

Ham 88 – Band Plan VHF/UHF
 Dr. Marc & Rosemary © 230427

1. The Band Plan is a cooperative effort to split up a group of frequencies for various ham activities. Data based on ARRL band plan and ORSI (OklahomaRepeaterSociety.org) coordination plan.
2. VHF repeater transmit offsets to receive frequency by 600 kHz.
 - a. Co-channel (same channel) distance separation is 120 miles.
 - b. 145.110 – 145.490: Channel spacing = 20 kHz, offset = minus.
 - c. 146.610 – 147.000: Channel spacing = 15 kHz, offset = minus.
 - d. 147.000 – 147.390: Channel spacing = 15 kHz, offset = plus.
 - e. Bandwidth is 16 kHz, so some adjacent channel interference is likely.
3. UHF repeater transmit offsets to receive frequency by +5 MHz.
 - a. Co-channel (same channel) distance separation is 120 miles.
 - b. 442.000 – 444.975: Channel spacing = 25 kHz, offset = plus.
4. Simplex has no specified channel spacing, but by convention follows the same guidelines as repeaters.
 - a. VHF channel separation is 15 kHz. (146.40, 146.415, 146.43, 146.445, etc.)
 - b. UHF channel separation is 25 kHz. (445.0, 445.025, 445.050, 445.075, etc.)
5. The different mode segments for 2-meter and 70-cm are in the table.

VHF		UHF	
144.00-144.05	EME (CW)	420.00-426.00	ATV repeater or simplex with 421.25 MHz video carrier control links and experimental
144.05-144.10	General CW and weak signals	426.00-432.00	ATV simplex with 427.250-MHz video carrier
144.10-144.20	EME and weak-signal SSB	432.00-432.07	EME (Earth-Moon-Earth)
144.200	National calling frequency	432.07-432.10	Weak-signal CW
144.20-144.275	General SSB operation	432.10	70-cm calling frequency
144.275-144.30	Propagation beacons	432.10-432.30	Mixed-mode and weak-signal work
144.30-144.50	New OSCAR sub-band	432.30-432.40	Propagation beacons
144.50-144.60	Linear translator inputs	432.40-433.00	Mixed-mode and weak-signal work
144.60-144.90	FM repeater inputs	433.00-435.00	Auxiliary/repeater links
144.90-145.10	Weak signal and FM simplex (145.01,03,05,07,09 widely used for packet)	435.00-438.00	Satellite only (internationally)
145.10-145.20	Linear translator outputs	438.00-444.00	ATV repeater input with 439.250-MHz video carrier frequency and repeater links
145.20-145.50	FM repeater outputs (-offset)	442.00-445.00	Repeater outputs (OK) (+offset)
145.50-145.80	Miscellaneous and experimental modes	445.00-447.00	Shared by auxiliary and control links, repeaters and simplex (local option)
145.80-146.00	OSCAR sub-band	446.00	National simplex frequency
146.01-146.37	Repeater inputs	447.00-450.00	Repeater inputs and outputs (local option)
146.40-146.58	Simplex		
146.52	National Simplex Calling Frequency		
146.61-146.97	Repeater outputs (-offset)		
147.00-147.39	Repeater outputs (+offset)		
147.42-147.57	Simplex		
147.60-147.99	Repeater inputs		

6. Cross-band ‘magic’ is configuring a mobile to receive on one band and re-transmit on another.
 - a. For example, set one side of the radio to the VHF repeater channel.
 - b. Set the other side to the UHF simplex frequency used by the handi-talkie.
 - c. Set mobile for cross-band operation.
 - d. The handi is effectively operating on the repeater, through the radio.
7. Allstar nodes with RF radios operate simplex.
 - a. This can be any simplex channel.
 - b. Typically we use 446.025, which is just one channel from the national calling frequency, making set-up easier.
 - c. Program your node simplex frequency into a channel number on the handi-talkie to assure quick set-up.
8. On simplex, a key problem is having tones set on one radio and not the other, effectively blocking that channel.
 - a. The simplest solution is to open the menu and clear all tones for that channel.
9. Life is good. Enjoy!

