

Antenna Shoot Out

September 2026 • VHF 2-Meter Antenna Testing and Comparison Event

Event overview: Bring your 2-meter antenna and see how it performs on a calibrated test range. Participants will be able to compare results, learn from different antenna designs, and connect with other radio amateurs in a practical, hands-on setting.

What to bring: One or more VHF 2-meter antennas to test and, if possible, the radio you normally use with them. A transmitter will be available if needed.

WHAT IS AN ANTENNA SHOOT OUT?

An antenna shoot out is a hands-on opportunity to test and compare VHF 2-meter antennas using a calibrated Outdoor Antenna Test Site. This allows real time comparisons between different antennas you may have as well as other antennas in the test session.

WHEN AND WHERE?

The event will be held on September 19th, 2026, from 0900 to 1200 hrs. PDT at the Nichols Community Center, 690 9th Ave Fox Island, WA 98333.

TEST SETUP

Each test uses a transmission at a known power level from the participant's antenna to a calibrated receiver located approximately 100 feet away. All results will be recorded, and a comparison report will be made available to participants after the event. There will be a drive-up opportunity for those interested in testing mobile antennas installed on a vehicle.

To keep comparisons fair, measurements are normalized using the measured transmitter output power for each participant. Directional antennas can also be tested for front-to-back ratio upon request.

TEST PROCESS

The process will follow these steps:

1. Sign in so a record can be created for each antenna or configuration you plan to test.
2. Have your radio's output power measured and recorded so results can be adjusted fairly for power differences.
3. When called, move to the test position, key up, and announce your call sign and antenna type.
4. After acknowledgement, key up for about 10 seconds while the measurement is taken.
5. If you wish to test more than one antenna, return to the queue for each additional test.

All tests will be conducted from the same position on the test range and on the same frequency to ensure consistent results.

After each transmission, the test operator will record your signal strength and inform you of the result over the air.

When testing is complete, the results will be reviewed and compiled into a report showing the performance of all antennas tested. It is always interesting to see how different designs and configurations compare.

EXAMPLE SIGN-IN SHEET

OUTDOOR ANTENNA TEST RANGE 690 9th St, Fox Island, WA 98333			CALLSIGN: _____ 9/19/2026		
TEST	#1	#2	#3	#4	#5
FREQUENCY					
ANTENNA					
MOUNT					
POLARIZATION					
POWER (W)					
RSL (Raw dBm)					
RSL (Norm dBm)					

Explanation of terms.

- Antenna: Type of antenna, Model number, or Home Brew name (ex Home brew J-Pole)
- Mount: HT, 6 ft mast, Vehicle roof or trunk mount
- Polarization: Horizontal, Vertical, Circular (left or right)
- Power: Average Output Power of transmitter used in the test
- RSL (Raw dBm): Received Signal Level (measured result)
- RSL (Norm dBm): Received Signal Level (normalized measurement accounting for output power)

dBm: Signal strength in decibels relative to 1mW (0dBm = 1mW).

Positive values of dBm indicate a value greater than 1mW and negative values indicate a value less than 1mW.

dBm is a logarithmic value. In this test all dB measurements will be negative and the more negative a value is the weaker the signal is. For example, a measurement of -85 dBm is much weaker than one that is -65 dBm which is a difference of -20dB.

