Putikeeg RS-998

Putikeeg RS-998 Wolf SDR Transceiver User Manual

Model: RS-998

1. Introduction

This manual provides detailed instructions for the proper setup, operation, and maintenance of your Putikeeg RS-998 Wolf SDR 100W HF+UV All Mode Transceiver. Please read this manual thoroughly before using the device to ensure optimal performance and safety.
The RS-998 is a versatile Software Defined Radio (SDR) transceiver designed for amateur radio enthusiasts, offering 100W output on HF and 60W on VHF, with a wide receiving frequency range.

2. Package Contents

Verify that all items listed below are present in your package. If any items are missing or damaged, please contact your vendor.

- 1 x Putikeeg RS-998 Transceiver Main Unit
- 1 x Hand Microphone
- 1 x DC Power Cable
- 2 x Fuses
- 1 x Allen Key
- 1 x Hook for Hand Microphone
- 2 x Screws
- 1 x Carrying Box
- 2 x Keys (for carrying box)

Figure 2.1: Contents of the Putikeeg RS-998 package, including the main unit, hand microphone, power cable, fuses, Allen key, microphone hook, screws, carrying box, and keys.

3. Setup

3.1 Physical Installation

Place the transceiver on a stable, flat surface with adequate ventilation. Ensure there is sufficient space around the unit for heat dissipation.

Figure 3.1: Front panel of the RS-998 transceiver, showing the main display, controls, and microphone connection.

3.2 Power Connection

1. Connect the supplied DC power cable to the power input port on the rear of the transceiver.
2. Connect the other end of the DC power cable to a stable 13.8V DC power supply (not included) capable of providing sufficient current for transmission (up to 20A).
3. Ensure the power supply is switched off before connecting.

3.3 Antenna Connection

The RS-998 features two antenna input options with SL16 connectors and 50Ω impedance.

1. Connect your HF antenna to the appropriate SL16 connector.
2. Connect your VHF/UHF antenna to the other SL16 connector.
3. Ensure all antenna connections are secure and properly grounded.

3.4 Hand Microphone Connection

Connect the hand microphone to the designated microphone port on the front panel of the transceiver.

4. Operating Instructions

4.1 Powering On/Off

- To power on: Press and hold the **POWER** button on the front panel.
- To power off: Press and hold the **POWER** button again until the unit shuts down.

4.2 Frequency Selection

The RS-998 supports a wide frequency range for both receiving and transmitting.

- Use the main tuning knob to adjust the frequency.
- Press the **BAND** button to cycle through different amateur radio bands.
- The 7-inch color LCD display will show the current frequency and spectrum waterfall.

Figure 4.1: The transceiver's display illustrating full band and full mode capabilities, including the spectrum waterfall and various operational parameters.

4.3 Mode Selection

The transceiver supports multiple modulation types including CW, LSB, USB, AM, NFM, WFM, SAM, DIGL, DIGU, IQ, LOOP, RTTY, and more.

- Press the **MODE** button to cycle through available modulation modes.
- Refer to the on-screen indicators for the currently selected mode.

Figure 4.2: Overview of the RS-998's multifunctional SDR capabilities, including 3D waterfall spectrum, 100W output, full mode/band support, built-in antenna regulator, automatic CQ digital recording, and various decoders.

4.4 Transmitting

Before transmitting, ensure you have the necessary licenses and are operating within legal frequency allocations.

1. Select the desired frequency and mode.
2. Press the Push-To-Talk (PTT) button on the hand microphone to transmit.
3. Release the PTT button to return to receive mode.

4.5 Advanced Features

- **Digital Audio Recording:** The transceiver supports 5-segment voice recording in automatic CQ and CW modes.
- **TF Card Upgrade:** Firmware updates and other data can be managed via a TF card.
- **Antenna Tuner:** The built-in antenna tuner assists in matching antenna impedance for optimal transmission.

Figure 4.3: Illustration of the RS-998's digital audio recording playback capability and support for TF card upgrades.

5. Maintenance

5.1 Cleaning

Regularly clean the exterior of the transceiver with a soft, dry cloth. Do not use abrasive cleaners or solvents, as these can damage the finish and internal components.

5.2 Ventilation

Ensure that the ventilation openings on the unit are not obstructed. Proper airflow is crucial for preventing overheating, especially during prolonged transmission.

5.3 Fuse Replacement

If the transceiver fails to power on, check the fuses in the DC power cable. Replace blown fuses with new ones of the same rating (supplied in the package).

