



SRPT-02 Technical Bulletin Frequency Offsets

GMRS Radio Setup

The SRPT-02 is compatible with the UV-5R in both single and dual frequency modes. In single frequency mode, the repeater records and transmits messages on the same frequency, potentially leading to radios using the repeater hearing the same transmission twice—once during user transmission and once during repeater retransmission. The significance of this depends on the distance between station radios.

In dual frequency mode, the repeater radio receives on frequency A and transmits on frequency B. This is achieved by configuring a frequency offset on the repeater radio and a corresponding offset on the station radios. To implement this, a -5MHz offset is programmed into the repeater radio, and a +5MHz offset is programmed into the station radios, following the guidelines outlined in the GMRS frequency allocation document published by the FCC.

Programming your radios

* It's important to verify compliance with local laws and regulations pertaining to repeater setup and requirements before engaging in any transmissions.

There is some confusion regarding how to program the UV-5R to ensure that offsets are stored correctly in persistent memory. We recommend using a software package called Chirp to program your radios. Please note that the channel offsets on your station radios are different from those on your repeater radio. Refer to Table A and Table B for details.

Red's Engineering provides example .csv files that may be loaded into Chip for programming your radios. See the links below.

[Repeater Radio Setup Example](#)

[Station Radio Setup Example](#)

	Frequency	Name	Tone Mode	Tone	Tone Squelch	DTCS	RX DTCS	DTCS Polarity	Cross mode	Duplex	Offset	Mode	Tuning Step	Skip	Power
0															
1	462.550000	15R-550								+	5.000000	FM	12.5		50W
2	462.575000	16R-575								+	5.000000	FM	12.5		50W
3	462.600000	17R-600								+	5.000000	FM	12.5		50W
4	462.625000	18R-625								+	5.000000	FM	12.5		50W
5	462.650000	19R-650								+	5.000000	FM	12.5		50W
6	462.675000	20R-675								+	5.000000	FM	12.5		50W
7	462.700000	21R-700								+	5.000000	FM	12.5		50W
8	462.725000	22R-725								+	5.000000	FM	12.5		50W

Table A Station Radio Setup Example

	Frequency	Name	Tone Mode	Tone	Tone Squelch	DTCS	RX DTCS	DTCS Polarity	Cross mode	Duplex	Offset	Mode	Tuning Step	Skip	Power
0															
1	467.550000	15R-550								-	5.000000	FM	12.5		50W
2	467.575000	16R-575								-	5.000000	FM	12.5		50W
3	467.600000	17R-600								-	5.000000	FM	12.5		50W
4	467.625000	18R-625								-	5.000000	FM	12.5		50W
5	467.650000	19R-650								-	5.000000	FM	12.5		50W
6	467.675000	20R-675								-	5.000000	FM	12.5		50W
7	467.700000	21R-700								-	5.000000	FM	12.5		50W
8	467.725000	22R-725								-	5.000000	FM	12.5		50W

Table B Repeater Radio Setup Example