



*Magic Bands with Super  
Results from Average  
Stations*

# VHF Contesting



# What's Ahead

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



# About K5ND

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- Writer
  - Heathkit Education
  - NCJ, QST, CQ, 73
- Blogger
  - [www.K5ND.radio](http://www.K5ND.radio)
- Six Meter Addict
- VHF Contest Rover



# The Joys of Contesting — aka RadioSport

- More Stations, More Activity
- Pickup DXCC and VUCC
- Competition in Categories
- Measured Improvement Over Time

# My Contesting Journey

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- HF CW and RTTY
  - DXCC and Competition
  - Category Search
- VHF Contest
  - VUCC and Competition
  - SO3B and Rover Categories



# VHF Contesting

- Small Antennas — High Gain
- Power Levels Not Overly Critical
- Small Number of Competitors – CQ SSB 8,000+ vs CQ VHF 1,000
- Modulation Modes Don't Matter

# VHF Contest Listing

- ARRL in January, June, and September
- CQ WW VHF in July
- Saturday Afternoon to Sunday Evening
  - ARRL is 33 hours, CQ is 27 hours
- VHF Sprints — Spring and Fall, 4 hours by Band

# ARRL VHF Contest Entry Categories

## Single Operator

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

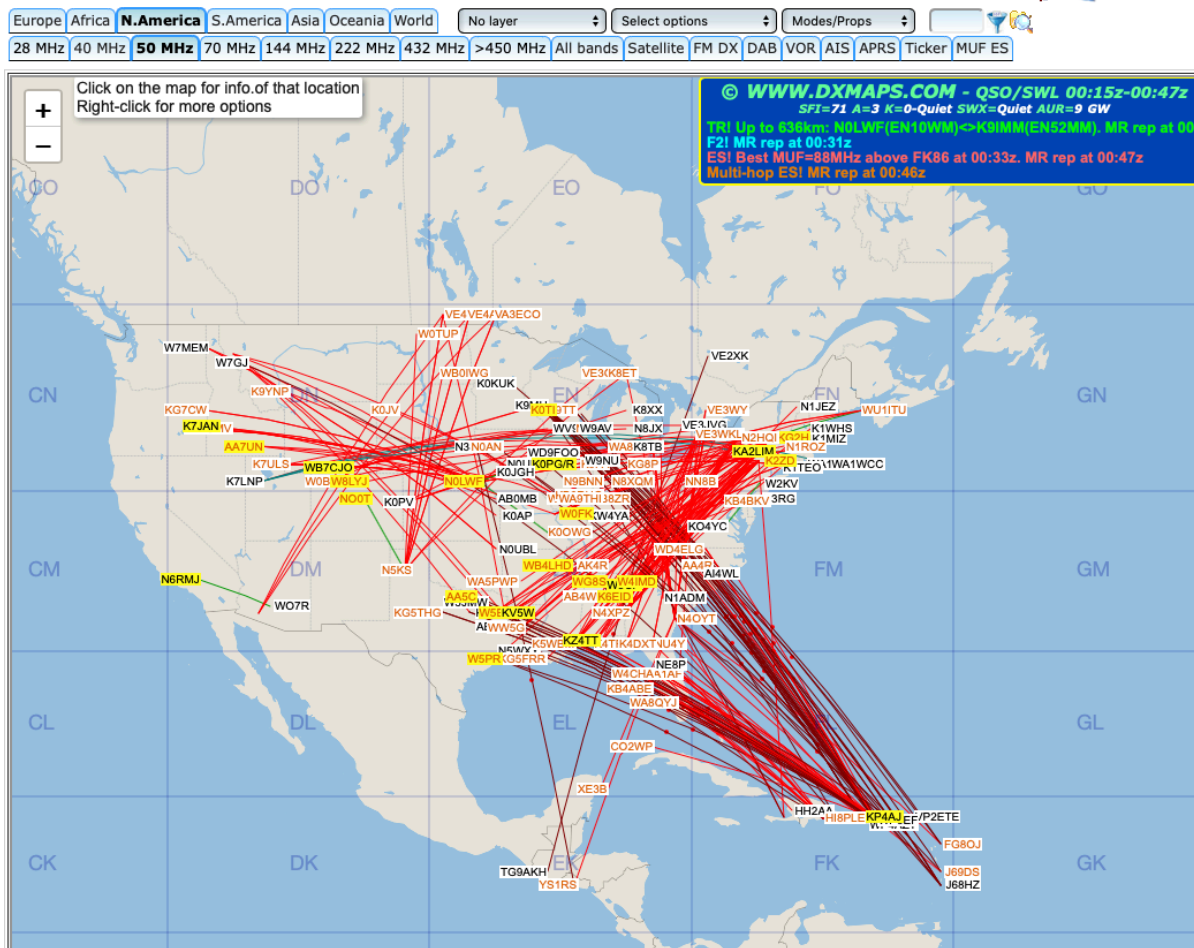
## Multi-Operator

- Limited (4-bands)
- Unlimited

## Rover

- Classic Rover (two ops)
- Limited Rover (low 4 bands, 200/100w)
- Unlimited Rover (all bands, high power, multiple ops)
  
- Exchange = 4-digit Grid
- Multipliers = Grids per Band
- Extra Points for Higher Bands – 1 for 6/2, 2 for 222/432, more for higher, January even higher





# ARRL Assistance Rules

- Very Open
- Chat Rooms, Social Media, Texting, Phone Calls, APRS
- Self Spotting on DX Clusters
- PingJockey, VHF-Chat Slack, ON4KST Chat
- Cannot confirm QSO or request repeats

# CQ VHF Contest

## Entry Categories

- Single Operator — All Band
- Single Operator — Single Band
- Single Op All Band QRP 10 watts
- Hilltopper QRP and 6 hours only
- Rover
- Multi-Operator

## ARRL Differences

- Assistance Limited — no phone, no text, no self spotting, MS/EME can share frequency and sequence only
- No Power Categories other than QRP
- 6 and 2 meters only
  
- Exchange = 4-digit Grid
- Multipliers = Grids per Band
- 1 point for 50, 2 points for 144

