



Tips for Topband success

AA1K, Jon P. Zaines, May 19, 2023, Topband Dinner, Hope Hotel, Dayton, Ohio



Tip 1: Antennas must be big

AA1K/m

- Serious mobile operation on 160 meters from 2000 VW Jetta, 2000-2009. Racked up 327,000 miles. Another 200,000 miles on 2009 Jetta.
- 54 countries worked on Topband with KJ7U screwdriver.
- First QSO was with VK3ZL. Numerous Europeans. G3PQA best ears.
- Rig was Icom 706Mk2G with 100 watts.
- All QSOs on CW, with Vibroplex junior paddle sitting on passenger seat. No memory keyer.
- QSOs made during my normal commute, no special trips to work DX
- Delaware Route 1 is newer highway, no power lines. RF quiet
- Diesel engine made for quiet noise floor. No ignition noise.



Early years





Tip 2: Never quit early

How a coffee break may have cost me a new one in QTH north of Wilmington, Delaware. Tower is 120 feet with $\frac{1}{2}$ wave sloper for Topband.

NUKUTAPU ISLAND, IOTA OC-054
WALLIS and FUTUNA

CFM 2-WAY QSO WITH

AA1K



FWØMO

operated by Mike, KM9D



FWØYL

operated by YL Janet, KF4TUG

QSL via OM2SA: JURAJ SIPOS
93013 TRHOVÁ HRADSKÁ 550
REPUBLIC of SLOVAKIA

| | | | | |
|-----------|------|--|--|--|
| DATE 2007 | 3.8. | | | |
| GMT | 0940 | | | |
| FREQ | 1.8 | | | |
| MODE | CW | | | |
| RST | 199 | | | |
| 73! | | | | |



Tip 3: Always be prepared

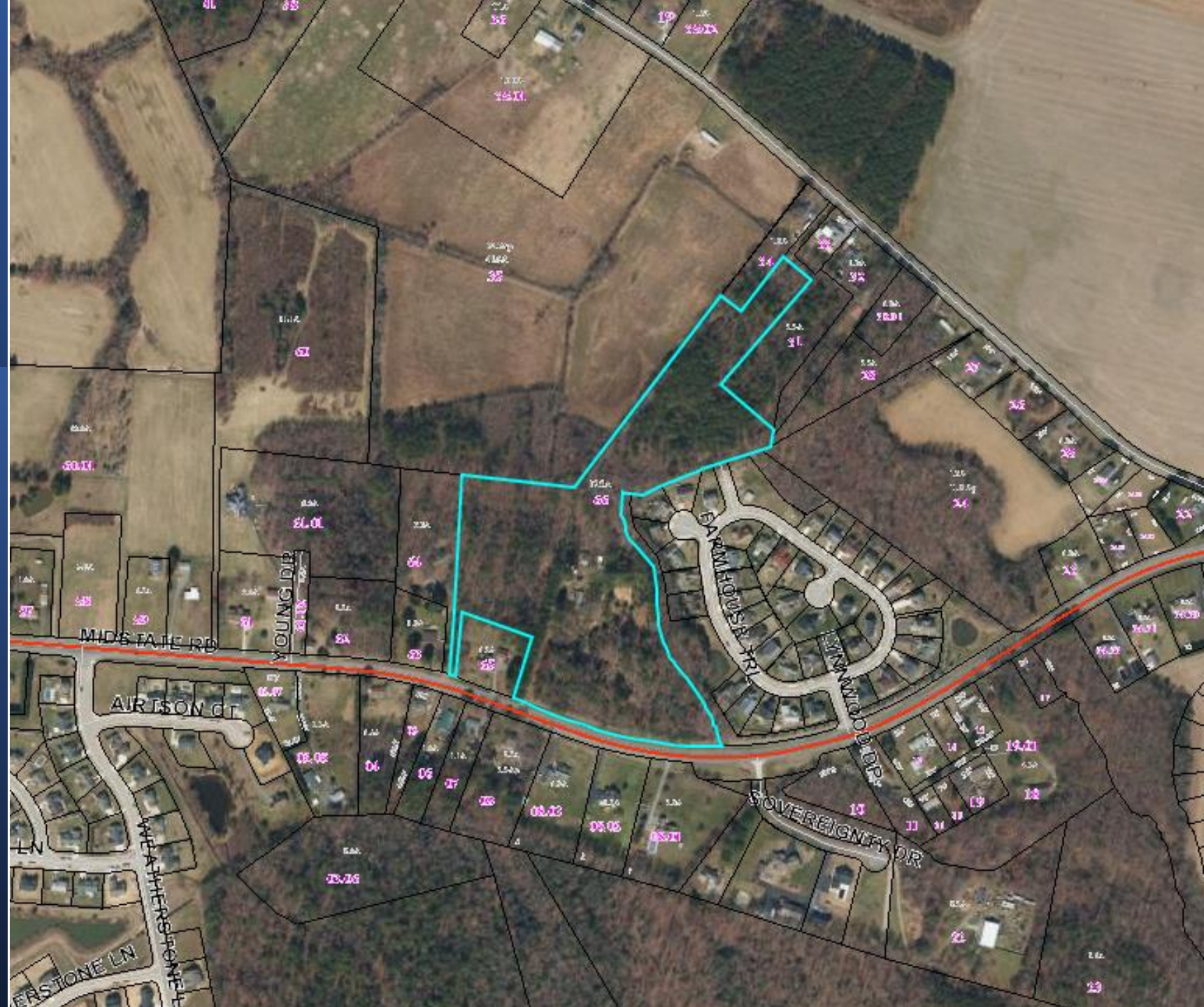
2007 summer vacation trip to Rangely Lake in Maine turned into portable operation to chase a needed one on 160

