

Basics of VHF Contesting

This is supposed to be FUN!



BRARA
March 6, 2018
Rick Rosen
K1DS



This presentation is dedicated
to the memory of Jim Malone
WA3LBI, now a Silent Key

Weeks before his untimely
death due to a heart attack,
he set a record world distance
10GHz QSO with VK3MO
using EME.

VHF Contests

- January VHF SS— 2nd full wknd January
- June VHF QSO Party-- 2nd full wknd June
- Field Day— 4th full wknd June
- CQ VHF WW-- 2nd full wknd July (50 & 144 only)
- 222 & Up Distance Contest— 1st full wknd Aug
- Sept VHF QSO Party-- 2nd full wknd Sept
- Spring and Fall single band Sprints
- 10 GHz & Up, EME, SBMS club uWave, FM



**K1DS/ R
FN20
CQ VHF
July 2010**



Pre-contest checklist

- Expectations-Expectations-Expectations
- Antennas and feedlines
- Rigs tested—beacons, nets, test gear
- Logging capability
- Spare parts/replacements
- Power source



Contingency planning



Know the Rules and Exchange

- When does the contest start and end?
- What class am I entering?
- Good call phonetics
- What info is exchanged?
- Grid locator (4 or 6 digit) have a map
- Signal report optional most often
- How, where and when are logs submitted?



Contest Entry Categories

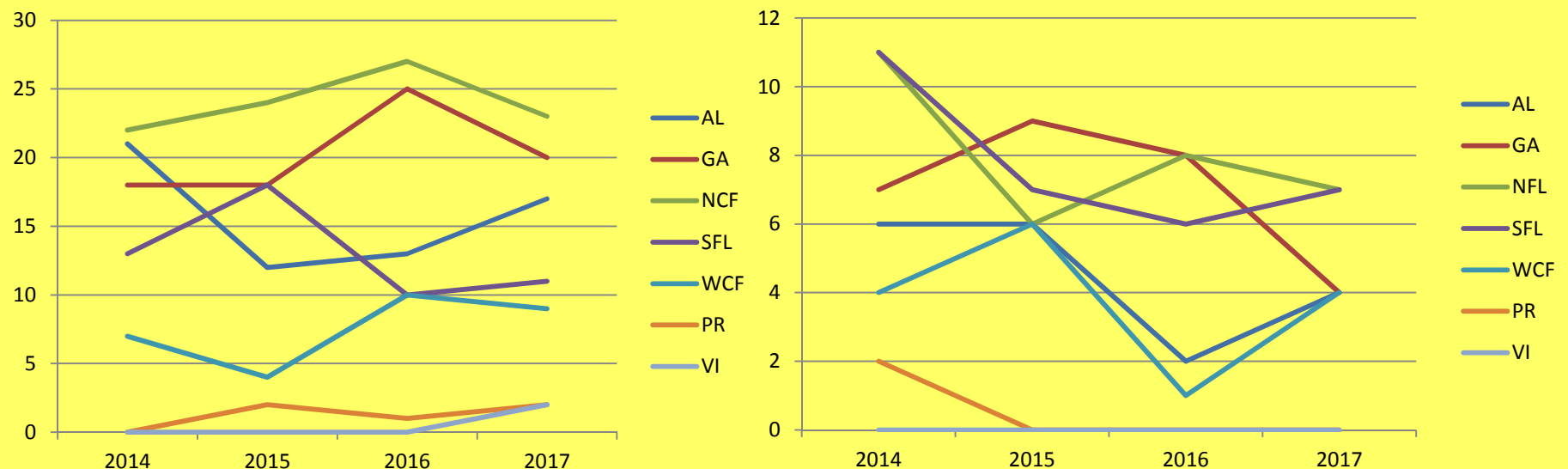
- Single Operator
 - High Power
 - Low Power (200/100/50w)
 - Portable (10w, all portable)
 - 3-Band (6-2/100w-432/50w)
 - FM (ABCD/100w)
- Multi-Operator
 - Limited (4 Bands)
 - Unlimited
- Rover
 - Classic (up to 2 ops, all gear self-contained)
 - Limited (Bands ABCD)
 - Unlimited (any number of operators, using any type of gear and antennas, whether portable or fixed)



