LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, TRANSPORTATION CHARGES PRE-PAID. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

This warranty shall be invalid if the product is damaged as a result of deface-ment, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or li-abilities. ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, IN-CLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANT-ABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WAR-RANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WAR-RANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limi-tation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

ROLLS

RS80
Digital Quartz
AM/FM Tuner

OWNERS MANUAL

Thank you for your purchase of the Rolls RS80 Quartz PLL Synthesized AM/FM Tuner. This unit has been carefully designed and assembled to provide years of reliable AM/FM reception, along with superior audio quality. Please read this manual carefully as it contains important information regarding the proper setup and operaton of the RS80.

FEATURES:
• Up to 40 FM and AM stations may be stored
• RDS (Radio Data System) Display
• Retains presets when power is off
• Large LCD digital display
• Auto Search and Store function
• Standard 1 space EIA rack chassis
• Headphone output, XLR outputs, and Signal Strength meter
• Remote included

INSPECTION
1. Unpack and Inspect the RS80 package
Your RS80 was carefully packed at the factory in a protective carton. Nonetheless, be sure to examine the unit and the carton for any signs of damage that may have occurred during shipping. If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. For warranty information, and to register your warranty, please visit our website at **www.rolls.com** and click on the Register Your Warranty Here button, or complete the Warranty Registration Card and return it to the factory.

<u>**TABLE OF CONTENTS**</u>

The following table lists the RDS and RBDS Program Type codes and their meanings:

PTY code	RDS Program type	RBDS Program type
0	No program type or undefined	No program type or undefined
1	News	News
2	Current affairs	Information
3	Information	Sports
4	Sport	Talk
5	Education	Rock
6	Drama	Classic Rock
7	Culture	Adult Hits
8	Science	Soft Rock
9	Varied	Top 40
10	Pop Music	Country
11	Rock Music	Oldies
12	M.O.R. Music	Soft
13	Light classical	Nostalgia
14	Serious classical	Jazz
15	Other Music	Classical
16	Weather	Rhythm and Blues
17	Finance	Soft Rhythm and Blues
18	Children's programs	Language
19	Social Affairs	Religious Music
20	Religion	Religious Talk
21	Phone In	Personality
22	Travel	Public
23	Leisure	College
24	Jazz Music	Unassigned
25	Country Music	Unassigned
26	National Music	Unassigned
27	Oldies Music	Unassigned
28	Folk Music	Unassigned
29	Documentary	Weather
30	Alarm Test	Emergency Test
31	Alarm	Emergency

REMOTE OPERATION

The included Infrared Remote provides a way to control the RS80 at a distance from the unit. It must be located in the "line-of-sight". The remote functions include all front panel buttons except the headphone functions. The round center button is the STORAGE button.

The "STAND BY" button pauses the operation of the RS80.

NOTE: When in Stand By mode, the internal circuitry of the RS80 is still functioning - all safety precautions must still be followed.

SPECIFICATIONS

FM SECTION

Tuning Range:	87.5-107.9MHz
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
Frequency Response:	3dB
Antenna Input Impedance:	75 Ohms

AM SECTION

Tuning Range:	530 - 1710 kHz (10 kHz increm.)
	522 - 1620 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 5"
	(48.3 x 4.5 x 12 cm)
Weight:	7.1 lbs. (3.2 kg)

FRONT PANEL

• Preset + / - : Increments and Decrements the Presets. If the tuner is stepped beyond the highest (or lowest) number preset stored, it will "wrap around" and step back to the lowest numbered preset.

• Tune + / - : Increases or Decreases the tuner frequency by 50 kHz each time it is pressed.

• Seek Up / Down: Increases the frequencies until a station strong enough to lock onto is reached. That station will remain.

• MUTE: Mutes (or resumes) all outputs.

• Ster/Mon: Selects between Stereo and Mono operation (FM mode only).

• Storage: Stores selected stations into presets.

