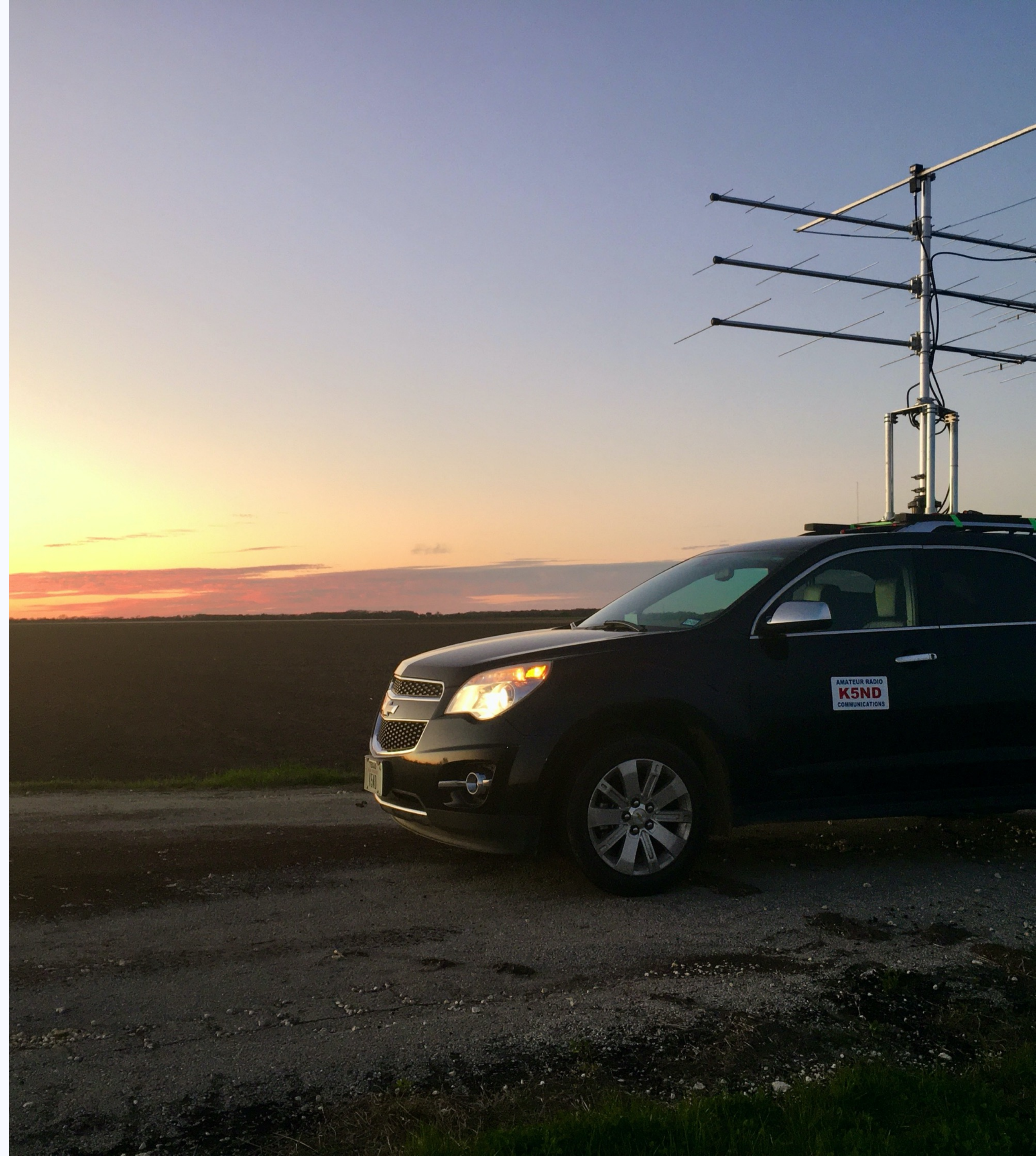


# VHF Contesting K5ND

*Magic Bands with Super Results  
from Average Stations  
— Joel Harrison, W5ZN*

[www.k5nd.radio](http://www.k5nd.radio)





