

ANTENNA SHOOTOUT IN THE FIELD

WHAT Most hams evaluate their antenna systems by the “signal reports” they get from contacts. This is VERY subjective. It’s also not very quantitative on an absolute basis. There is a better way to truly measure the effectiveness of an antenna system. It’s to use a known transceiver, sending a controlled CW message, and then measuring the signal reports from trusted “spotting” stations around the USA and the world.

WHY The objective is to see exactly how well your antenna is truly performing in an open-field environment, away from metal and other radio wave distorting/blocking objects. You will be able to compare your antenna to others right on the spot, and maybe share ideas on how to improve your antenna system.

WHEN Wednesday morning November 16th AND Saturday morning November 19th. See the timetable below for event timing. You can participate in one or both events.

WHERE The target location is on the south edge of AnSan Sister City Park (right behind the Search & Rescue building off Ducharme & Buffalo). There are nice picnic tables under trees right next to street parking (on Cherry River Dr.) with open grass next to it. We’ll be setting up the rig on the table in the middle of the south edge of the park.

SETUP The Las Vegas City Parks prohibit driving anything into the ground to prevent puncture of irrigation lines. Use wide bases and weights for tripods and masts. Be sure to mark any ground radials and guy wires with bright colored tape or cloth. There is no height restriction but the trees are short.

HOW We’ll set up a 100W rig with an internal tuner on the table with an inline power meter going into a 4-way coax switch. The switch will select each antenna, one at a time, which eliminates possible interference. You’ll connect your coax back to the switch (SO-239 sockets) at the rig. We’ll transmit the same CW call from each antenna but using each antenna operator’s callsign to associate the signal reports with that operator. We’ll do this as a round-robin on each band (starting with 40m). We’ll record the signal strength and distance as reported by Reverse Beacon Network. After each round-robin we’ll switch to the next band (40/20/15/10 meters). We’ll tabulate the results and share them with all those who sign in at the event. We’ll have a 20m dipole up at 24 feet as a reference since that band is likely to be active at all times. Time-permitting we can also add 30m, 17m & 12m at the end.

BRING It will be chilly in the morning and bright during the day, so dress and protect yourself accordingly. You might want to bring gloves, hat, sunglasses, warm drinks and snacks. Be sure to have your antenna ready for setup including coax, adapters, masts, tripods, etc.

TIMETABLE

0700-0800	Check-ins, operator briefing and setup
0800-0900	Capture of an HF impedance scan of each antenna with a NanoVNA and final tuning
1000-1200	On-air testing
1200-1300	Tear-down and group lunch nearby where results are presented

WHO Anyone interested in testing their antennas or just hanging out to learn about antennas and ham radio are welcome. The idea is to try out different antenna approaches and share what is learned. This invite is going out to all Las Vegas area ham clubs and groups so we can have a very lively turnout. We especially welcome newbies and those simply interested in seeing different antennas in action.

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VOLUNTEERS We need a small group of facilitators to make this a smooth-running and effective event:

Event Coordinator (Rudi will coordinate and facilitate all participants and activities at the event)

Rig Operator (Brings and sets up their own 100W All-band HF rig with internal ATU)

Technical Support (brings their NanoVNA & adapters to help with antenna setup, analysis & tuning)

Data Logger (brings their own laptop computer with internet hotspot connection)

Videographer (brings their video equipment, records the event and edits it down to a tight recap video)

SCORING: For each CW call on each antenna and on each band we will average out the product of signal strength (dB) times the distance (miles) to account for different number of “spotters” hearing the antenna. Antennas will not be expected to operate on all bands.

REGISTRATIONS If you’d like to setup and test your antenna at the Shootout, then please contact me so I can plan for it. Any “overflow” would go to a similar follow-on event shortly thereafter.

Please email your:

Name

Callsign

Phone number

Email address

Day Preference: Wed Nov 16 or Sat Nov 19

I’d like to volunteer for the following position (1=1st choice; 2=2nd choice):

- Rig Operator** (prefer a 100W rig with internal tuner that can also send pre-written CW messages)
- Technical Support** (bring your NanoVNA & adapters to help with antenna setup, analysis & tuning)
- Data Logger** (bring your laptop computer with internet hotspot connection)
- Videographer** (bring your video equipment to record the event)

RSVP TO:

Rudi Wiedemann – K7RAW

The Antenna Whisperer

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