• Auto Search: When this button is pressed the RS80 will search through the FM and AM frequencies and store the stations it is able to lock onto.

• AM/FM: Selects beween AM and FM mode.

• PTY Search: Once the RDS/PTY mode has been selected, pressing this button searches through all frequencies to find a station matching the selected Program Type.

• RDS Display: Displays the current RDS information (if available) from the current station. Pressing this button repeatedly scrolls through the info such as Station ID, Station Frequency, Artist and Song Title, Time, Clock, and Text.

• RDS / PTY: Enters the RDS/PTY Mode. Pressing this button repeatedly scrolls through the list of Program Types.

LCD DISPLAY

The RS80 LCD display shows which band (AM or FM) is currently selected, and if the unit is receiving RDS information.

• The Channel indicator displays the channel or PRESET number that has been selected.

• The Frequency indicator shows the current frequency setting of either the FM or AM station selected.

• When an RDS station is being received, and the information is set to be displayed, this LCD display will show that information.

• IR - This is the Infrared Remote sensor. It will need to be in the "line of sight" in order for the RS80 Remote to operate properly.

• Stereo LED: Indicates a stereo station is being recieved and the RS80 is NOT in MONO mode.

• Modulation LEDs: Indicates the current selected station's signal strength.

• Headphone Level: Adjusts the signal level of the Headphone Out.

• Headphone Out: 1/4" Tip-Ring-Sleeve stereo jack for connection to stereo head-pones.

• Power Switch: Applies power to the RS80.

DESCRIPTION CONT

REAR PANEL

• AC: Three connector iec power cord. Please connect to a properly grounded AC outlet.
• Power Select Switch: Selects between 115 Volt (US), and 230 (Europe) AC power voltages. This switch MUST be in the proper setting before the RS80 is turned on.
• Right and Left Outputs: Balanced XLR and unbalanced RCA outputs.
• 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.

CONNECTION

Connect the RS80 to a properly grounded AC outlet.
Connect the Left and Right outputs to a mixer, amplifier, or other audio device.

FM Antenna
Indoor FM antenna
Connect the wire FM antenna to its corresponding input on the rear panel of the RS80. 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 300 Ohm terminals. 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 speaker cords near the loop antenna. Interference or noise may be generated.

Multipath 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 "multipath reflection". To reduce this problem, select an antenna with good directivity and place it in the best location with strong reception.

OPERATION

SET THE FREQUENCY SELECT
• To change the AM tuning steps from 9kHz to 10kHz (and vice-versa), press and hold down the PTY SEARCH button for three seconds.

AUTO SEARCH
• Press the AUTO SEARCH button to scan for all available stations. The stations will be stored in the 40 available Presets.

PROGRAMMING PRESETS
Press the PRESET+ / PRESET-, SEEK +/SEEK-, or TUNE+/TUNE- buttons to access specific stations you want stored. When the desired station is located, press the STORAGE button - then press the PRESET + or PRESET - button to select the desired storage location. When that location is reached, press the STORAGE button to store the preset.

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 this RDS signal; the display will indicate "RDS". 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).
• To search for and store stations with a certain Program Type (PTY) (such as Rock, Country, News, etc.), press the RDS/PTY button repeatedly until you see the Program Type you want. When you see the Type you are looking for, press the PTY Search button. This will search for all the RDS stations that carry that kind of programming - when it reaches one, it will stop on that station and exit PTY Search mode.
PLEASE NOTE: THE PTY SEARCH FUNCTION IS ENTIRELY DEPENDENT ON WHETHER THE STATION FIRST PROVIDES THE PTY INFO, AND SECOND IF THE STATION'S PTY INFO MATCHES YOUR EXPECTED TYPE. THEREFORE - THE RESULTS OF THE PTY SEARCH VARIES GREATLY.
• To see the RDS information carried on a certain station, press the RDS Display button repeatedly. This will scroll through the available RDS info on that station.