

## Skywarn Repeater Basics

Written by Wayne Harrah

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There are 4 things that make a repeater work.

It listens to the world on frequency "A". Then, it talks (simultaneously) to the world on frequency "B". Each radio the USER is using knows when its time to listen, that it has to be on the "LISTEN" freq. That radio also knows that when its time to TALK, it automatically changes to the correct "TRANSMIT" freq when you push the PTT.

OK, lets assume you want to be able to TALK on the repeater and give reports as well as receive them. When you program a RECEIVE FREQ into a radio, it ASSUMES (unless you set it differently) that a standard OFFSET will be used. The easy thing to remember is that a "FREQUENCY" shown in a listing (for the purposes of the listings anyway) is the frequency that you will RECEIVE on, such as 146.940 Mhz... That is the freq you would see on your radio display when you tuned to that repeater... With me so far? "OFFSET" (sometimes referred to as a + or - offset), is the difference between the RECEIVE FREQ and the TRANSMIT FREQ. Remember, we are talking about a "REPEATER". It simultaneously retransmits what it HEARS on frequency "A" (such as 146.940) out onto another predetermined frequency "B". The difference is called "OFFSET". Usually its given (in a standard repeater pair) in terms of -600khz or +600khz of the receive freq.

REPEATERS are only allowed to be on certain frequency ranges in each Amateur band. If you aren't on a repeater, youre talking SIMPLEX, where you transmit and then receive on the same frequency, by taking turns.

The radio knows what these repeater "sub-bands" are, and depending upon what freq you're using to LISTEN will determine whether the standard OFFSET (where the corresponding transmit freq is for that receive frequency) will be [above] the RECEIVE FREQ or [below] the RECEIVE FREQ. Transmit freqs ABOVE the receive freq are called "POSITIVE OFFSET", and transmit freqs BELOW the receive freq are called "NEGATIVE OFFSET". With me?

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