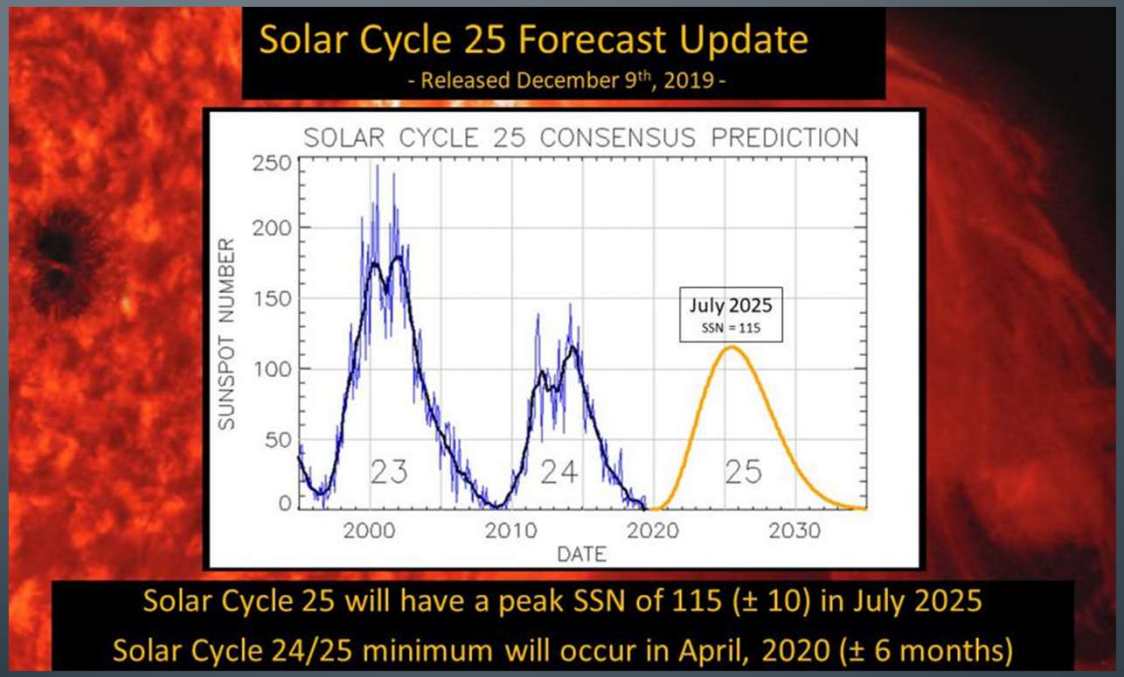
QRP Presentation
John Meade W2XS

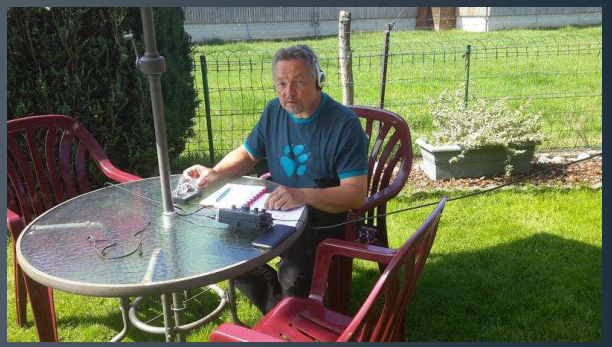
- Contact Info:
  - jm416@optonline.net

QRP Philosophy

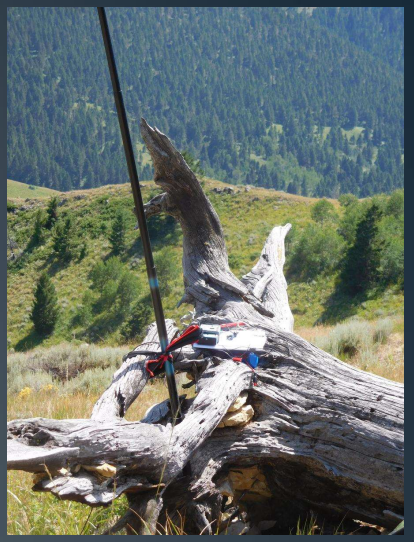
- Operating at 1 to 5 watts can be fun and addictive.
- The results are surprising when the band is open.
- QRP does not necessarily have to "replace" QRO. Do both!
- Operate from the back yard or a park bench.

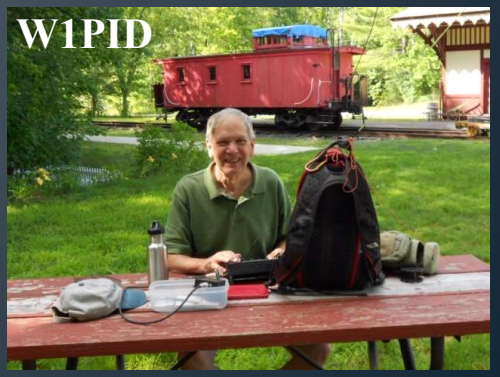


Where can I operate?