# Average Stations

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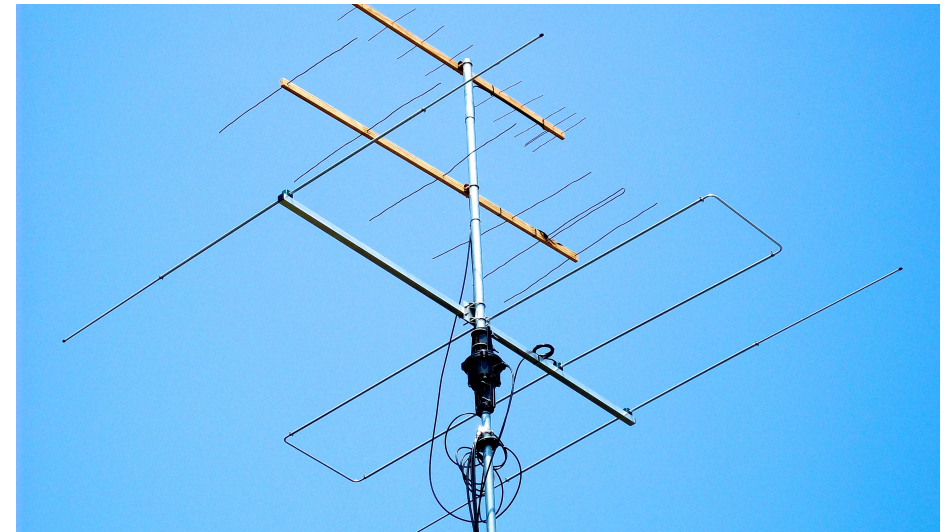
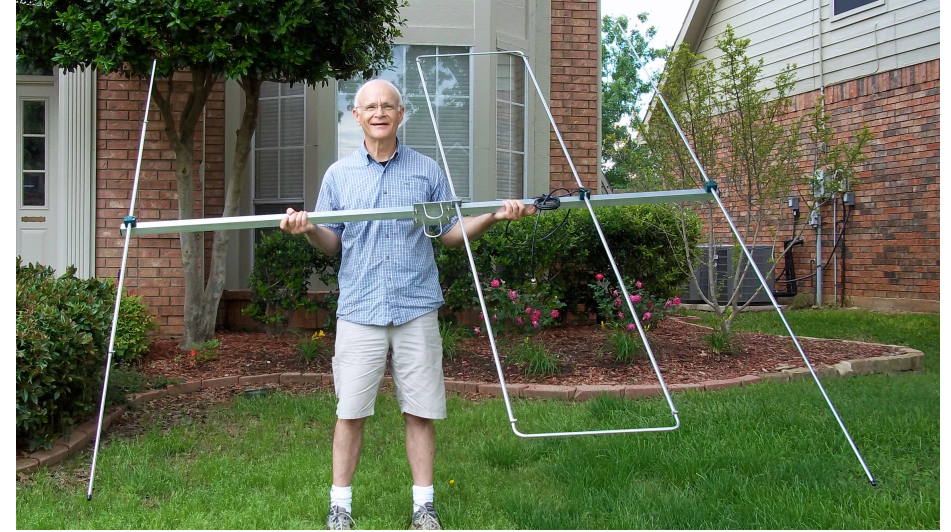
- 6 meters — HF/6 rig at 100 watts, Moxon or 3-el Yagi
- 2 meters — 50 watts great, Yagi at 50 feet is outstanding
- 222/432 — Greater than 50 w and multi-element Yagi
- Preamps helpful at 6 and 2, essential on higher bands



# Small Antennas

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- 6 Meter 3-Element LFA Yagi
- Cheap Yagis with wood booms for 144 and 432
- Omnidirectional loops and omni-angles
- 6 meter Stressed Moxon, small and works great
- Painter Pole or Pushup Mast with Armstrong Rotator works just fine.



# VHF Propagation

- **Sporadic E** — primarily 6 meters, pray for Es
- **Tropospheric Ducting** — 2 meters and above, watch for this on Sunday morning
- **Meteor Scatter** — Early mornings works best
- **Moon Bounce / EME** — Bigger station and antennas

# Contest Strategy

## Category to Fit You

- First have fun.
- Second generate reasonable score.

## More Bands

- Higher bands have higher points.
- Move stations to higher bands.

## More Modes

- Find more stations.

## WSJT-X is a Must

- FT8 and FT4 for Es and Tropo
- MSK144 for Meteor Scatter
- JT65 for EME
- Q65 to be determined

## Butt-in-Chair

- Universal Contesting Maxim
- Nights can be very quiet



# Operating Practices

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- 2 meters go-to calling place, unless 6 meters is open
- Move Stations to Other Bands
- Accurately Pointing your antennas is critical at VHF
- Sunday Morning Tropo and Meteor Scatter add multipliers

# Get on the Air

- You too can be a Winner.
- Don't let PERFECT get in the way of getting on the air and having fun.
- September 2020 SO FM only, 27 entries. Winner 3,546 pts. 24 entries scores were less than 1,000 pts. Lots of ARRL Sections without entries.





# More Information

## Central States VHF Society

- Organize Spring Sprints
- Annual Conference

## Email Lists

- VHF Contesting, groups.io
- WSJT-X, groups.io
- ARRL Contest Update

## National Contest Journal

- Frequent VHF Articles and Column
- Three K5ND Articles in 2020

## QST and CQ Magazines

- World Above 50 MHz Column
- VHF+ Column
- Articles



## Warning — This Could Happen to You

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Roving with  
Antenna Eating Trees

Thanks for your patience and attention. 73, Jim @ K5ND

Questions  
and maybe  
Answers

