## Ham 102 – Band Plan 10 & 6 meter

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- 1. The normal process of ham radio starts with VHF/UHF (2m/70cm) communications. We have used simplex, duplex repeater, and AllStarLink digital communications. Over 100 articles discuss these topics.
- 2. 6 meters (50 54 MHz) is still VHF, but the wavelength is less line-of-sight dependent.
  - a. The 'magic-band' is the transition region, at times it is local or long distance with joy or heartbreak.
  - b. Since it is VHF, the entire band is open to all license classes.
  - c. FT8 digital is common.
- 3. 10 meters (28 29.7 MHz) is the bottom of HF wavelengths.
  - a. Techs can operate 28.3 28.5 with 200 Watts on single-side-band (SSB) and 28.0-28.3 with CW.
  - b. This is adjacent to the unlicensed Citizens Band (CB). Much of that hardware is usable.
- 4. Both allocations have a band plan, which shows where to find traffic with which mode.
- 5. Commercial and ham-brew antennas are common.
  - a. For skywave (DX), polarization is less important, so horizontal works.
  - b. Unlike VHF practices, different antennas must be tuned and matched to prevent transmitter damage.

6-m

- c. Verticals under the roof line are less subject to lightning.
- 6. The diagram illustrates the minimum safety hardware needed between the antenna, ground, and radio.
  - a. Keep antenna below lightning rod cone of protection.
  - b. A lightning protector is needed at the top of coax and another before entering the building.
  - c. Ferrite beads near the radiator reduce noise.
  - d. Three ground rods with bonding to utility ground are necessary.
  - e. I use the same protection for under roof to mitigate noise and other transients.
- 7. The *ICOM* 7300 HF+6 is highly recommended.
  - a. The compact, software defined, touch-screen, waterfall, premium audio, is the most sold HFtransceiver in the history of ham radio for many reasons. At retail, it is a bargain. Twice a year it discounts to \$899 or \$999. It is very nice. No, it is excellent. It is straight forward to learn and easy to use.
  - b. Alinco DR-06T is a decent, 6-meter single band mobile with 50-W, about \$250.
  - c. Alinco DR-03T is the 10-meter sibling.

10-m	
28.000-28.070	CW
28.070-28.150	RTTY
28.150-28.190	CW
28.200-28.300	Beacons
28.300-28.500	Phone, SSB, TECHNICIAN privileges
28.500-29.300	Phone
28.680	SSTV
29.000-29.200	AM
29.300-29.510	Satellite Downlinks
29.520-29.590	Repeater Inputs
29.600	FM Simplex
29.610-29.700	Repeater Outputs

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50.0-50.1	CW, beacons
50.060-50.080	beacon subband
50.1-50.3	SSB, CW
50.10-50.125	DX window
50.125	SSB calling
50.3-50.6	All modes
50.6-50.8	Nonvoice communications
50.62	Digital (packet) calling
50.8-51.0	Radio remote control (20-kHz ch)
51.0-51.1	Pacific DX window
51.12-51.48	Repeater inputs (19 channels)
51.12-51.18	Digital repeater inputs
51.62-51.98	Repeater outputs (19 channels)
51.62-51.68	Digital repeater outputs
52.0-52.48	Repeater inputs (23 channels)
52.02, 52.04	FM simplex
52.2	TEST PAIR (input)
52.5-52.98	Repeater output (23 channels)
52.525	Primary FM simplex
52.54	Secondary FM simplex
52.7	TEST PAIR (output)
53.0-53.48	Repeater inputs (19 channels)
53.0	Remote base FM simplex
53.02	Simplex
53.1,'.2, '.3, '.4	Radio remote control
53.5-53.98	Repeater outputs (19 channels)
53.5, '.6, '.7, '.8	Radio remote control
53.52, 53.9	Simplex

- d. A few VHF/UHF radios include 6-meters.
- e. Walcott Radio sells 10-meter C/B variants.
- f. Yaesu makes 6-meter HTs. I had a VX-7, which was quite capable, but tedious to program.
- g. TYT 9800 is a quad-band radio at a low price point of \$200. It is not recommended, at this time. QC is atrocious. Few 5-star ratings on ham sites, most are 0-3.
- 8. Life is good. Enjoy! Web: www.evergreencg.org Social: https://gab.com/groups/62710