Tip 5: Acquire more land

Moved in
December 1997

Original property
12 acres

Added upper 5.5
acres in 2014



Tip 6: More antennas is better



Red dots: Eight Rohn guyed towers

Blue dots: JA/SE BSEF receive short vertical array

Green dots: Eu/SW BSEF receive short vertical array

White dots: Phased short verticals for in-band RX

Thin colored lines: Single-wire Beverages

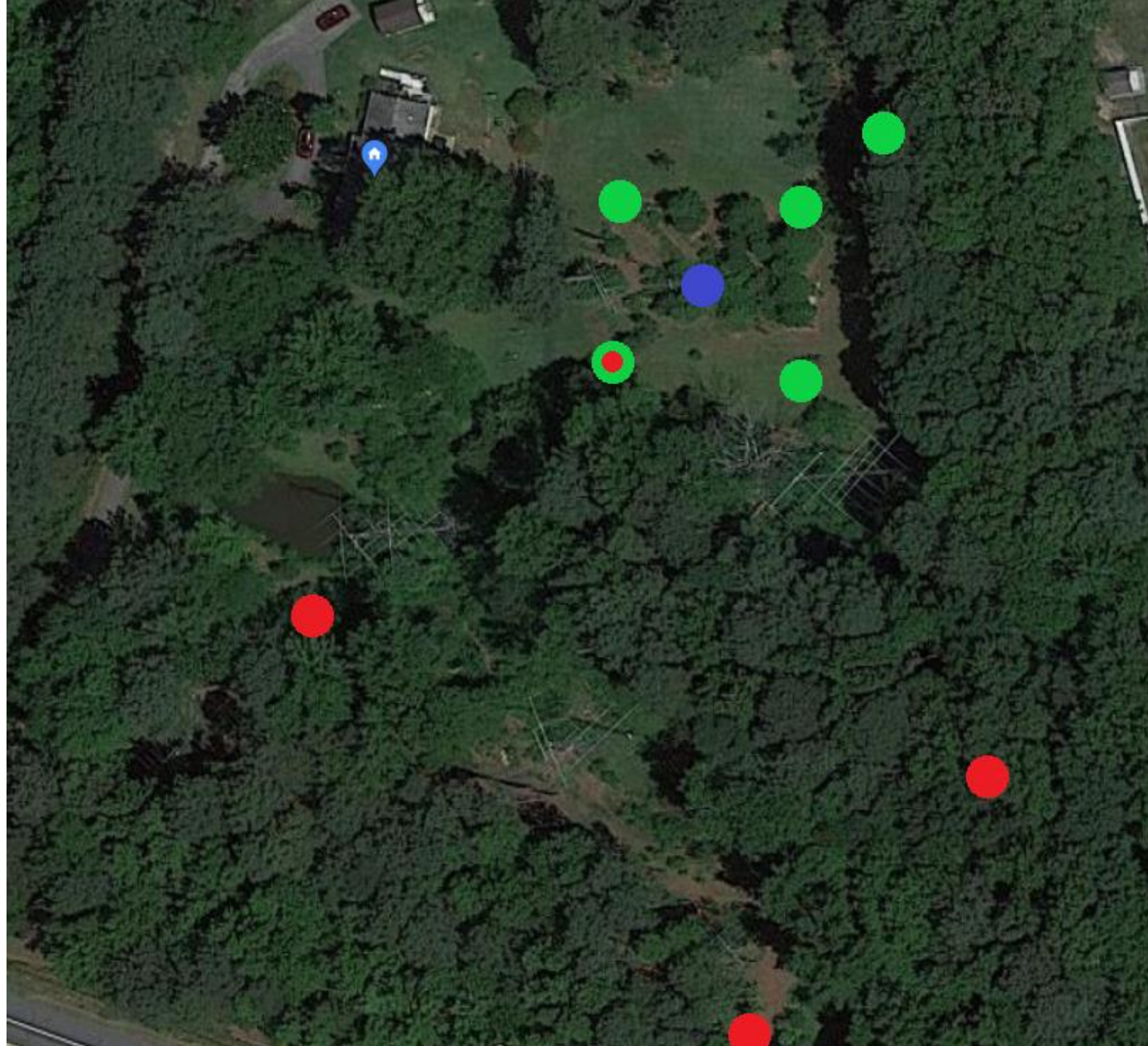
Thick colored lines: Phased Beverage pairs