K1DS/R
50MHz-24GHz +
LASER

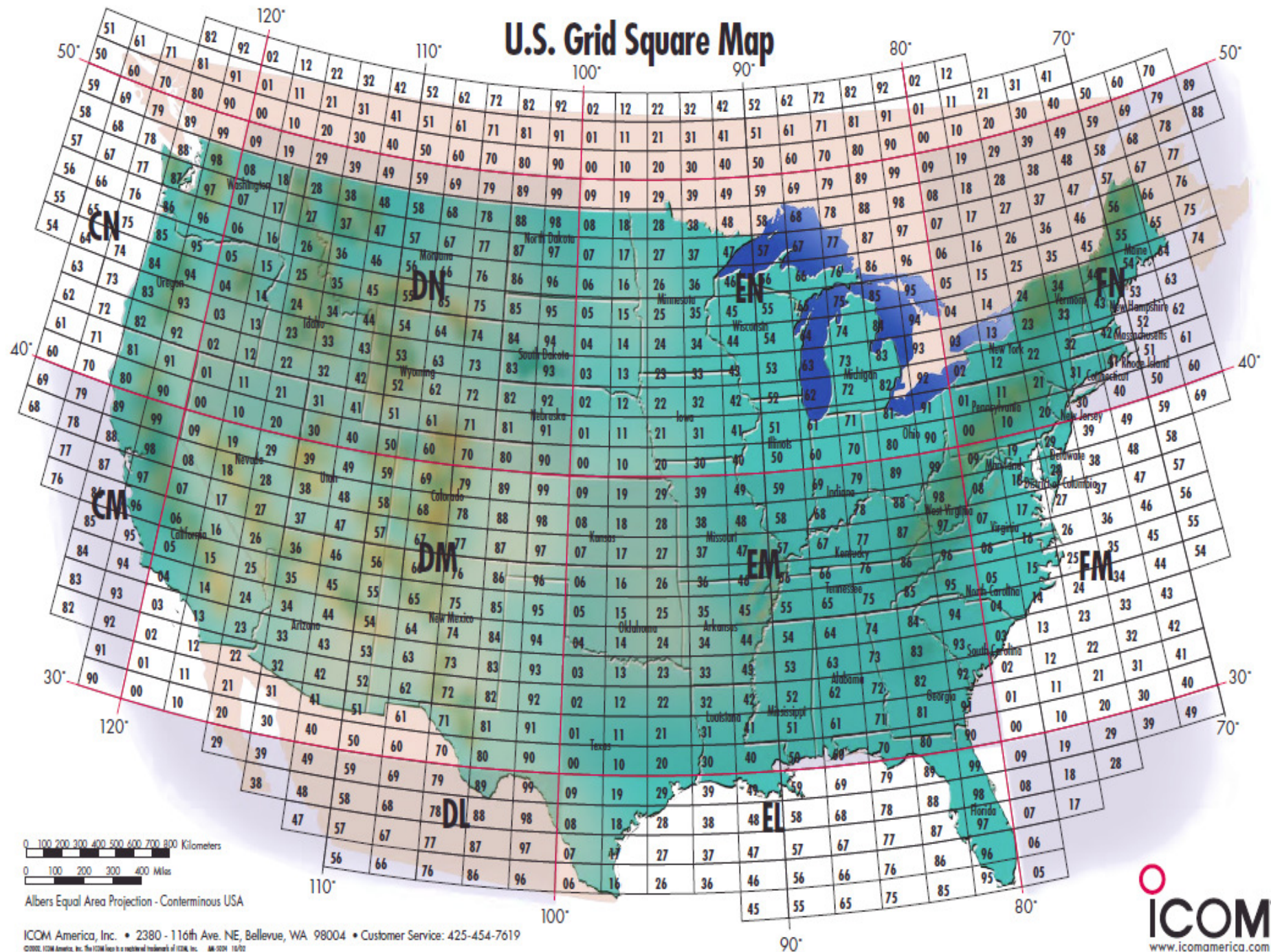


Southeastern ARRL Division VHF Contest Participation



South Florida ARRL Section has averaged only 8 entries in the last 4 June ARRL VHF Contests and averaged only 15 entries in the last 4 January ARRL VHF Sweepstakes

U.S. Grid Square Map



Strategies and Tactics-1

- Read about the contest from QST/CQ/contesting reflectors
- Plan to have fun, not win the first time
- Make sure the gear works first
- Get antennas their highest
- 6m & 2m are basic to most contests
- Select an entry class
- Action starts when contest starts



January VHF Contest

In recognition of achieving a winning score by working fellow amateurs on designated Amateur Radio frequencies above 50 MHz during the contest period.