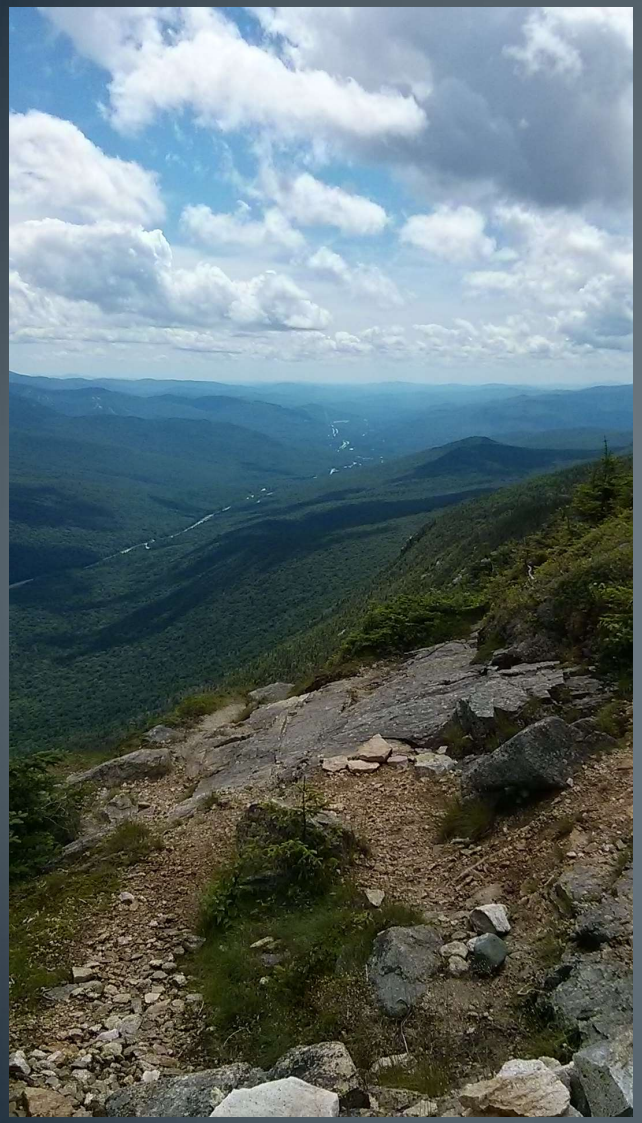


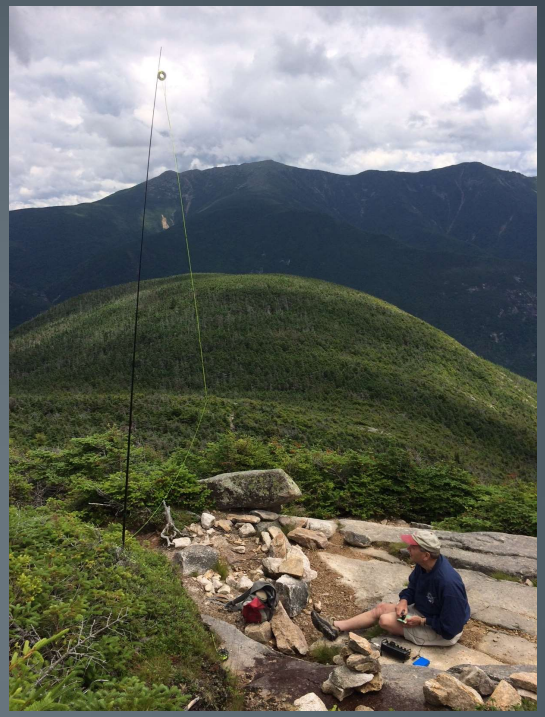
Where can I operate?





