency is memorized for the same preset number.

Numeric Preset Tuning **7** **H**

To tune to a previously memorized station, just press the preset number on the NUMERIC buttons. For example, to tune to preset 3, press the 3 button. To tune to preset 15, press the 1 button and then press the 5 button.

Preset Tuning **13** **16** **F**

Tune up or down to the next stored station preset.

From the remote:

Press the PRESET UP or PRESET DOWN buttons.

From the front panel:

1. Make sure that PRESET is illuminated in the front panel display. If necessary, press the TUNE/PRESET button on the front panel to turn the Preset tuning feature on.
2. Press the UP or DOWN buttons on the front panel to tune.

PRESET SCAN Tuning **11**

Preset scan automatically scan through all memorized station presets, playing each for five seconds before moving to the next.

1. To start Preset Scan tuning, press the P. SCAN button on the remote.
2. To stop the Preset scanning when the desired station preset is reached, press the P. SCAN button again.

NOTE: If a PRESET station is currently tuned when the P. SCAN button is pressed, scanning will start with the next higher preset number and continue through all presets, stopping on the initial preset. If a PRESET station is not currently tuned when the button is pressed, scanning will start from PRESET 1 and continue to PRESET 30.

FM MONO Button **Q**

The FM MONO button on the remote changes the analog FM mode from stereo reception to mono reception. In stereo mode, a stereo signal is heard if the station is broadcasting a stereo signal. A stereo indicator lights in the display. In mono mode, a mono signal is heard even if the station is broadcasting a stereo signal.

RBDS Reception

The Rotel RT-1084 is equipped with RBDS (Radio Broadcast Data Service) capabilities for the United States. These broadcast systems provide additional functionality to FM radio reception by transmitting encoded information along with the radio signal. This signal is decoded by an RBDS receiver and can provide a range of informational features including:

1. a display of the station's name.
2. a display of the station's program content (e.g. ROCK or NEWS).
3. traffic information broadcasts.
4. a scrolling text display for announcements or information.

In addition, RBDS provides several advanced search features including:

1. Search for a station with the desired program content (PTY).
2. Search for traffic information (TP).
3. Search for stations broadcasting special traffic announcements (TA).

Ask your authorized Rotel dealer for information on RBDS broadcasting in your area.

NOTE: The RBDS features are entirely dependent on the broadcaster sending properly encoded signals. Thus, they will only be available where RBDS is currently implemented and where stations are broadcasting these data signals. If there are no RBDS stations, the RT-1084 will function as a standard radio receiver.

NOTE: RBDS services are only available on FM broadcasts. The features described are only operational in FM mode.

DISPLAY Button **12** **S**

There are five display options when the tuned station is broadcasting RBDS data and the RDS indicator in the display is lit. Press the DISPLAY button to step through the five available options:

1. Standard FREQUENCY display.
2. PROGRAM SERVICE name. This is typically the station's call letters, such as BBC1. If the current station is not broadcasting an RBDS signal, the display will show a blinking PS indication.

3. **PROGRAM TYPE.** This is a description of the station's content from a list of program types (for example: NEWS, CURRENT AFFAIRS, INFO, SPORT, EDUCATION, DRAMA, CULTURE, SCIENCE, VARIED, POP, ROCK, EASY LISTENING, LIGHT CLASSICAL, SERIOUS CLASSICAL, OTHER MUSIC, WEATHER, FINANCE, CHILDREN, SOCIAL AFFAIRS, RELIGION, PHONE IN, TRAVEL, LEISURE, JAZZ, COUNTRY, NATIONAL MUSIC, OLDIES, FOLK, and DOCUMENTARY). If the station is not broadcasting an RBDS signal, the display will show a blinking PT indication.
4. **CLOCK TIME.** A time and date display broadcast by the station. If the station is not broadcasting an RBDS signal, the display will show a blinking CT indication.
5. **RADIO TEXT.** Scrolling text messages broadcast by the station. If the station is not broadcasting an RBDS signal, the display will show a blinking RT indication.

PTY Button **2** **K**

The PTY search function scans for RBDS stations broadcasting a particular type of program.