160-meter driven
element in modified
K3LR array at AA1K



- **Blue dot:** Rohn 25 tower, series fed with insulated guys
- LP and 6m yagi at top make tower resonant around 1400 kHz
- **Green dots:** Four wire t-shaped parasitic elements hang from tower
- Switchable NE, SE, SW, NW as 3-element array for 5.3 db gain
- Extra element to NE adds 0.9 db gain to Europe
- **Red dots:** BSEF TX array





160 second director

BSEF TX array

- Four vertical elements with footprint of 146 x 320 feet
- Each element has 120 radials each 130 feet on the ground
- Forward elements t-shaped wires, 73.5 feet tall with 58-foot tophat
- Rearward elements are inverted L's
- One element shared with original K3LR parasitic array, relay switched
- Elements resonant around 1930 kHz. Small coil resonates to 1830.
- Two forward elements (toward Europe) fed in parallel via 320-foot, 7/8" 50-ohm hardline. Two rearward elements have coils to resonate at 1795 kHz, making them reflectors.
- About 8.5 db gain over single element

Broadside endfire transmit array



Tip 7:
Everything
need not be
neat and in a
box



Beverage feedpoints



Tip 8: Everything does not need to be new and shiny

Green amp at right is single 4-1000 glass tube amp used on 160 meters at AA1K for about 25 years. It was at least that old when I acquired it in 1984.