W1PID.COM





W6PNG

https://nomadic.blog/2020/12/11/are-your-laurels-in-the-bloody-mountains/

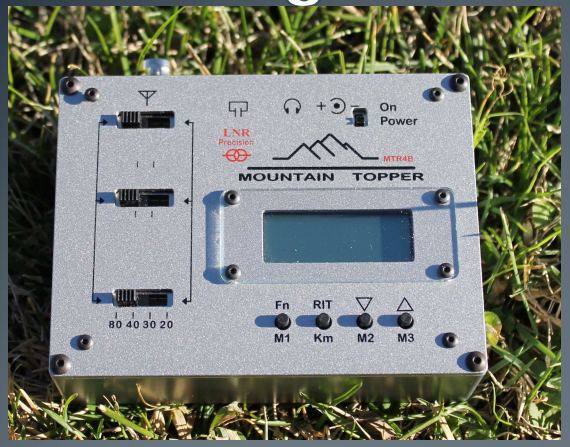
KX2, EFHW

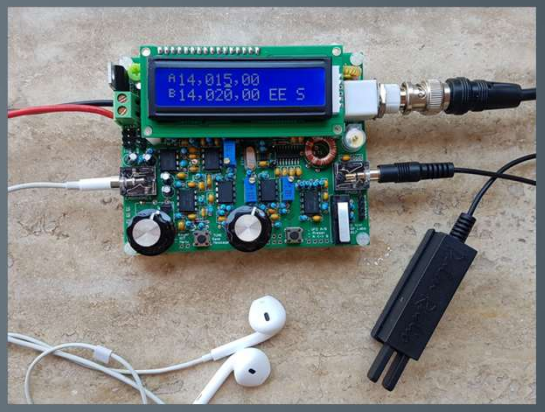
QRP Philosophy

- Even simple QRP rigs will provide fun and satisfaction.
- The lower the current drain, the longer the batteries will last.
- Many QRP rigs are simple but high performance.
- Put up the best antenna possible.

What rig should I buy?

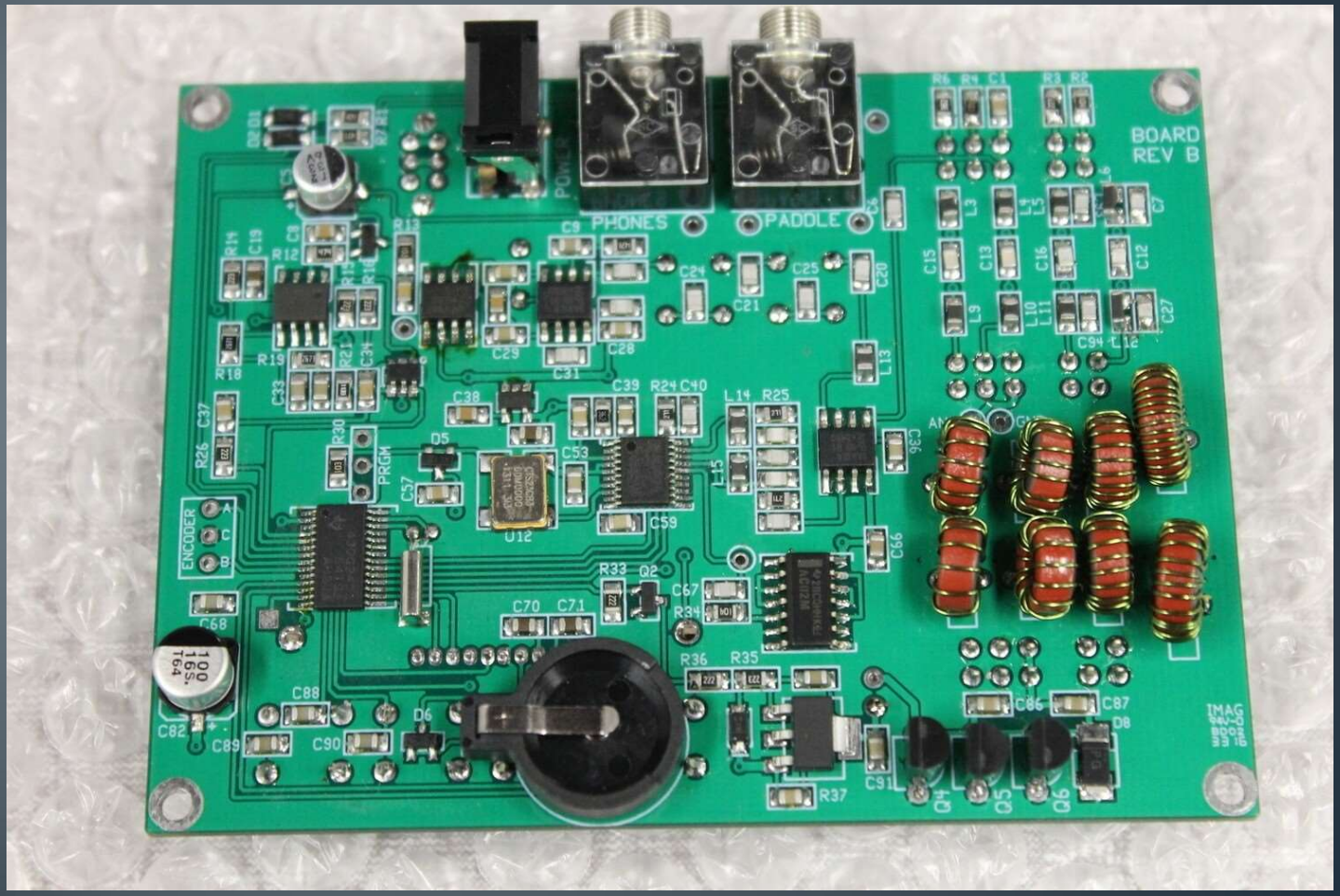
What rig should I buy?