## What's Ahead

- Joys of Contesting
- My Contesting Journey
- VHF Contesting – ARRL & CQ
- Average Stations – Small Antennas
- VHF Propagation
- Strategy and Operating Practices
- Get on the Air – Winning





## About K5ND

Writer     Heathkit Home Study Courses  
              National Contest Journal  
              QST, CQ, and 73 Magazines

Blogger    [www.K5ND.radio](http://www.K5ND.radio)

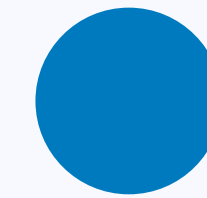
Six Meter Fanboy

VHF Contest Rover

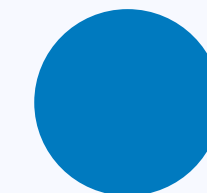


# Joys of Contesting aka RadioSport

High Levels of Activity  
DXCC in a Weekend  
Without the Pileups



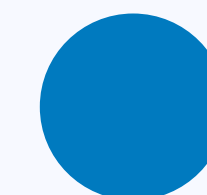
More Stations, More Activity



Pick up DXCC and VUCC



Competition in Categories



Measured Improvement Over Time

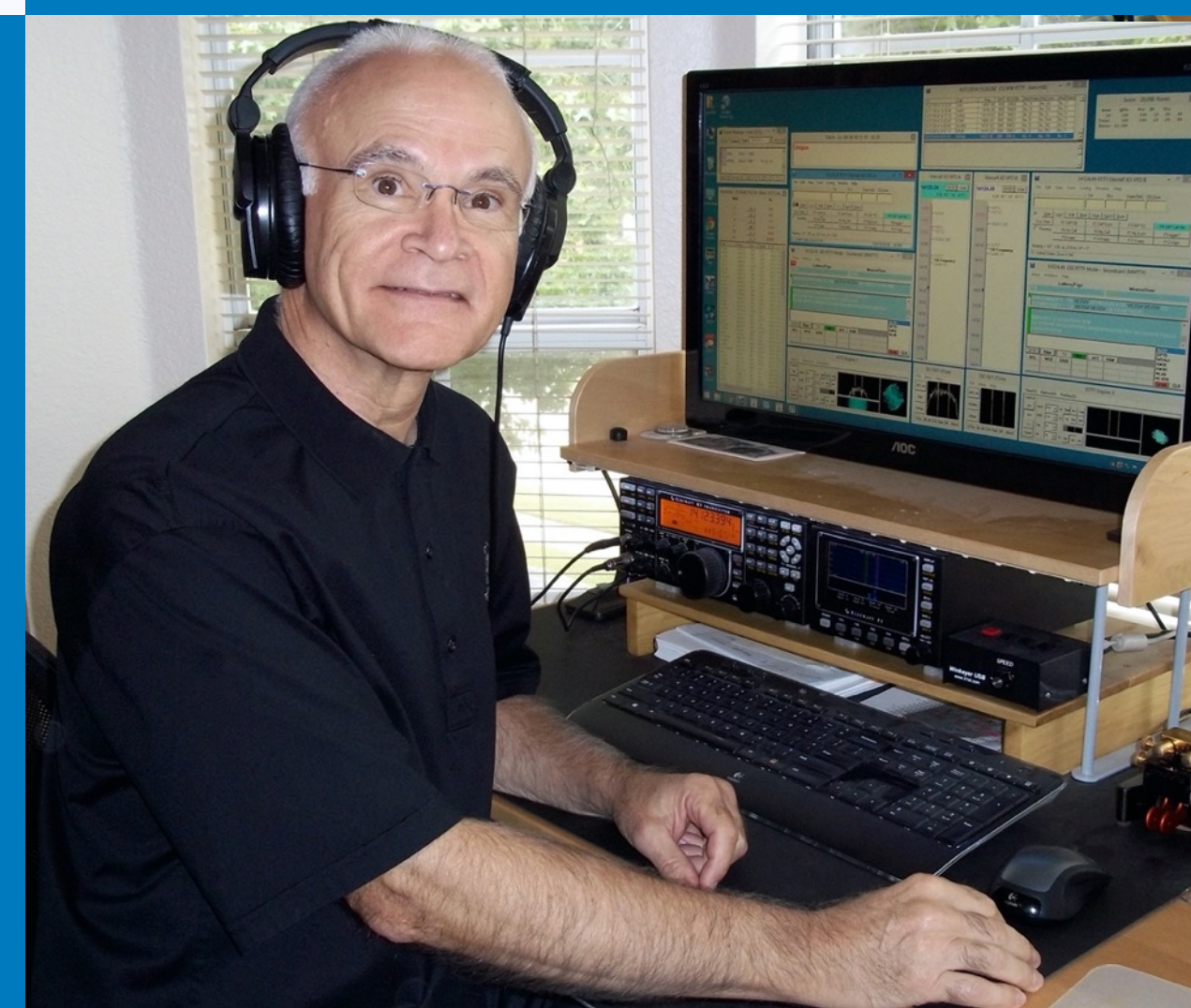


# My Contesting Journey

VHF  
VUCC  
SO3B - Roving



CW & RTTY  
DXCC  
Score Improvement  
Category Search





# VHF Contesting



## Small Antennas

Lots of options for antennas with high gain and low height



## Power Levels Not Overly Critical

Primarily places you in the low- or high-power category



## Small Group of Competitors

CQ WW SSB Contest 8,000+ entries

CQ WW VHF Contest 1,000+ entries



## Modes Don't Matter

Any mode works for a QSO — SSB, CW, WSJT-X, FM

No separate category for mode of operation



# Contest Listing



## **ARRL January, June, and September**

June is the big contest with the most chance of 6 meter openings



## **CQ WW VHF July**

Only 6 and 2 meters. Different rules.



## **Saturday Afternoon to Sunday Evening**

ARRL 33 hours, CQ 27 hours, rather than the typical 48-hour HF contests



## **Central States VHF Sprints — Spring and Fall**

4-hour sprints by band



# ARRL Contest Entry Categories

## Single Operator

- Low Power (200/100/50 watts)
- High Power (exceeds low power)
- Portable (10 watts)
- 3-Band (50-144-432 – 100/50 watts)
- FM Only (low 4 bands, 100 watts)

## Rover

- Classic Rover (two ops)
- Limited Rover (low 4 bands — 200/100 watts)
- Unlimited Rover (all bands, high power, multiple ops)

## Multi-Operator

- Limited (4 bands maximum)
- Unlimited)

Exchange is 4-digit Grid. Multipliers are total number of grids per band. QSO points 1 for 50/144, 2 for 222/432, 3 for 902/1296, 4 for 2.3 GHz and up.

Rovers also get 1 multiplier for each grid activated.







# CQ WW VHF Contest

## Entry Categories

- Single Op – All Band
- Single Op – Single Band
- Single Op – All Band QRP, 10 watts
- Hilltopper – QRP and 6 hours only
- Rover
- Multi Op

## Assistance

- No self-spotting.
- EME and MS can spot frequency and sequence, only.
- Rovers can use APRS.
- No telephone or text.

## Power and Bands

- No power categories other than QRP
- 6 and 2 meters only

Exchange is 4-digit Grid. Multipliers are total number of grids per band. QSO points 1 for 50 and 2 for 144.

No Rover grid activation multiplier. But grids worked from each activated grid go in the total multipliers.





