

How do I?

An occasional series

This week: Fun with VHF: 2 Meter FM Simplex - Another Cool Tool

A tip of the hat to Ben Stoner, K8KTO and his YouTube channel
--- K8KTO Amateur Radio --- for this week's inspiration.



<https://www.youtube.com/watch?v=b3EVyRuigO0>

Many new amateur radio operators put their Technician license to work on 2 meter FM. The US amateur radio 2 meter band occupies 144 to 148 MHz. The bottom end, from 144.0 to 144.1 is reserved for CW (Morse Code), while the rest of the band is allocated for phone (voice), image, RTTY (radio teletype) and data. Within that fairly large chunk of valuable radio spectrum, band plans allocate space for repeater inputs and outputs, APRS, calling frequencies, SSB, etc.

Two meters is a fun world, and you can probably do lots more than you think. If you paid attention to the ARRL *Technician License Manual*, or picked up a copy of Steve Ford's *Radio's to Go!*, you probably are under the impression that 2 meters is all about nets, public service (races, parades, etc), Skywarn, APRS and satellites. Unfortunately, many hams impression of the 2 meter band is that unless you can see the person you are talking to, you cannot reach them without using a repeater.

Many amateur radio clubs inadvertently foster this belief because they have repeaters (a valuable asset!) and host weekly or monthly nets using the repeater. Repeaters are very useful, but what if they are down?

Stop. What are you doing? Put away the matches and kindling. There is no reason to resort to smoke signals just because the repeater is not working. Pick up your radio, set it to the National Calling Frequency on 146.520 MHz and try to stir up come on-air activity.

Key your HT, make a brief announcement such as: “This is KB3PQT looking for a contact and listening”, or simply “KB3PQT listening”. Note: Hams generally do not call CQ on Two Meter FM.

Some days it may take a while to get a response. Keep trying. If you don’t get a response after a few attempts, make your transmissions a little longer and give your call sign more than once per transmission.

Once you and another ham make contact, both operators should agree on a frequency where they can move up or down the band a little -- so that the calling frequency will be available for the next person.

The Two Meter Band Plan provides for simplex operations in the range 146.400 MHz to 146.580 MHz. In Pennsylvania the standard Two Meter Simplex Channel Spacing is 15 KHz.

So, if you wish to drop down one channel lower than the National Calling Frequency both operators would agree to use 146.505 MHz and resume communications on that frequency.

Available Two Meter Simplex Frequencies near the National Calling Frequency

146.400 MHz	
146.415 MHz	
146.430 MHz	
146.445 MHz	
146.460 MHz	
146.475 MHz	
146.490 MHz	
146.505 MHz	
146.520 MHz	National Calling Frequency
146.535 MHz	
146.550 MHz	
146.565 MHz	
146.580 MHz	

Ben, K8KTO, has a very interesting video on his YouTube channel where he demonstrates Two Meter FM Simplex. Caveat. He lives in northwest Ohio, where it is very flat. Your communications range here in the rolling hills of central PA will vary.

Fortunately, the Cumberland Amateur Radio Club has its very own 2 Meter FM Simplex net on Sunday at 7:00 PM Eastern (local time) on 146.490 MHz. The net control is usually Frank, KB3PQT. His station is located on the north side of Mechanicsburg, PA. We typically have check-ins from Cumberland, Dauphin, York, and Adams counties. And when conditions are “perfect”, Carl KB3KJP checks in from Westminster, MD (approximately 70 air miles).

For more articles on radio, modes, bands, thoughts on stations, antennas, and more, follow the trail to:

<https://www.radioclub-carc.com/resources/>

Catch ‘ya on the air!