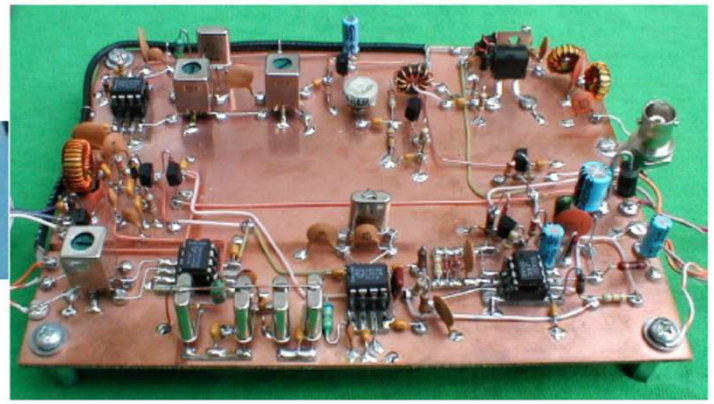


What rig should I buy?

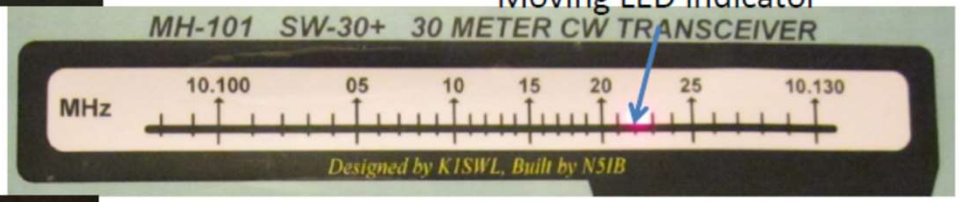
Why these new rigs are not kits!



A Nice Homebrew Example N5IB

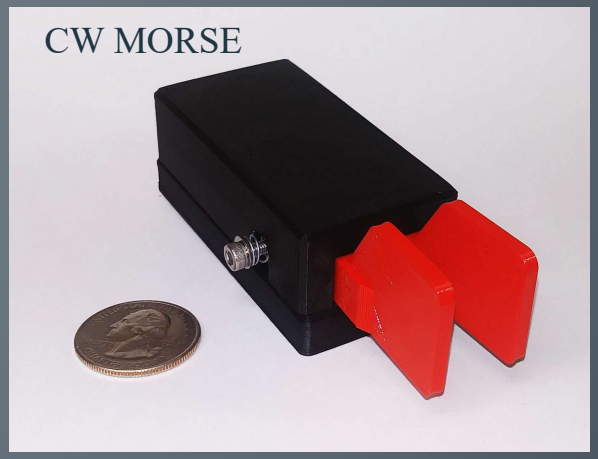


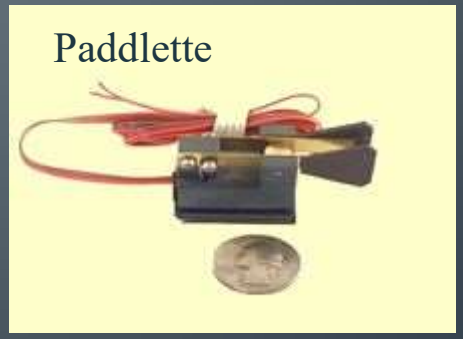
Moving LED indicator



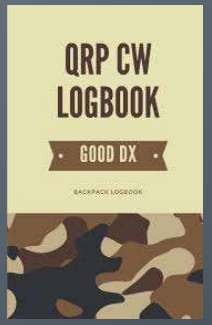
SW-30+ built Manhattan style and
Enclosed in a retro-look poplar box.

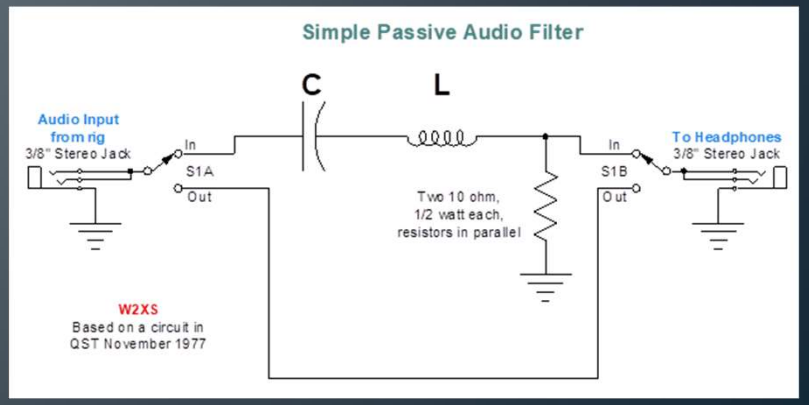
What paddle should I buy?