6. Troubleshooting

Problem	Possible Cause	Solution
Unit does not power on	No power from DC supply; Blown fuse; Loose power cable connection	Check power supply; Replace fuse; Secure power cable
No reception	Antenna not connected; Incorrect frequency/mode; Low squelch setting	Connect antenna; Verify frequency/mode; Adjust squelch
No transmission	Antenna not connected; High SWR; Microphone not connected or faulty	Connect antenna; Check SWR and use tuner; Verify microphone connection
Poor audio quality	Incorrect audio settings; Interference; Faulty microphone/speaker	Adjust audio settings; Check for interference sources; Test with different microphone/speaker

7. Specifications

Parameter	Value
Model	RS-998
RX Frequency Range	0.5 MHz - 750 MHz
TX Frequency Range	0.5 MHz - 30 MHz (amateur only), 144 MHz - 148 MHz
Transmit Power (SW)	≤ 100W
Transmit Power (VHF)	≤ 60W
Receiving Sensitivity	-110dBm at 12dB SNAD
Antenna Impedance	50Ω, SL16 connector (two options)
Working Voltage	DC13.8V ± 15%
Display Screen	7-inch color LCD
Modulation Types	CW, LSB, USB, AM, NFM, WFM, SAM, DIGL, DIGU, IQ, LOOP, RTTY, etc.
Number of Storage Channels	36
Low-Noise Amplifier (LNA)	Yes
Adjustable Attenuator	0-31dB
Launch Current	≤ 20A
Receiving Current	≤ 1.5A (speaker activated)
Working Temperature	-20°C ~ +60°C
Storage Temperature	-40°C ~ +85°C
Item Weight	17.71 pounds (approx. 8.03 kg), 4020g (8.9lb) including handheld microphone

Parameter	Value
Package Dimensions	16.89 x 12.6 x 10.08 inches
Water Resistance Level	Not Water Resistant

Figure 7.1: Physical dimensions of the RS-998 transceiver: 13.4 inches (length), 6.1 inches (width), 8.3 inches (height). Weight including handheld microphone is approximately 8.9 lbs (4020g).

Product function parameters

TYP:	X-TFSI	VS:	RS998
Frequency range	Receiving frequency: 0.5 MHz - 750 MHz		
	Transmit frequency: 0.5 MHz - 30 MHz (only for amateur band transmission) 144 MHz - 148 MHz		
Working voltage	DC13.8V+15%		
Display screen	7-inch color LCD display screen		
Antenna impedance	502, SL16 seat, two antenna input options		
Transmission power	≤ 100W (short wave), 60W (VHF)		
Receiving sensitivity	-110dBm @12dB SNAD		
Main reference frequency	122.88MEZ		
Modulation type	CW、LSB、USB、AM、NFM、WFM、DIGI		
Number of storage channels	36		
Low-noise amplifier	LNA		
Adjustable attenuator	0~31dB		
Launch current	≤20A		
Receiving current	≤ 1.5A (When the horn is activated)		
Working temperature	-20°°C ~ +60°°C		
Storage temperature	-40°°C ~ +85°°C		

Figure 7.2: Detailed table of product function parameters, including frequency range, working voltage, display screen type, antenna impedance, transmission power, receiving sensitivity, main reference frequency, modulation types, number of storage channels, low-noise amplifier, adjustable attenuator, launch current, receiving current, working temperature, and storage temperature.

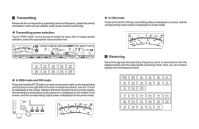
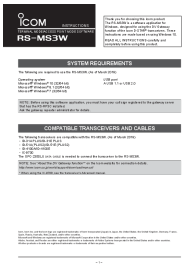
8. Warranty Information

The product specifications indicate "Warranty: No". Please refer to your purchase agreement or contact your retailer for details regarding any implied warranties or return policies.

9. Support

For technical assistance or inquiries, please contact your authorized Putikeeg dealer or the retailer from whom you purchased the product. Please have your model number (RS-998) and purchase details ready when contacting support.

Related Documents - RS-998

	All Mode Full Band SDR Transceiver Instruction Manual Instruction manual for the Quanzhou Risen Electronics Co., Ltd RS-998 All Mode Full Band SDR Transceiver, detailing its features, setup, operation, panel description, and troubleshooting.
	RS-998 All Mode Full Band SDR Transceiver User Manual and Technical Specifications This document provides comprehensive operating instructions, menu functions, settings, troubleshooting, and technical specifications for the Risen Electronics RS-998 All Mode Full Band SDR Transceiver.
	MFJ 2019 Ham Catalog: Amateur Radio Accessories & Antenna Tuners Browse the comprehensive MFJ 2019 Ham Catalog from MFJ Enterprises, featuring innovative amateur radio accessories, remote station control systems like RigPi, and a wide range of IntelliTuner™ automatic antenna tuners.
	DJI SDR Transmission User Guide This comprehensive user guide details the DJI SDR Transmission system, a professional wireless video transmission solution. It covers product features, power options (NP-F battery, USB-C, gimbal), firmware updates, touchscreen interface for transmitters and receivers, various connection modes (Control, Broadcast, Wi-Fi), integration with the Ronin app, compatible accessories, and detailed technical specifications. Designed for filmmakers and broadcast professionals, it ensures reliable, high-quality video transmission.
	Ameritron SDC-104 Automatic Screwdriver Antenna Controller Instruction Manual Instruction manual for the Ameritron SDC-104 Automatic Screwdriver Antenna Controller, covering installation, operation, programming, and features for use with Elecraft, Icom, Kenwood, and Yaesu radios.
	ICOM RS-MS3W Software: Installation and Operation Guide Comprehensive guide to installing and operating the ICOM RS-MS3W software for Windows, enabling the DV Gateway function with D-STAR transceivers. Covers system requirements, compatible devices, and software features.