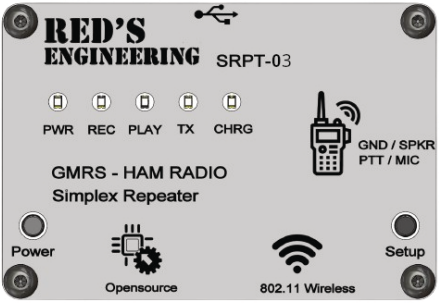
RED'S ENGINEERING

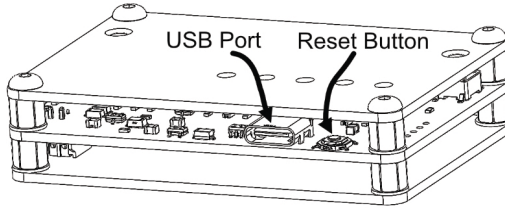
SRPT-02/03
Simplex Repeater
Quick Start Guide



Important - Read First

Digital Activation

The SRPT is equipped with a button lockout feature that prevents the repeater from turning on during shipment. **Before using the repeater for the first time, press the reset button, located under the front panel next to the USB port.**



Press Reset button before use.

Features

- Plug and play, works right out of the box
- Configuration via cell phone, PC, or Mac
- Works with the Baofeng UV-5R radio
- DTMF detection, enable disable repeater
- 10/45 second message record/playback time
- Station Identification (Morse Code generation)
- Periodic Station ID
- LED Indicators show current status
- USB C power / Charging
- Open source software
- OTA Firmware Updates (WiFi)
- Long battery life, ~12 hours talk time
- Hand made in the USA

What's in the Package:

1 - SRPT 02/03 Repeater

1 - UV-5R Compatible Cable

1 - USB Charging Cable

1 - 1000mA Battery (installed)

1 - Quick Start Guide

Technical Support

For customer service please visit:

www.redsengineering.com

You may email us at:

support@redsengineering.com

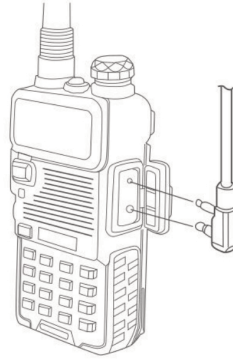
All emails answered within 24 hours.

Scan the QR code below for fast access to our Web site.

Connection

1. Connect the radio to the SRPT using the supplied cable.
2. Power on your radio, adjust volume to 70%
3. Power on the SRPT using the power button lower front of the repeater.

For more advanced connections, see 3.5mm connection diagram on Page 18.



Operation

Power on the radio first, then the repeater. For best performance, disable voice prompts on the radio if possible. Adjust the volume on the radio to approximately 70% of the full range. You may need to make further adjustments based on the specific model of the two-way radio you're using. **Make sure VOX and power saving modes are disabled on the radio.**

Adjust Volume to 70%

Enable/Disable Repeater

You can enable or disable the repeater in the field using DTMF detection by keying up your radio and pressing "#" to disable the repeater or "*" to enable it during your transmission.

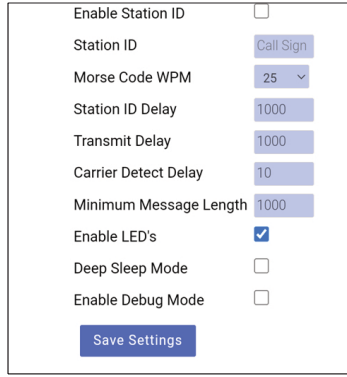
#=”Disable Repeater”
*****=”Enable Repeater”

When the repeater has been disabled, it will acknowledge with three slow beeps.
When the repeater has been enabled, the repeater will acknowledge with three fast beeps.

NOTE:
The volume must be set for this feature to work properly. If the volume on your radio is too low, the DTMF tones will not be acknowledged by the repeater.

Configuration

The SRPT repeater is ready to use straight out of the box with its default factory settings. To customize settings such as Station ID, power-saving modes, or advanced options, access the setup utility. The SRPT offers a user-friendly web interface for system configuration and firmware updates, accessible via a standard web browser on your phone or PC over Wi-Fi. During normal operation, the web interface is disabled; to enable it, simply press the Setup button.



Setup

1. With the SRPT powered on, press the "Setup" button on the front of the repeater.
2. In Setup mode, "PWR," "REC," "PLAY," and "TX" LEDs will be illuminated. In this mode, the SRPT acts as a wireless hot spot for configuration.
3. In your wireless settings, select the access point labeled "SRPT" see figure 3.1.
4. Once connected (no authentication required), a web browser page should open.
5. Older phones will require you to enter the URL into your Web browser this is: http://192.168.244.1
6. Click on the Menu icon, then select "Configure".
7. Adjust the settings as needed and click "Save" see figure 3.2.
8. Press the "Setup" button on the front of the SRPT to apply your settings. The repeater is now ready for normal operation.

Setup Options

- **Enable Station ID:** When enabled, your call sign will be transmitted in Morse code after each SRPT transmission.
- **Station ID:** This is your call sign, which will be transmitted in Morse code.
- **Periodic Station ID:** Delay in seconds to periodically identify the station using Morse Code when no transmission is detected. Set to 0 to disable.
- **Morse Code WPM:** The speed at which Morse code will be transmitted, with options ranging from 20 to 40 words per minute.
- **Station ID Delay:** Delay between the voice transmission and the Station ID transmission, with a default setting of 1000ms (1 second).
- **Carrier Detect Delay:** Delay before confirming valid carrier detect, used in conjunction with radio squelch settings to filter

out noise or weak signals. The default value is 100ms (0.1 second).