What accessories might I need?





What Battery Should I Use?

- SLA Batteries – 2 V per cell = 12 V typ
  - Heavy but dependable
  - Use the right charger: Battery Tender Plus
    - www.batterytender.com
- Lithium Ion – 11.1 V (KX2)
  - Use the right charger Must remove to charge
  - 6 AH = (1 lb 10 oz) 5 hrs at 15 W, 12 hrs at 5 W
  - 3 AH = (12 oz) 5 hrs
  - https://www.bioennopower.com/
- NiMH (used in KX3) – 1.2 V per cell
  - AA sized cells. Charge while in the radio
- Alkaline Batteries – 1.5 V per cell
  - Not Rechargeable

AAA Battery = 1 AH
AA Battery = 2 AH
C Battery = 6 AH
D Battery = 11 AH

Ten Tec QRP History

Heathkit QRP History

QRP Calling Frequencies

Table 11-5	North American QRP Calling Frequencies	
Band (Meters)	*Morse Code (MHz)*	*Voice (MHz)*
160	1.810	1.910
80	3.560	3.985
	3.710	
40	7.040	7.285
	7.110	
30	10.106	
20	14.060	14.285
17	18.096	
15	21.060	21.385
	21.110	
12	24.906	
10	28.060	28.885
	28.110	28.385
6	50.060	50.885
2	144.060	144.285 (SSB)
		144.585 (FM)

A Few QRP Links

- Neil Goldstein W2NDG
  - http://fofio.blogspot.com/2015/07/radio-kit-guide.html
- ARCI
  - http://www.qrparci.org/links/qrp-kits-bits-and-supplies
- LIQRP
  - https://www.qsl.net/liqrp/

W2LCW

https://longislandcwclub.org/

QRP Resources

Table 11-6 QRP Operating Resources

Resource	*Address or Source*	*Description*
QRP Amateur Radio Club, International	www.qrparci.org	*QRP Quarterly* magazine and numerous awards
American QRP Club	www.a-qrp.org	Extensive kit-building and construction resources, *Homebrewer* magazine
G-QRP Club	gqrp.com	Lots of building and operating information, *SPRAT* magazine
Adventure Radio Society	www.arsqrp.com	Emphasis is on portable operation
QRP-L e-mail reflector	listserv.lehigh.edu/lists/qrp-l	Best-known QRP e-mail reflector, includes archives for e-mail, files, and articles
QRP forum	www.eham.net/forums/QRP	Wide variety of topics
Magazine columns about QRP	*QST* "QRP Power," *Worldradio* "QRP" *CQ Magazine* "QRP"	A different technical or operating topic with every issue

What Antenna Should I Use?

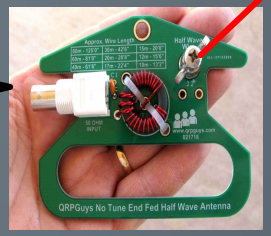
- End Fed Half Wave Wire
  - 66’ on 40 meters with a 49:1 matching transformer. No tuner needed
- End Fed “Random” Length Wire
  - 41’ or 58’ with a 9:1 transformer and a tuner and counterpoise
- Center Fed 40m Dipole With Twin Lead
  - Multiband – Need tuner and a balun
- Magnetic Loop
- Short, Loaded Whip

End-Fed Halfwave Antenna

See Handout for more info

Rig
(No Tuner)

BNC
Cable
10' - 25'



Matching Unit
49:1 Transformer

Support Pole
and
Base Mount

Antenna Wire
40m = 66'