This award is presented to

K1DS/R

SCORE: 74,889

FIRST PLACE

ATLANTIC DIVISION

ROVER

FIRST PLACE W/VE

2017

Ru Aslund

K5UR

President, ARRL

Bart Jahnke

W9JJ

Contest Manager

**Division
Winner**

VHF



ARRL The national association for
AMATEUR RADIO®



Strategies and Tactics-2

- Listen and scan the bands +/- 50 KHz starting around the calling frequencies
50.125; 144.2; 222.1, 432.1
- Watch for activity on an SDR screen
- Learn and use CW
- Seek FM simplex contacts
52.525, 146.52/55/58, 223.5, 446.000
- Turn your antennas
- Call CQ at times (voice/CW keyer)
- Listen for 6m Es



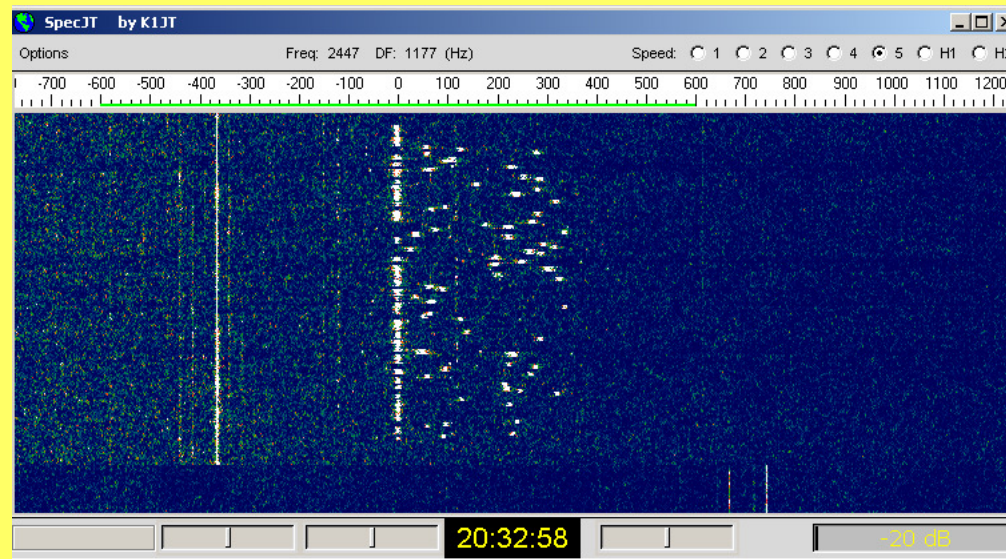
**K1DS/R & N1XKT/R (my harmonic)
FN30 Seabright, NJ**

VHF Weak Signal Operation

- Tropo scatter
- Tropo ducting
- Es
- Meteor scatter
- Aurora backscatter
- F-layer propagation
- Moonbounce

VHF Communications Modes

- SSB
- CW
- FM
- Digital
 - JT65
 - MSK441
 - FT8



Free Logging Software

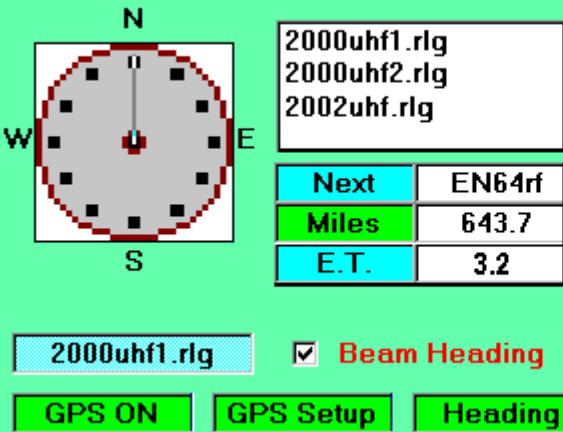
- <http://mysite.verizon.net/dmascaro1/>
- <http://www.qsl.net/w3km/>
- <https://n1mm.hamdocs.com/tiki-index.php>