1. Press the PTY button on the remote or the PRESET LIST/PTY button on the front panel. The current RBDS program content type appears in the display.
2. If desired, change to a different PROGRAM TYPE using the DOWN/UP buttons to scroll through the list.
3. Press the PTY button a second time within 5 seconds. The tuner will attempt to find an RBDS station broadcasting the selected type of program. If the button is not pressed within 5 seconds after selecting a program type, the PTY function will be cancelled.
4. If no station is located for the desired content type, the tuner will return to the last previously tuned station.
5. Cancel the PTY function by pressing any button.

TP Button **5** **T**

Searches for an RBDS station broadcasting traffic information programming:

1. Press the TP button on the remote or the CAT LIST/TP button on the front panel. The tuner will attempt to find an RBDS station broadcasting the traffic programming.

2. If no station is located, the tuner will return to the last previously tuned station.
3. Cancel the TP function by pressing any button.

AF Button **11** **J**

In some cases, an RBDS station is part of a network of stations broadcasting the same programming (for example, BBC1 programming in the UK may be available at several different frequencies). Stations broadcasting this programming may transmit an RBDS data signal providing the tuner with a list of alternate frequencies where this programming is available. If this data list is transmitted, an AF indicator will appear in the display.

The AF button is used to scan the alternate frequencies to find a stronger signal. The button is only functional when the AF indicator is lit.

1. Press the AF button on the remote or the CH LIST/AF button on the front panel. The tuner will scan each of the alternate frequencies for the same programming in the stored list and tune to the strongest signal.
2. If no station is located, the tuner will return to the last previously tuned station.
3. If the signal strength of the new station is weaker, the tuner will revert to the previously tuned station.
4. Cancel the AF function by pressing any button.

TA Button **U**

Searches for an RBDS station broadcasting special traffic announcements:

1. Press the TA button on the remote. The tuner will attempt to find an RBDS station broadcasting traffic announcements.
2. If no station is located, the tuner will return to the last previously tuned station.
3. Cancel the TA function by pressing any button.

Sirius Radio Operation

The RT-1084 can operate up to three optional Sirius satellite radio modules available from your Rotel dealer. This section provides basic setup, activation, and operating instructions.

Setup **4** **9** **B** **V**

After connecting the module as shown in the setup section, place the antenna and orient it for maximum signal strength. In some large urban areas, repeater transmitters ensure good reception. Otherwise, place the antenna for satisfactory satellite reception by placing it in a window, aimed at a group of satellites in fixed orbits centered over Minnesota in the upper midwest region of the United States.

Try aiming the antenna:

- From northeastern US or eastern Canada, aim west.
- From southeastern US, aim northwest.
- From south central US, aim north.
- From midwestern US or central Canada aim north to straight overhead.
- From southwestern US, aim northeast.
- From northwestern US or western Canada, aim east.

When you have sufficient signal strength, a green LED on the module will light. A red LED indicates insufficient signal strength.

NOTE: Wait several seconds after moving the antenna for an accurate indication of signal strength.

When you have successfully locked on to the Sirius signal, the front panel display will show the following:



The signal strength indicator in the upper left corner of the display allows you to fine tune the orientation of the antenna to maximize signal strength.

Activating your Sirius subscription **L**

After maximizing the signal strength, you must contact Sirius Satellite Radio to register your account. Before contacting Sirius, note the 12 digit ID number (ESN) for your Sirius tuner module:

1. Press the SETUP button on the front panel to enter the SETUP Options settings.



2. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to highlight the Sirius ID line on the front panel display as shown above.
3. Press the ENTER button on the front panel or the D/A button on the remote to display the unique 12 digit ID number (ESN) for your Sirius module in the front panel display. Note this ID number; you will need it to activate your account.

NOTE: You can also press the ID button on the remote to display the 12 digit ID number.

Contact Sirius to activate your account in one of two ways:

1. Visit the www.sirius.com website and click the "Activate" link. Then, follow the on-screen instructions.
2. Call 1-888-539-SIRIUS (1-888-539-7474). A representative will help you activate your Sirius Satellite Radio Service.