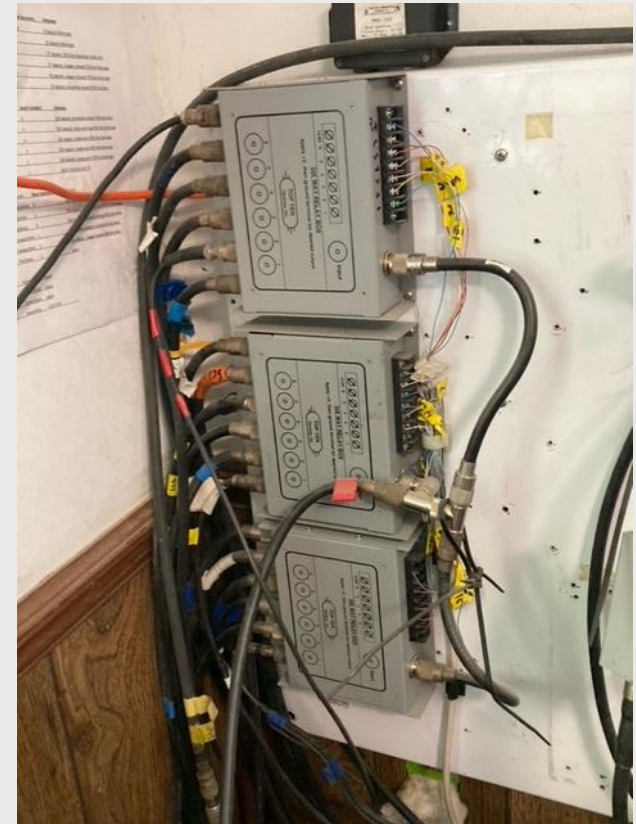
Tip 9: Scrounge lots of wire and cable

AA1K by the numbers

- Eight Rohn guyed towers, totaling 736 feet of tower
- 125,000 feet of radial wire, sizes from no. 24 to no. 10
- 20,000+ feet of hardline and coax
- 19 HF and 6m yagis (more in progress)
- 24 single-wire and phased Beverages
- Four broadside/endfire 34-foot-tall receiving vertical arrays
- One two-element 34-foot receiving vertical array



Tip 10:
Accessories help





Leave time for
maintenance



WAZ-17 UZBEKISTAN ITU-30

UK8DAN

Serazhetdin D. Bekmurzaev

| | | | | | |
|----------|----------|------|-----|-----|-------|
| VIA | DATE | UTC | MHz | RST | 2-WAY |
| | D M Y | | | | |
| TO RADIO | 17 02 07 | 0205 | 1.8 | 599 | CW |
| AA1K | | | | | |

QSO Verified by: RW6HS, Vasily M. Kasyanenko.
P.O. Box «0» Novopavlovsk, 357300 Stavropol'skiy kr., RUSSIA
E-mail: rv6h@narod.ru

SV2ASP/A

QTH Docheiarou Monastery Mount Athos

CFM QSO/HRD WITH RADIO AA1K

| DAY | MONTH | YEAR | UTC | MHz | 2WAY | RST |
|-----|-------|------|-----|-----|------|-----|
| 9 | 1 | 09 | 345 | 1.8 | SSB | 59 |

Op. Monk Apollo
I.M. Docheiarou
63087, Mount Athos
Greece

Vy 73s and God bless you
O Otoc vs o' culoyti

LAKSHADWEEP ISLANDS - INDIA

VU7RG VU7MY

Asim - BANGORAL - KADWAT - AS-011

Maceev As-106

ARIM AAANN DEZIC DKWAL DIKAO DLSOAB DLZOP
DLGFB FREGD FRCWJ FBTTI JANNIL JACUB JHERIF
JEMKF KALEE NEDOS OESANA PAZEL PAZERP SPIKCY
SPROCI VATOK VETCT VUZBI VUZJOS VUZNES VUZBRI
VUZVIZ VUZSOM YOGA WEMJ WEAEP WABUW WABUQI

CQ Zone: 26 CAMBODIA Grid Square OK10so

XU7ACB

Sihanouk City

QSO WITH AA1K

| | | | | | | |
|-------------|-------|------|-----|----|-----|-------|
| Date | UTC | Band | RST | 2X | RST | 2-Way |
| 15-Dec-2001 | 11:42 | 160m | 599 | CW | | |

Trx QSL 73 de N6FF

Operator & QSL Mgr: N6FF

3Y1EE Peter I Øy 3Y2GV

3Y5X

Sri Lanka

Ron GOONETILLEKE 4S7RO

BU2AQ
TUNG-YING WU

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e-mail: allison5@ms10.hinet.net
CQ:24 ITU:44 GL:pl04sw IOTA:as-020

Cliff -250m
Sealayer +560m
hilltop

Welcome to Taipei and QSO with the world at my QTH

FT5XO

ÎLES KERGUELEN

49°30' SOUTH 69°50' EAST
CQ ZONE 19 ITU ZONE 08 IOTA AF-048

OPERATORS:
AGGA, GIDNWC, HVAZAZ, HODXEL, NAKZ, NNTT,
IPXVY, VEELJ, VRSOXL, WNL, WTEW & VVYK
ON VIA VEIXN

NO MORE MR. KILOWATT

XZ0A

Thahtay Kyun Island, Mergui Archipelago
UNION OF MYANMAR

UT1GO

MONGOL OP. CHI CHADRAABAL

DU1/JJ5GMJ

PALAWAN ISLAND, PHILIPPINES

Results

- 329 entities confirmed on Topband
- All 40 zones confirmed
- First place USA single op CQ WW 160m contest (1987, 1990, 2000, 2022)



Website: AA1K.us