

# ROLLS

## RS81 Quartz PLL Synthesized AM/FM Tuner.



### Specs:

#### FM SECTION

Tuning Range: 87.5-108MHz

3 dB Limiting: 12dB

Image Rejection: 53dB

Usable sensitivity mono IHF: 9dB

Selectivity: (-70KHz : +90KHz)

S/N Ratio at 1 mV Mono: 52dB

Stereo: 50dB

THD at 1 mV 40 kHz deviation: 0.18%

Stereo Separation: 28dB

Auto Scan Sensitivity: 23dB

AM Suppression Mod: 52dB

Antenna Input Impedance: 75 Ohms

#### AM SECTION

Tuning Range: 530 - 1710 kHz (10 kHz increm.)

522 - 1611 kHz (9 kHz increm.)

IF Frequency: 450KHz

Usable Sensitivity: 28dB

Auto Scan Sensitivity: 41dB

S/N Ratio at 5 mV/M: 46dB

6 dB Bandwidth: 7KHz

Image Rejection: 42dB

A.C.A. +/- 9 kHz: 46dB

AGC Action: 43dB

THD at 5mV/M: 0.40%

Antenna Input Impedance: 300 Ohms

Size: 19" x 1.75" x 7"

(48.3 x 4.5 x 12 cm)

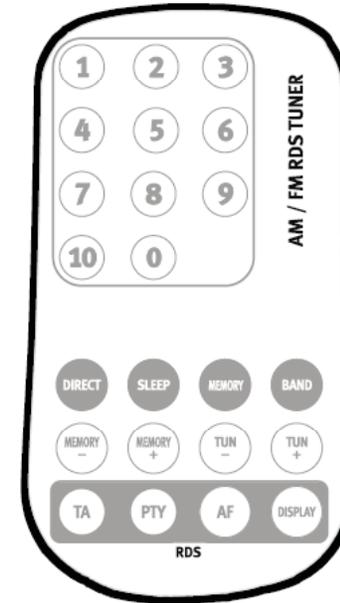
Weight: 7.1 lbs. (3.2 kg)



- MEM. UP: Increments up Presets. If the tuner is stepped beyond the highest number preset stored, it will “wrap around” and step back to the lowest numbered preset.
- BAND: Switch for AM or FM (FM 1 / FM 2 / AM)
- Tuning + / - : Increases or Decreases the tuner frequency each time it is pressed. Press in for 2 seconds for automatic scan searching. After a station is received, it will stop automatically and start to play.
- MO/ST: Selects between Stereo and Mono operation (FM mode only).
- DISP: Displays the current RDS information (if available) from the current station.
- DIRECT: Press to directly select a radio frequency. For example, to directly select station 107.7, simply press “DIRECT” + number “1077”.
- Headphone Level: Adjusts the signal level of the Headphone Out.
- Headphone Out: 1/8” Tip-Ring-Sleeve stereo jack for connection to stereo headphones. The use of MONO jacks will permanently damage the RS81. Make sure you are using a stereo jack.
- Power Switch: Applies power to the RS81.

## Radio Memory Function

- The 30 Radio presets are in 3 sections: FM 1 x 10 / FM 2 x 10 / AM x 10
- First select the channel which wants to be stored
- Press “MEMORY”
- Press “1 ~ 10” To select the channel number for preset memory.
- Press “MEMORY” again to confirm the memory. LCD shows “CH1 ~ 10”.
- Repeat above steps to store more channels. Up to 10 channels can be stored per section.



## Remote Operation:

The included Infrared Remote provides a way to control the RS81 at a distance from the unit. It must be located in the “line-of-sight”.

## Remote Description:

- BAND: Switch for AM or FM
- Press “BAND” to select FM 1, FM 2, or AM frequencies.
- Press “TUN+ / TUN-” to select stations. Press and hold for over 2 seconds enters into automatic scan searching. After a station is received, it will stop automatically and start to play the station.
- DIRECT: Press to directly select a radio frequency. For example, to directly select station 107.7, simply press “DIRECT” + number “1077”.
- Remote buttons work the same as front panel buttons, refer to the section of the manual with the description of the front panel.

## Sleep function:

- Press " SLEEP "
- Maximum set up time is 90 minutes. Increase by 10 minutes for every press, this is indicated by the LCD display. Sleep set up is cancelled on final press (LCD shows "00").
- When you reach the pre-set time limit, the tuner will automatically stop playing and go into stand by mode.
- If want to reactivate (power on) the RS81 after it goes into sleep mode, turn off the main power switch and then turn the power switch on.
- In case you need to cancel the sleeping function during play, keep pressing " SLEEP " until LCD shows "00". The sleep function is then canceled.