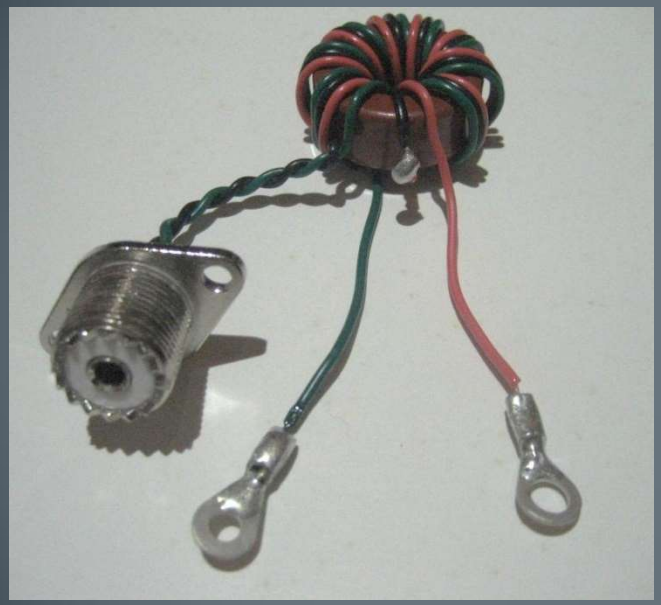
Insulator

Rope
or
Twine

Ground
Stake

End-Fed Wire with 9 to 1 Transformer

Need a tuner and a counterpoise

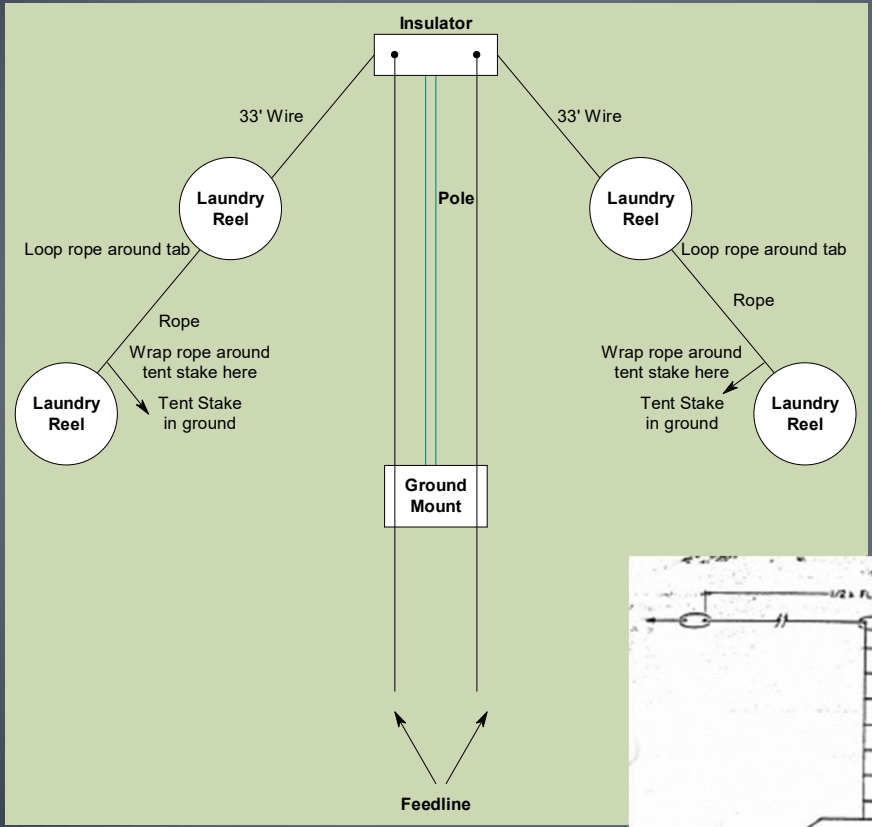


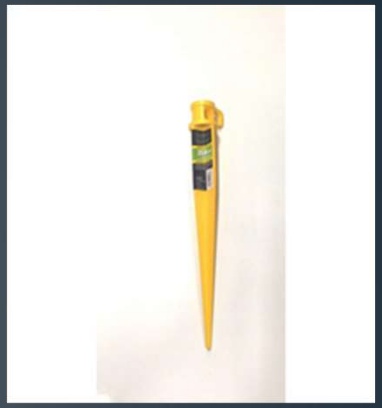
http://www.hamuniverse.com/randomwireantennalengths.html

