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VHF vs UHF

Which band works best, and where

Most new hams start on 2 meters (VHF) and 70 centimeters (UHF). Both are for local contacts, and most handhelds cover both.



VHF: 30 to 300 MHz

Ham bands: 6 m, 2 m and 1.25 m. Longer waves reach a bit farther over open ground, hills and woods.



UHF: 300 MHz to 3 GHz

Ham bands: 70 cm, 33 cm and 23 cm. Shorter waves slip through windows and between buildings, so UHF often does better in cities and indoors.

ANTENNAS



A quarter-wave antenna is about 19 inches for 2 m and about 6 inches for 70 cm.

REPEATERS

The offset is 600 kHz on 2 m and 5 MHz on 70 cm. Simplex calling frequencies: 146.520 and 446.000 MHz.

WORDS TO KNOW

- VHF: very high frequency, 30 to 300 MHz.
- UHF: ultra high frequency, 300 MHz to 3 GHz.
- Dual-band: a radio that covers both 2 m and 70 cm.

GOOD TO KNOW

- Technicians can use every ham band above 50 MHz.
- FM satellites like SO-50 listen on 2 m and transmit on 70 cm.
- GMRS and FRS are UHF too, but they're separate services with their own radios.
- Coax loses more signal at UHF, so use good cable for long runs.

Range and building tips are rules of thumb: your terrain matters more than the band.

IN SHORT

Pick the band your local repeaters and nets use. A dual-band radio covers both.