VHF LOG
by Dave Mascaro, W3KM

- > VHF/UHF/Microwave contest logger
- > CW Memory/keyboard keyer
- > Digital Voice keyer
- > PTT Transmitter control
- > Uses a Local Club roster
- > Create you own data files
- > 'Good Calls' files w/band activity
- > Grid Squares w/ 6-digit headings

Free Logger



KM Rover

2000uhf1.rlg
2000uhf2.rlg
2002uhf.rlg

| | |
|-------|--------|
| Next | EN64rf |
| Miles | 643.7 |
| E.T. | 3.2 |

2000uhf1.rlg ☒ Beam Heading

GPS ON GPS Setup Heading

- > Rover logger for 'Big 4' VHF/UHF contests
- > GPS interface - beam heading to targets
- > CW, PTT, DVK functions
- > 6-digit grid square calculator
- > Automatic and manual rotor offset
- > Master data file look-up
- > IO support in NT type OS
- > band encoder for band switching

Free Logger

Big and Little Guns

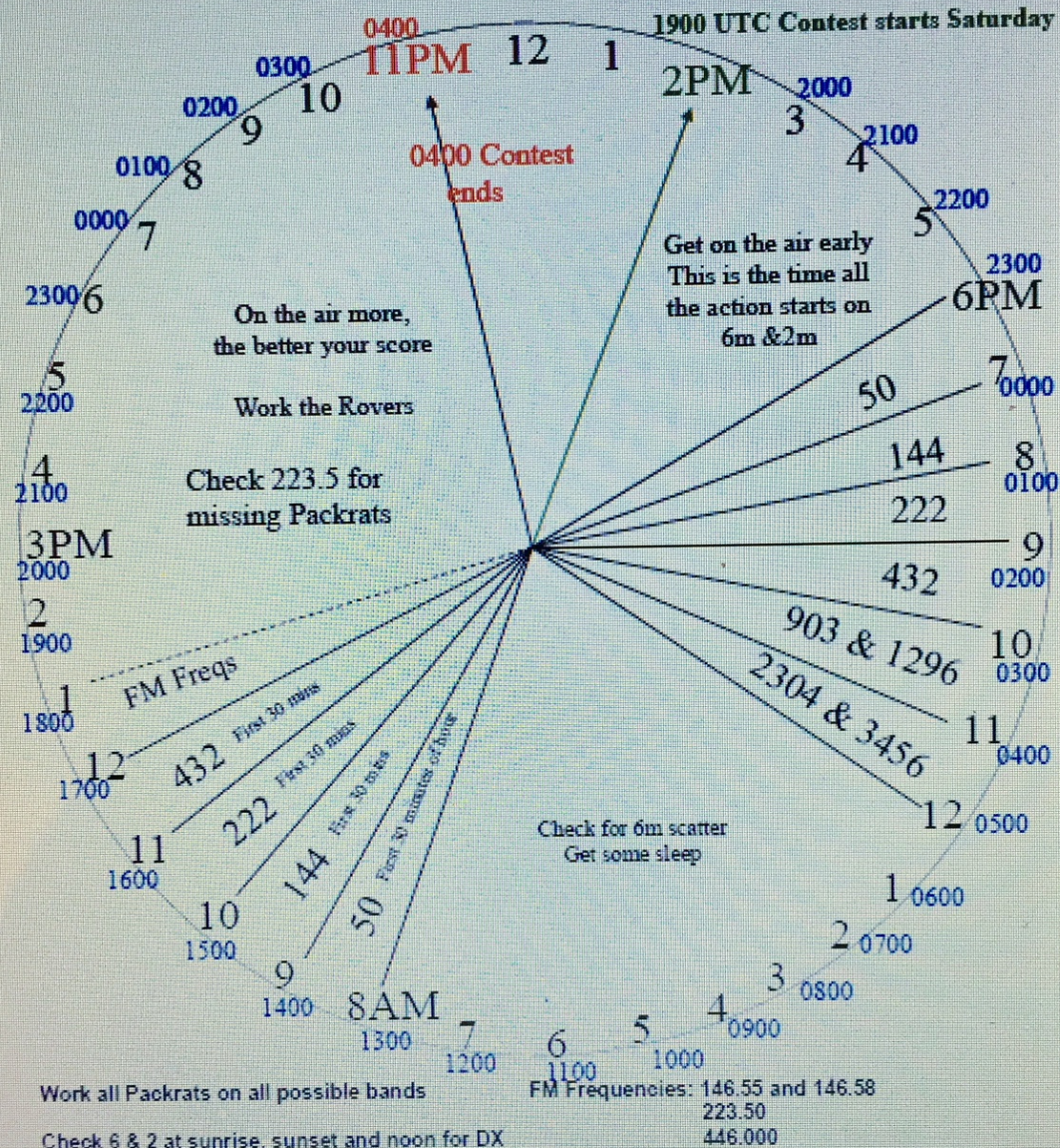
- Call anyone you hear
- Tail-end other contacts
- Be persistent but polite
- Conditions can change quickly
- Listen and record the exchange carefully
- “Thanks”
- Know when local ops and rovers active