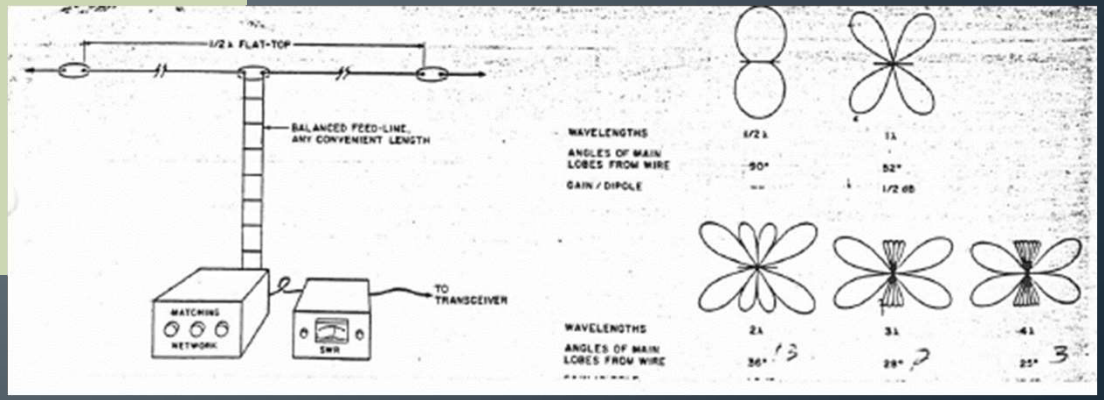
Feet: 29 35.5 41 58 71 84 107 119 148

Portable 40m to 10m Inverted V

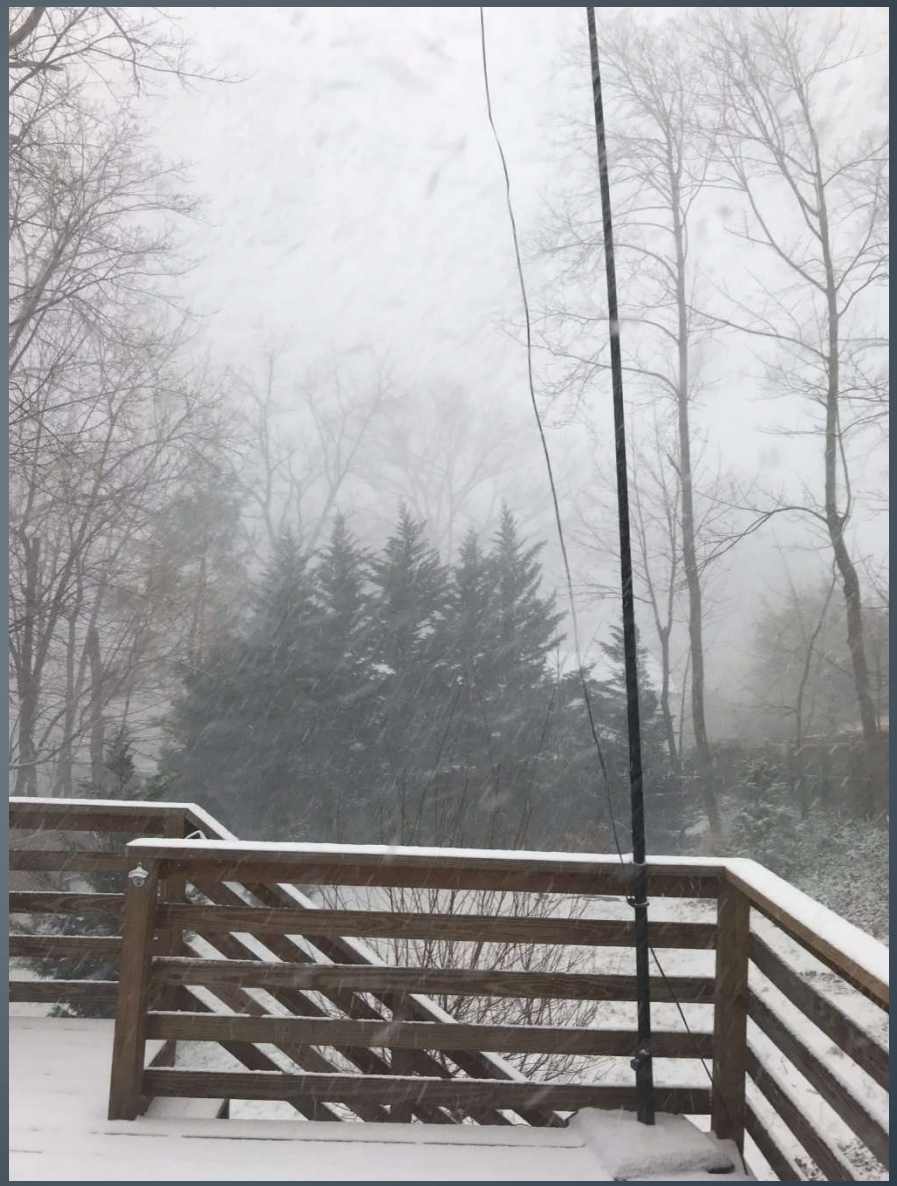
See Handout for more info





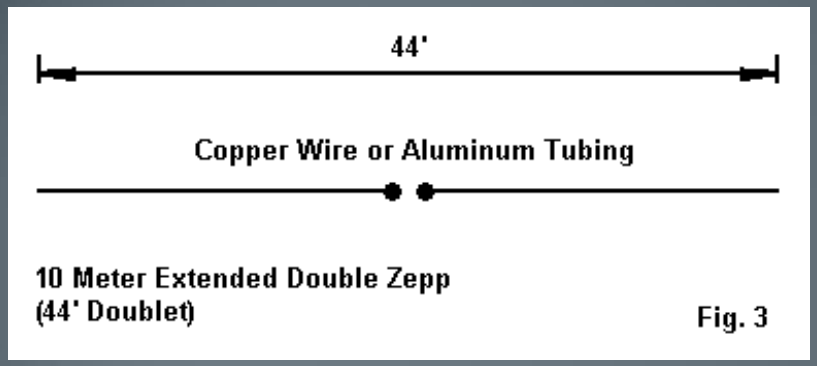


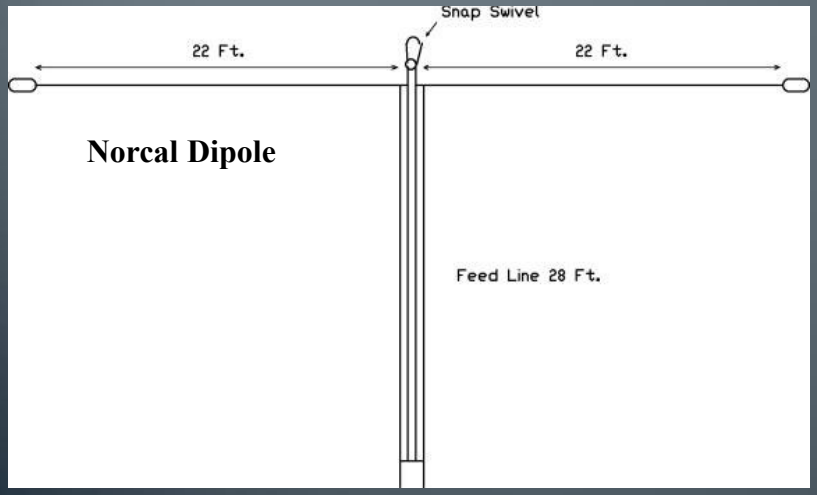