Cheap Yagis  
3-Element LFA



Simple Stations  
Small Antennas

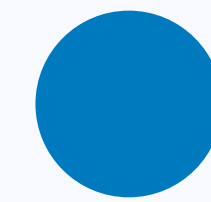
Stressed Moxon  
6 meters



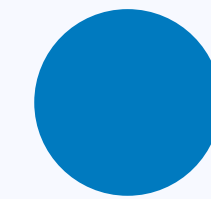


## Average Stations Per W5ZN

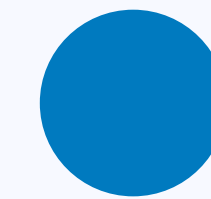
Insight provided by Joel W5ZN  
at Contest University



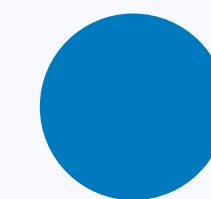
HF - 6 meter rig at 100 watts  
3-element Yagi at 30 feet



2 meters greater than 50 watts  
Yagi at 50 feet is outstanding



222 and 432 greater than 50 watts  
Yagi at 50 feet and more elements



Preamps helpful at 6 and 2 meters  
Essential on the higher bands



# Propagation



## **Sporadic E**

Primarily on 6 meters with spectacular results

Pray for Es during the Contest



## **Tropospheric Ducting**

Can bring great results at 2 meters and above

Watch for this on Sunday mornings



## **Meteor Scatter**

Can greatly extend your range on 6 and 2 meters

Early morning is best but can work at all times



## **Moon Bounce**

Not for average stations but is used during the contest



# Contest Strategy



## **Pick the Category that Fits You and Your Station**

My first purpose is to have fun. The second is to generate a reasonable score and then compare from one contest to another.



## **More Bands — More Modes**

The way to score points is to move stations to your higher bands with more points. More modes can help you find more stations.



## **WSJT-X is Now a Must Have Mode**

SSB and CW are the mode for running stations when the bands are open. Most are in FT8 and some MSK144.



## **Butt-in-Chair is Critical in All Contesting**

If you're not in front of your station, you're not working QSOs and multipliers. Even so, nights on VHF contests are generally dead.



# Operating Practices

✓ 2 meters is the go-to meeting place. If 6 meters is open, work as many stations as possible there.