## Multi path reflections:

FM waves, like light waves, travel in a straight direction unless reflected off objects in their path. Because of this, two sets of waves reach your antenna from the FM station; those that have traveled directly to the antenna, and those that have been reflected off buildings or mountains. When the antenna receives both kinds of signals, the two interfere with each other and result in distorted sound and poor separation. This phenomenon is called "multi path reflection". To reduce this problem, select an antenna with good directivity and place it in the best location with strong reception.



- AC: Three connector IEC power cord. Please connect to a properly grounded AC outlet.
- Power Select Switch: Selects between 115V (110-120V)/230V (220-240V) input power. Follow silk screening on unit. This switch MUST be in the proper setting before the RS81 is turned on. PERMANENT DAMAGE CAN BE DONE TO THE RS81 IF THE POWER APPLIED TO THE RS81 DOES NOT MATCH SWITCH INDICATION.
- FM ANT. 75 Ohm: Connects to the included 75 ohm FM antenna.
- AM LOOP ANT. 300 Ohm: Connects to the included 300 ohm AM Loop antenna.
- RCA OUTPUTS - Line level.
- XLR OUTPUTS - Line level balanced.
- DC 24V: Input for powering the RS81 when main power is not available. Connect as the silk screen indicates. This must be 24V DC only. Wiring with incorrect polarity or any other voltage than 24V DC will result in permanent damage to the RS81 and will not be covered under any warranty.

## RADIO TUNING RANGE

FM 87.5 MHz – 108 MHz

AM 530 KHz – 1710 KHz (US) / AM 522 KHz – 1611 KHz (Europe)

- The AM tuning steps from 9kHz (Europe) to 10kHz (US) have been pre-set by the factory. The RS81 9kHz to 10kHz AM can not be changed.

Connect the RS81 to a properly grounded AC outlet.

Connect the Left and Right outputs to a mixer, amplifier, or other audio device.

### FM Antenna:

For an Indoor FM antenna Connect the wire FM antenna to its corresponding input on the rear panel of the RS81. While listening to a broadcast, hold the wire end and move around until the antenna is facing a direction where the signal comes in the strongest. Secure the antenna in this position.

### Outdoor FM antenna:

Installation of an outdoor FM antenna is recommended for a very high quality FM reception.

- The lead-in antenna cable should be of the 75-ohm coaxial type as it suppresses intrusion of noise more effectively than the 300 ohm twin lead type.

- The cable should be straight and as far away from power lines as possible. Cut off any extra length.

### AM Loop antenna connection:

Connect the cord of the accessory AM loop antenna to the AM LOOP.

When tuning in AM stations, move the antenna to the left or right and set in the direction which yields the optimum reception.

- Do not bring the power cord or audio cords near the loop antenna. Interference or noise may be generated.

## RDS (Radio Display System) FUNCTION

RDS is a data stream of information sent out by certain FM radio stations along with the actual program. To utilize this feature, you must first be tuned to a station that carries RDS signal. NOTE: Allow 30 - 60 seconds for the data to download. Not all stations that carry the RDS data carry all functions of RDS (ie; some do not carry the "clock" or "text" data).

PLEASE NOTE: THE RDS FUNCTION IS ENTIRELY DEPENDENT ON WHETHER THE STATION FIRST PROVIDES THE RDS INFO AND HOW WELL THEY SUPPORT THE FUNCTION. THEREFORE - THE RESULTS OF THE RDS DISPLAY VARIES GREATLY.

### RDS:

-AF: Alternative Frequency

Assuming an alternative frequency is available for the station. If the current signal is weak, press AF, RDS will search a different frequency with stronger signal with same station.

-DISP: (Display) Changes the RS81 display between radio station frequency and RDS information. For example, if 103.5 FM were tuned in, then press DISP button, the display will switch from the frequency to the song and artist description. Otherwise, shows "NO PS" if no RDS information is available.

-PTY: Program Type

Radio stations can assign different program types to their shows. These can be picked up by an RDS radio. Press PTY, LCD shows the radio program type, such as news, sports or drama. If the radio station does not assign the program type for the program, LCD shows "NO PTY".

-TA: Traffic Announcement

Press TA, RDS will automatically search for the traffic or travel stations. It will stop at the travel or traffic station. (There must be a station available with "traffic" RDS or no station will be located). Press the TA button again to return to the original station.