- **Minimum Message Length:** The minimum message length before the repeater is activated, useful for filtering out unwanted noise or accidental key presses from other radios.

- **Transmit Delay:** Delay time the repeater will wait before transmitting a recorded message.

- **Enable LED's: T**his option disables all status LED's on the repeater to conserve power. In this mode the unit will report power on by flashing the power LED two times and will report power off by flashing once.

- **Deep Sleep Mode:** The repeater may be operated in deep sleep mode for further reduced power consumption. Please note that when operating in this mode, there is a 1.5 second delay that's needed for the repeater to wake from deep sleep mode once a carrier has been detected. With this feature enabled, the front panel LED's will not be operational. Powering the repeater on in this mode will be

indicated by the Power LED flashing twice. Powering off will be indicated by a single flash.

Button Lockout Feature

The SRPT repeater can lock the front buttons to prevent the unit from being accidentally turned-on during shipment. To enable this feature, press and hold the power button for approximately 5 seconds with the repeater powered off. You will see the Power LED flash briefly twice indicating the feature has been enabled. Press the reset button, located under the front panel (next to the USB port) to resume normal operation.

Restore Default Settings

In the unlikely event that you need to reset the SRPT to its factory default settings, follow these steps.

1. Turn on the power using the power switch, and the power LED should illuminate.
2. Press and hold the Setup button for 10 seconds, then release it.

The "PWR," "REC," "PLAY," and "TX" LEDs will flash twice, and the unit will power cycle. The repeater is now restored to its factory default settings.

Configuration Screens

Network Selection

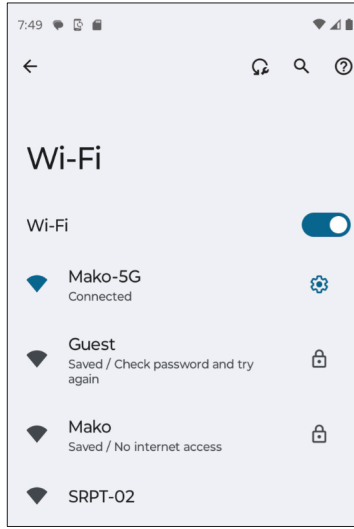


Figure 3.1

Setup Screen

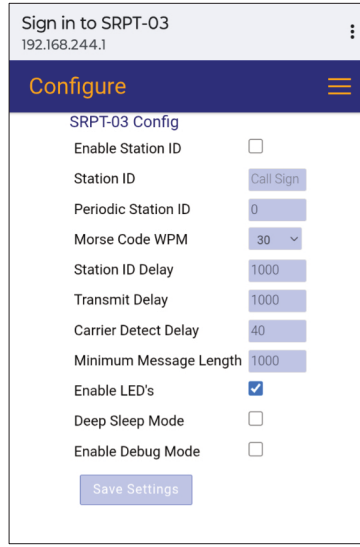


Figure 3.2

Charging Your Repeater

To ensure optimal performance and safety, **always use a USB 2.0 charger** to power and charge your repeater. Connect the charger to the device using the provided USB cable. When charging begins, the CHRG LED indicator will illuminate, signaling that the battery is charging. Once the battery is fully charged, the LED will turn off, indicating the process is complete. A full charge provides approximately 12 hours of talk time, keeping your repeater ready for extended use.

Users relying on the UV-5R would need to swap the stock battery (1800mAh) up to 11.55 times or the extended battery (2800mAh) up to 5.47 times to match the run-time of a single SRPT-02/03 charge, depending on the usage scenario. This makes the SRPT an outstanding choice for those needing reliable, long-lasting performance without frequent battery charging.

Firmware Update

To add new features or apply bug fixes, it may be necessary to perform a firmware update. Please download the user manual from Reds Engineering Web site for more details.

Once you obtain a firmware image from Red's Engineering, you will need a PC or Mac to unzip the file and upload it to the repeater.

Firmware upgrades for bug fixes and feature enhancements are always available free of charge.

You may visit our Web site or contact us at the email address below.

www.redsengineering.com
support@redsengineering.com

Technical Specifications

- Dimensions: 2.7 x 1.9 x 0.7"in 70 x 48 x 18 mm
- Weight: 2.2 oz. (0.63 g)
- Power Supply/Charger: 5 VDC, 500mA
- Wireless Technology: IEEE 802.11b/g
- Antenna: 1 x 2dBi Built-in
- Frequency Band/Bandwidth: 2.4 GHz 802.11b/g
- Channels: 1 to 11 IEEE 802.11b/g
- Wireless Transmission Speed: 20Mbps
- Battery Capacity: 1000mA
- USB type C connection
- Full charge time: 3 Hours
- Interfaces/Ports: USB C, 3.5mm audio con.

1. Mic
2. PTT
3. Speaker
4. Ground

Radio Cable Pin-out

Troubleshooting

Problem: There is a delay after keying the repeater and the beginning of the message is cut off.

Solution: Disable VOX and all power saving modes on the radio.

Problem: DTMF control is not working.

Solution: Check the volume control on the radio. Sometimes, depending on the radio, you may need to go higher than 70% volume.

Problem: My repeater won't power on.

Solution: Make sure you press the reset button once prior to use. See page 1 in this user guide.

For more troubleshooting assistance, scan the link below for the full troubleshooting guide.

You may also contact:
support@redsengineering.com

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Edition 1.2

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