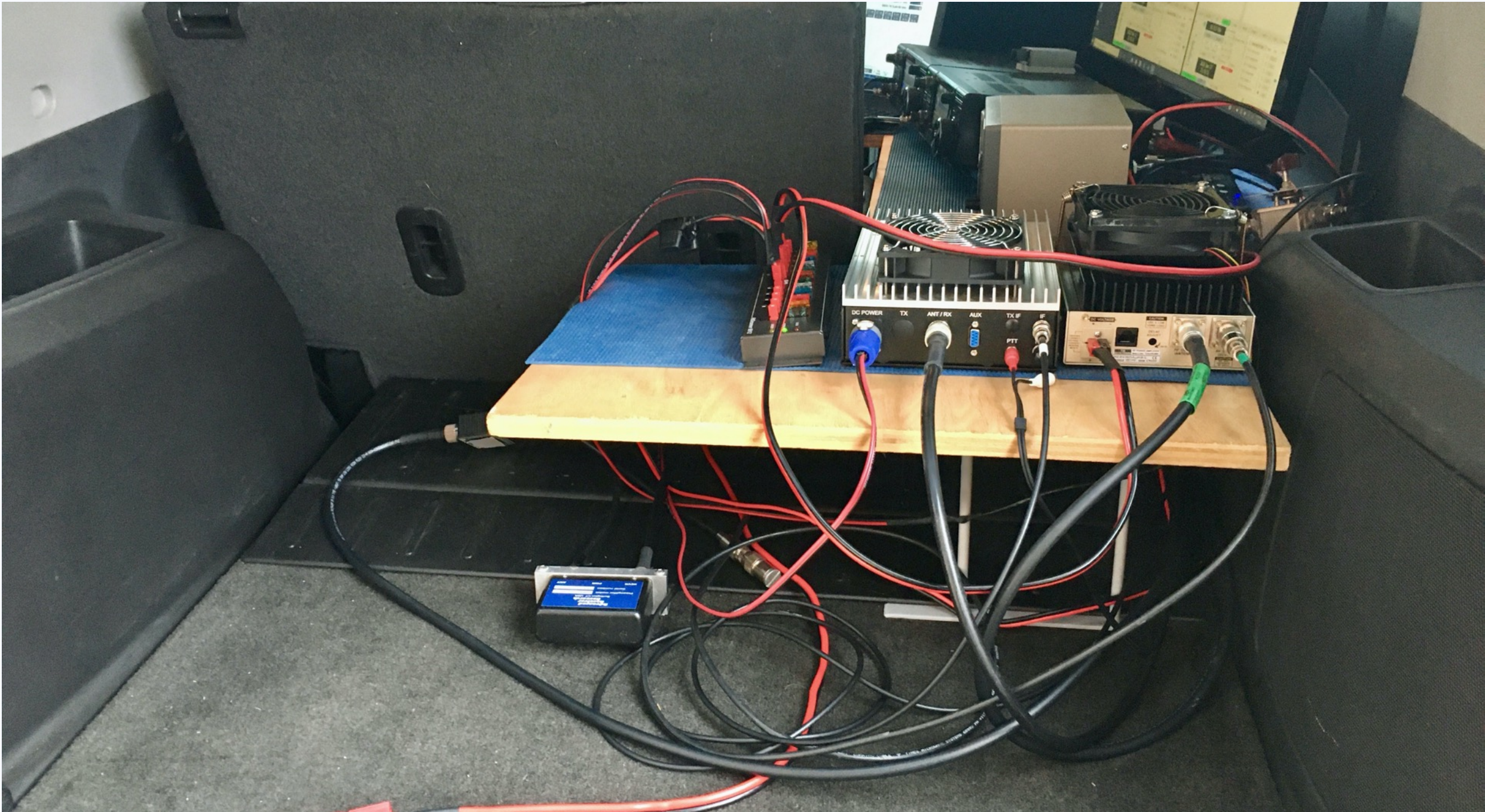
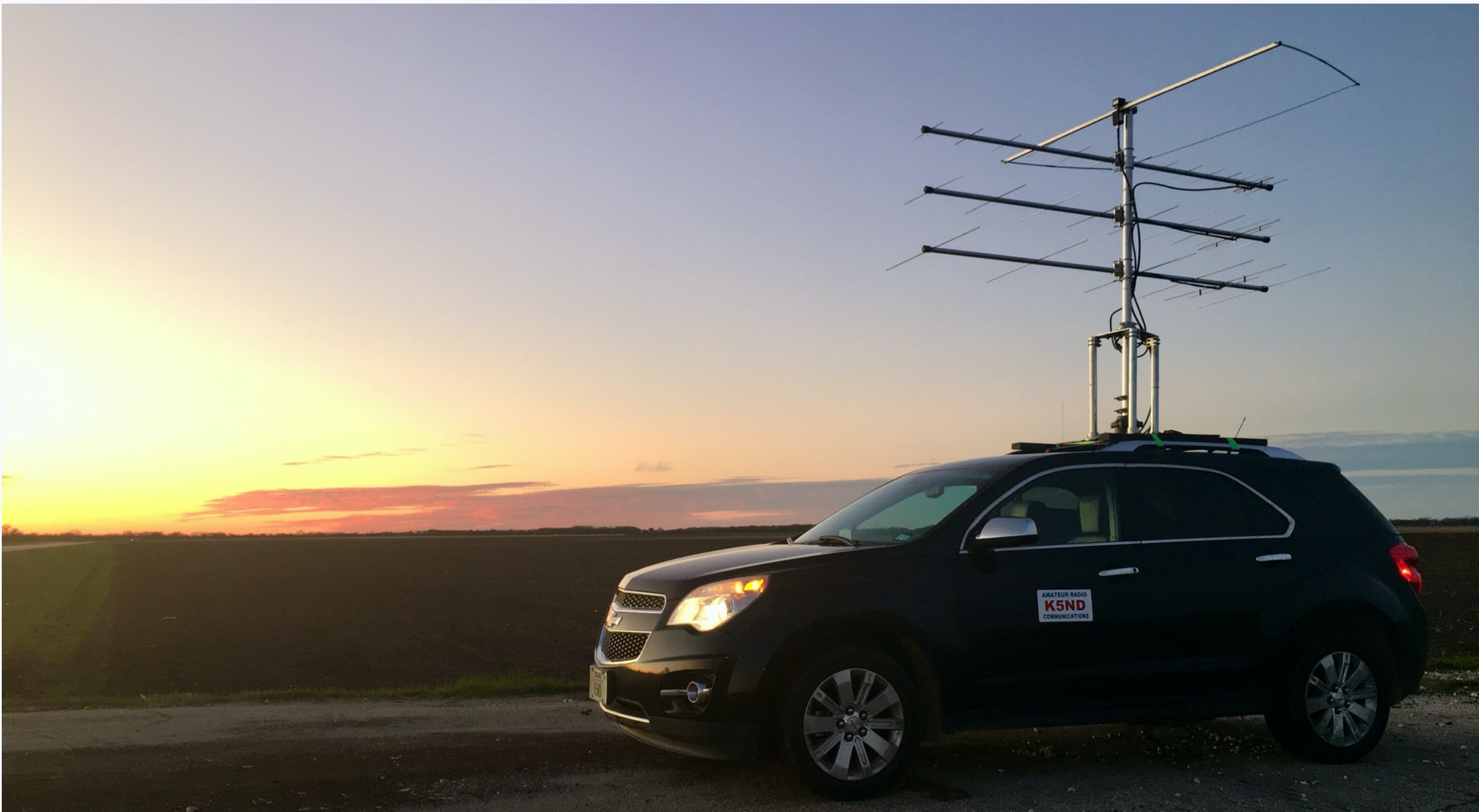
✓ Move Stations to Other Bands for points.