Time & Band Management

- Start when contest starts
- Plan breaks for meals and sleep
- Get information from locals on best contest activity periods and bands/modes
- Back off when rates slow down, but check back periodically for 6m Es
- Most activity on 50-144-432 SSB



January Contest Clock Activity Hours



Work all Packrats on all possible bands

Check 6 & 2 at sunrise, sunset and noon for DX

Eat and Drink right. Get some sleep.

DO NOT USE 223.5FM for coordination

FM Frequencies: 146.55 and 146.58
223.50
446.000

Work the Activity Hours Have Fun!

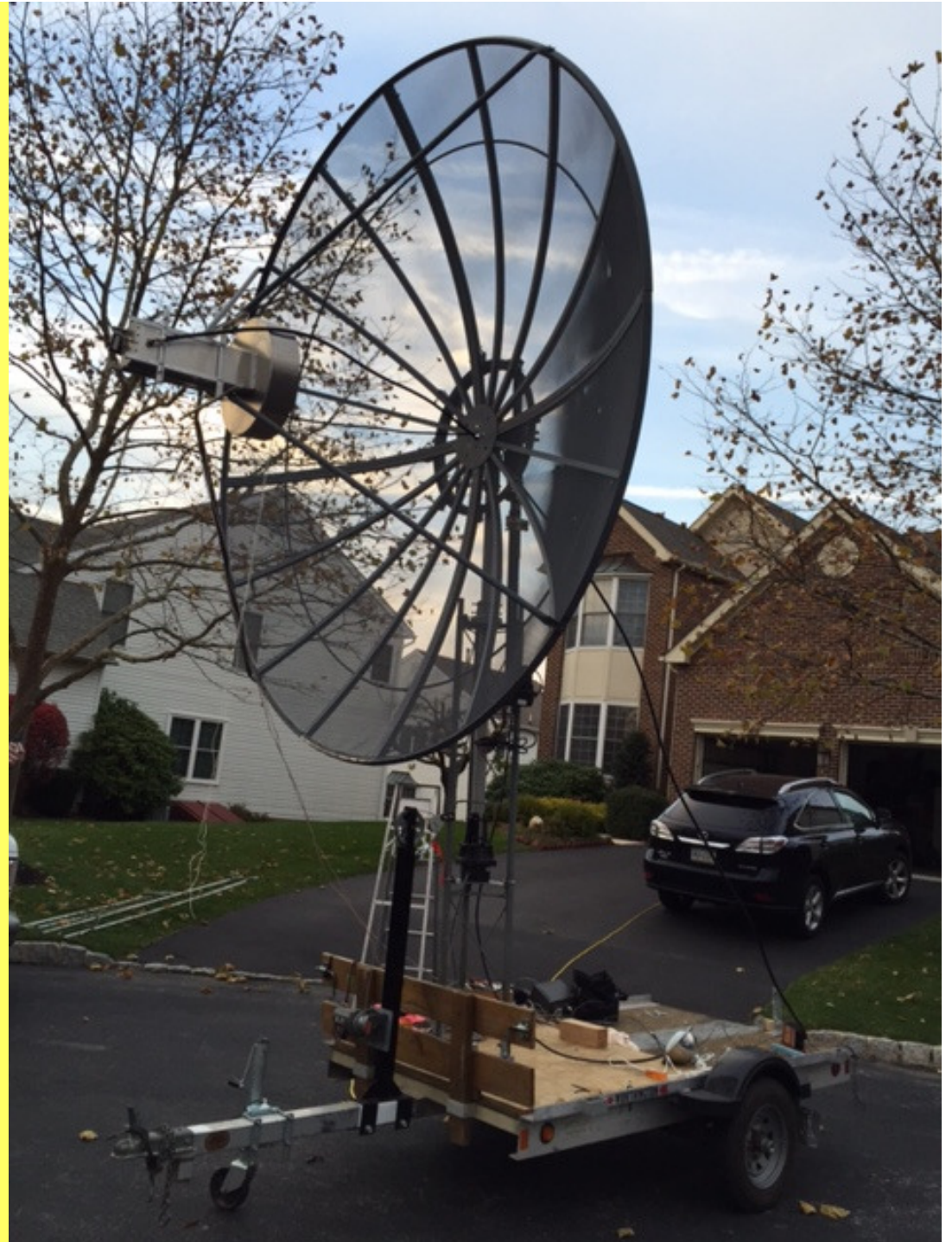
Every contact adds to the club aggregate score