Manual Tuning **I3 P**

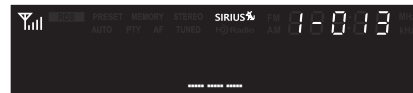
Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to step up or down to the next Sirius channel. The currently playing artist and song scrolls in the display.

Direct Channel Tuning

7 14 17 E H R

To tune by entering a Sirius stream number:

1. Press the FREQ DIRECT button on the front panel or the FREQUENCY button on the remote.



2. Press the 3-digit number of the Sirius stream on the numeric keypad and then press ENTER on the front panel or D/A on the remote.

Channel List Tuning

11 13 14 E J P

Channel List tuning allows you to select from a list of channels displayed in the front panel display.

1. Press the CH LIST/AF button on the remote or front panel to display a list of channels in the front panel display.



2. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to select a channel.
3. Press the ENTER button on the front panel or the D/A button on the remote to play the channel.

NOTE: When channels are displayed in Channel list mode, press the DISPLAY button to switch the display from channel names to artist names and song titles.

Category List Tuning

4 5 13 14 E P T V

Category List tuning allows you to display a category of channels (music, sports, news, etc.) and select a channel from that category.

1. Press the CAT LIST/TP button on the remote or front panel to display a Category list in the front panel display.



2. Press the < CAT > buttons on the remote or the < LEFT/RIGHT > buttons on the front panel until the desired category is displayed.
3. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to select a channel from within the category.
4. Press the ENTER button on the front panel or the D/A button on the remote to play the channel.

If you want to cancel the selection and return to the last previously active channel, press CAT LIST/TP button on the remote or wait 5 seconds for the operation to time out.

NOTE: When channels are displayed in Channel list mode, press the DISPLAY button to switch the display from channel names to artist names and song titles.

Storing Presets **7 15 H Q**

Up to 30 channel presets can be memorized for each Sirius module. To memorize a preset:

1. Tune to the desired Sirius channel.
2. Press the MEMORY button on the front panel or the remote. The front panel display shows the current channel name.



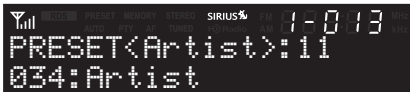
- Press the desired 2-digit preset number using the numeric keypad on the front panel or remote. For example, to memorize the station as preset 03, press 0, then 3. The digits appear in the upper right corner of the display as you enter them.
- Press the front panel ENTER button or the D/A button on the remote or either MEMORY button to memorize the preset.
- A previously stored channel is erased from memory when a new channel is memorized for the same preset number.

Playing Presets

2 7 13 14 E K H P

To play a previously stored preset, press stored the preset number using the numeric keypad on the front panel or the remote. Or, you can choose from a list of stored preset stations:

- Press the PRESET LIST/PTY button on the remote or front panel to display a list of channels in the front panel display.



Yml SIRIUS% 1-0 13
PRESET<Artist>:11
034:Artist

- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to select a channel from the preset list.
- Press the ENTER button on the front panel or the D/A button on the remote to play the channel. If you want to cancel the selection, press the PRESET LIST/PTY button or just wait 5 seconds for time out.

NOTE: When channels are displayed in Channel list mode, press the DISPLAY button to switch the display from channel names to artist names and song titles.

Sirius Setup Options

In addition to the Antenna aiming procedure described previously, a Setup menu provides access to a number of optional settings and features.

To access these options:

- Make sure the desired Sirius module is selected by pressing the correct TUNER SELECT button on the remote.



00 Sirius ID
01 Skip or Add

- Press the SETUP button on the front panel.
- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the desired option or setting is displayed.
- Press the SETUP button on the front panel to exit sub-menu.

The available settings and options include:

Sirius ID

Select this option to display the unique 12-digit ID code of the Sirius module.



<Sirius ID>
ESN 112233445566

Channel Add or Skip

9 13 14 B E P

You can program the RT-1084 to skip specified Sirius channels in the channel list displays, a useful feature for channels you never listen to. To set the skipstatus:

- Make sure the desired Sirius module is selected by pressing the correct TUNER SELECT button on the remote.
- Press the SETUP button on the front panel.

- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the Add or Skip display is shown.
- Press the ENTER button on the front panel or the D/A button on the remote.
- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to highlight the desired Sirius stream.
- Press the ENTER button on the front panel or the D/A button on the remote to toggle the selected stream from "available" to "skip".



<Add or Skip> Skip
112:Channel name

Lock Options

7 9 13 14 B E H P

You can lock specified streams so that they cannot be accessed even by entering channel numbers. This could be useful to prevent children from listening to adult programming.

To set the Lock status:

- Make sure the desired Sirius module is selected by pressing the correct TUNER SELECT button on the remote.
- Press the SETUP button on the front panel.
- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the Lock Options display is shown.
- Press the ENTER button on the front panel or the D/A button on the remote.
- Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until Lock/unLock is highlighted.

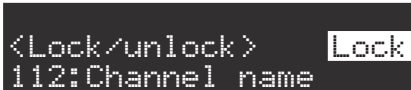


00 Lock/unLock
01 Edit code

6. Press the ENTER button on the front panel or the D/A button on the remote to enter the submenu.



7. Type the lock code. The factory default code is "0000". You can specify your own code (see the following section).
8. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote to highlight the desired Sirius stream.
9. Press the front panel ENTER button or the D/A button on the remote to toggle the selected stream from "Unlock" to "Lock".



Setting a Lock Code

7 9 13 14 B E H P

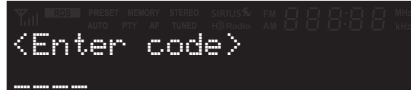
If you have locked any Sirius channels (see above), you will need to program a 4-digit code that must be entered into order to access a locked channel. The default code is "0000".

To specify your own code:

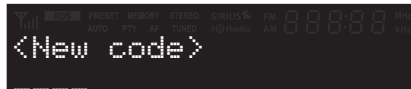
1. Make sure the desired Sirius module is selected by pressing the correct TUNER SELECT button on the remote.
2. Press the SETUP button on the front panel.
3. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the Lock Options display is shown.
4. Press the ENTER button on the front panel or the D/A button on the remote.
5. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the Edit Code item is highlighted.



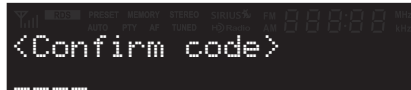
6. Press the ENTER button on the front panel or the D/A button on the remote to enter the submenu.



7. Type the old lock code. The factory default code is "0000".
8. At the next screen, type the desired new 4-digit code.



9. When the confirmation screen appears, retype the new 4-digit code.



Restoring Factory Defaults

9 13 14 B E P

The Sirius Satellite radio receiver can be reset to its original factory settings.

To reset the Sirius Satellite module:

1. Make sure the desired Sirius module is selected by pressing the correct TUNER SELECT button on the remote.
2. Press the SETUP button on the front panel.
3. Press the UP/DOWN buttons on the front panel or the < FREQ DOWN/FREQ UP > buttons on remote until the Factory Default display is shown.
4. Press the ENTER button on the front panel or the D/A button on the remote.
5. Press the front panel UP/DOWN buttons or < FREQ DOWN/FREQ UP > on the remote to select "YES" or "NO".



6. Press the ENTER button on the front panel to reset when YES is highlighted.

Specifications

HD FM

Tuning Frequency:

87.5 to 107.9 MHz

Sensitivity:

-88dBm

Signal to Noise Ratio:

85 dB

THD + N:

0.10%

Channel Separation:

75dB

Frequency Response:

20 Hz-20 kHz, \pm 1.5 dB

Digital Output:

Optical, Coax: 44.1KHz

Analog Output:

1Vrms

Analog FM

Tuning Frequency:

87.5 to 107.9 MHz

IHF Sensitivity:

1.99 μ V / 17.2 dBf

Signal to Noise Ratio:

68 dBf (mono)

70 dBf (stereo)

THD + N:

0.5% (mono)

0.6% (stereo)

Frequency Response:

20 Hz-14 kHz, \pm 1.5 dB

HD AM

Tuning Frequency:

520 to 1710 KHz

Sensitivity:

-86dBm

Signal to Noise Ratio:

50 dB

THD + N:

0.10%

Channel Separation:

75dB

Frequency Response:

40 Hz-14.7 kHz, \pm 1.5 dB

Digital Output:

Optical, Coax: 44.1KHz

Analog Output:

300mVrms

Analog AM

Tuning Frequency:

520 to 1710 KHz

Sensitivity:

1770 μ V/m (600KHz)

880 μ V/m (1000KHz)

Signal to Noise Ratio:

35 dB

THD + N:

2.0%

Selectivity:

20 dB

Sirius Tuner

Signal to Noise Ratio:

73 dB

THD + N:

0.20%

Channel Separation:

73dB

General

Power Consumption:

23 watts (rated)

Max Power Consumption:

52 watts (with three Sirius modules connected)

Power Requirements (AC):

120 volts, 60 Hz (USA version)

Weight:

6.5 Kg/14.3 lb.

Dimensions (W x H x D):

432 x 92 x 343 mm

17.01" x 3.62" x 13.51"

Tuning Frequency:

87.5 to 108 MHz

Station Presets:

HD/AM/FM: 30 max

Sirius 1: 30 max

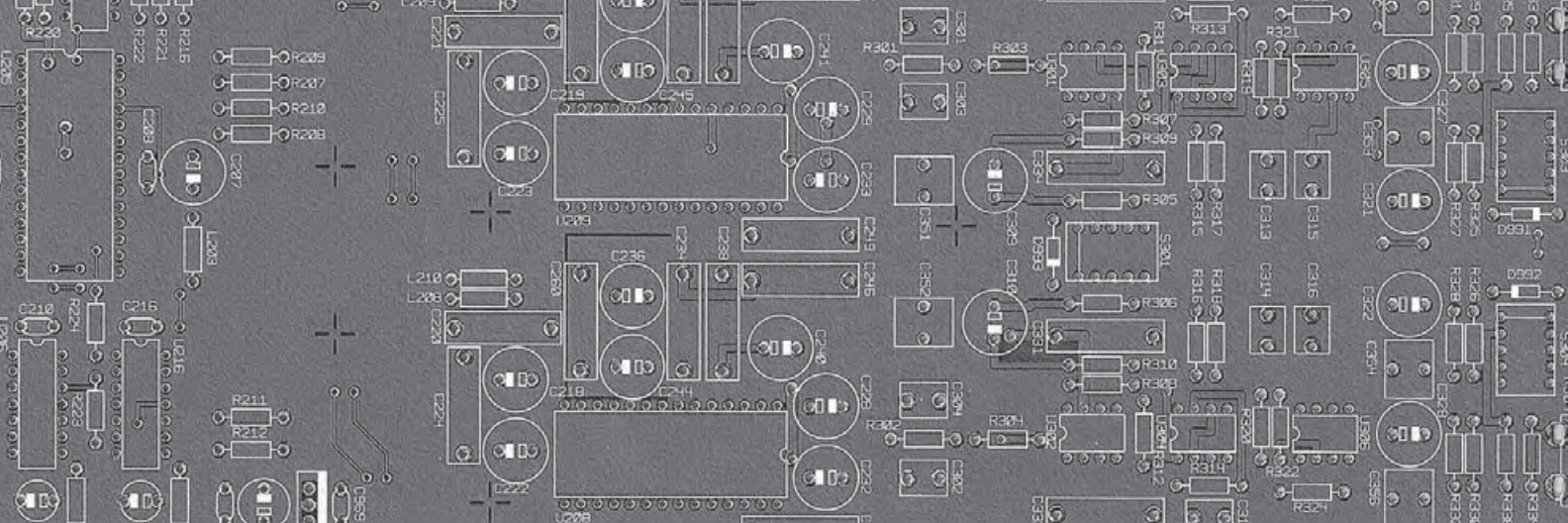
Sirius 2: 30 max

Sirius 3: 30 max

All specifications are accurate at the time of printing.

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