✓ Accurately pointing your antennas is critical at VHF-UHF.

✓ Sunday Morning Tropo and Meteor Scatter can add multipliers.







Current Version  
K5ND / R



# Simple Entry Winners

## FM Only

September 2019 Results

15 Entries in USA

Top was 87 QSOs and 21 Grids

West Gulf KG5UNK with 6 points

September 2020 Results

27 Entries in USA

Top Entry 3,546 points

24 entries less than 1,000 points





There's More!

There's Always More.

## Contest University

All Past Presentations

<https://www.contestuniversity.com/files/>

<https://www.contestuniversity.com/videos/>

## Central States VHF Society

Organizes Sprints

Annual Conference

<https://www.csvhfs.org>

## QST, NCJ, CQ Magazines

World Above 50 MHz Column

VHF and Relevant HF Articles

VHF+ Column

## Email Lists

VHF Contesting

WSJT-X

ARRL Contest Update





## Further Reading

### National Contest Journal

- ✓ [VHF-UHF Contesting! Column by NØJK](#)
- [K5ND's VHF Limited Rover Experience, Jan/Feb 2020](#)
- [Magic Band. Magic Contesting, May/June 2020](#)
- [K5ND's VHF Rover Setup – Part II, Nov/Dec 2020](#)
- [VHF Contest Rover Experience, K5GJ, May/June and July/August 2019](#)

### QST Magazine

- ✓ [World Above 50 MHz Column by NØJK](#)
- [Introduction to VHF+ Roving, May 2019](#)

### K5ND Blog Posts

- ✓ [VHF Topics and Contest Plans / Reports](#)





Watch for K5ND / R During the Contests



# K5ND/R Set Up June 2020 VHF Contest