Revised 10-28-2011

Avoid These Errors

- Incorrect time/date on logging program
- Inexperience with computerized logging
- Incorrect logging of call and grid or rover
- Hogging the calling frequencies
- Poor ergonomics
- Climbing a tower without appropriate safety gear and assistance
- Working on “live” gear
- Getting overtired, especially if a rover
- Failing to submit your log

K1DS
10' EME dish
1296MHz - 250W
2304MHz-160 W
Trailer Mounted





K1DS
432MHz Portable EME
EL96

HB9Q



DX-Group HB9CRQ

PI9CAM



OK1KIR

Czech Republic
Club station

IN79DW7400
1st. 40.000 MHz 2. Line - 14.200 MHz
432 MHz up to 24 GHz

| DXCC | WAC | WAZ | EME |
|--------------|----------|----------|----------|
| 432 MHz 400 | 14.2 MHz | 14.2 MHz | 14.2 MHz |
| 1700 MHz 400 | 1700 MHz | 1700 MHz | 1700 MHz |
| 5700 MHz | 5700 MHz | 5700 MHz | 5700 MHz |

www.ok1k1r.cz



Cables maintenance

Arrangement for 1700 MHz and 5700 MHz operation

WEST WINDSOR, NEW JERSEY USA

Al Katz
1621 Old Trenton Road
West Windsor, NJ 08550

EME ~ FN20qg

a.katz@ieee.org



K2UYH

DL7APV

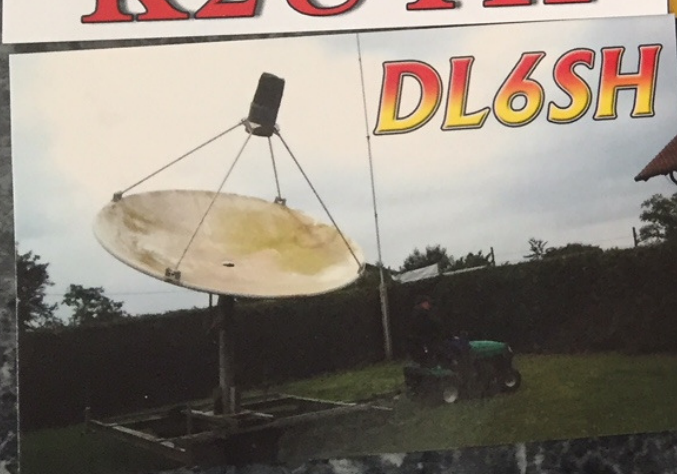
GERMAN
AMATEUR
RADIO
STATION



DF3RU



DL6SH




ES5PC



Estonia
KO38hj
WAZ Zone -15
ITU Zone - 29

NC1I



4.5m RF HAMDESIGN dish

Six Chix



Final Comments

- Set yourself a plan and a goal
- Always have a plan B
- Try to make it fun
- Get your buddies on the air and participate
- Submit your log promptly (within 10 days)



QUESTIONS?

73, Rick K1DS