

Repeater Offset

In order to allow communication through an amateur radio or commercial repeater system, an input frequency and output frequency have to be chosen. A repeater will often use the same antenna to transmit and receive, so in order that the high-power output signal from the transmit carrier doesn't totally overpower the distant low-power signals from mobile stations; a duplexer is used to keep each separate.

Because of this, the frequencies chosen have to be a reasonable distance from one another to let the duplexer attenuate the output signal on the way to the receiver. Standard frequency distance between the input and output were chosen for most of the amateur radio bands to make it easier to access unfamiliar repeater systems. Those are:

- 10 meters - 100 KHz
- 2 meters - 600 KHz
- 222 MHz - 1.6 MHz
- 70 centimeters - 5 MHz
- 33 centimeters - 12 MHz
- 23 centimeters - 12 MHz

For example, if the repeater output was on 146.940 MHz, then an operator could reliably assume that setting the input frequency 600 KHz lower to 146.340 MHz would allow him to communicate on this frequency.

The standard formats to describe this repeater would either be:

146.94/-

or

146.34/146.94

with the input frequency listed first

Offsets

The repeater listings show the repeaters' output frequencies. Repeaters have standard input frequency offsets as shown in the table below. If a repeater does not conform to the standard, the non-standard input frequency is displayed in the "Notes" field.

Output Frequency	Input Frequency Offset
51-52	- 0.5 MHz
52-54	- 1.0 MHz
144.51-144.89	+ 0.6 MHz
145.11-145.49	- 0.6 MHz
146.0-146.39	+0.6 MHz
146.61-147.0	-0.6 MHz
147.0-147.39	+0.6 MHz
147.6-147.99	-0.6 MHz
223-225	- 1.6 MHz
440-445	+ 5.0 MHz
445-450	- 5.0 MHz
918-922	-12 MHz
927-928	-25 MHz