Portable 40m to 10m Inverted V

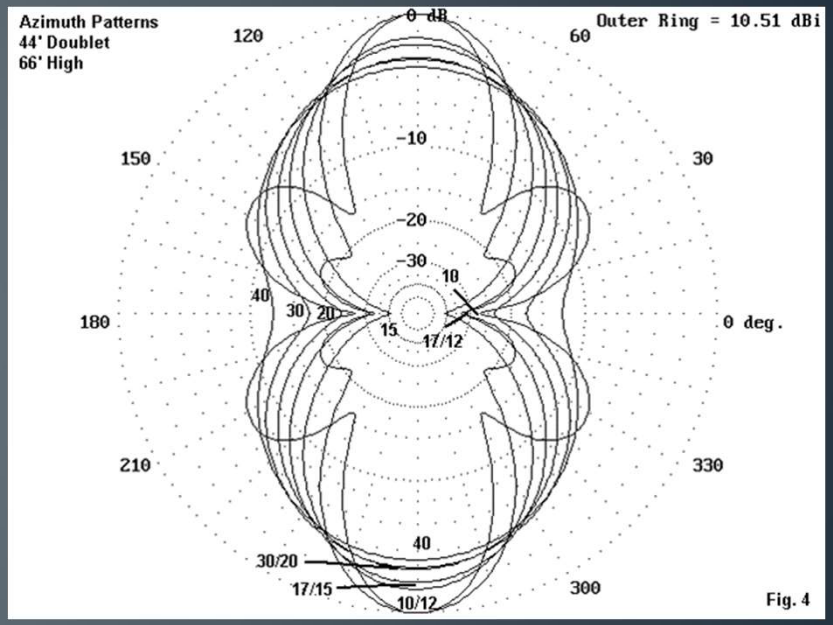


W4RNL – 44' Antenna

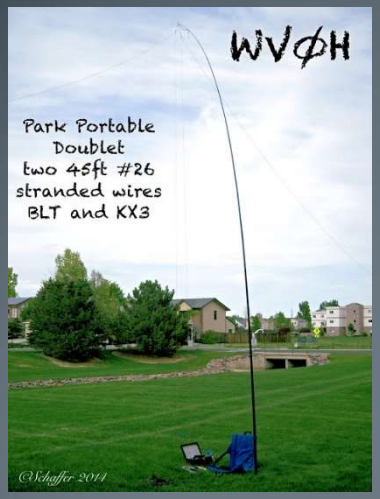
People use with a balanced tuner from 40m to 10m

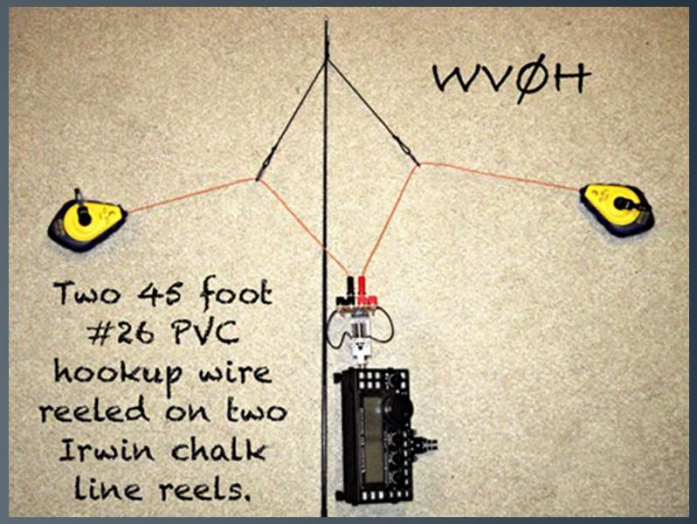






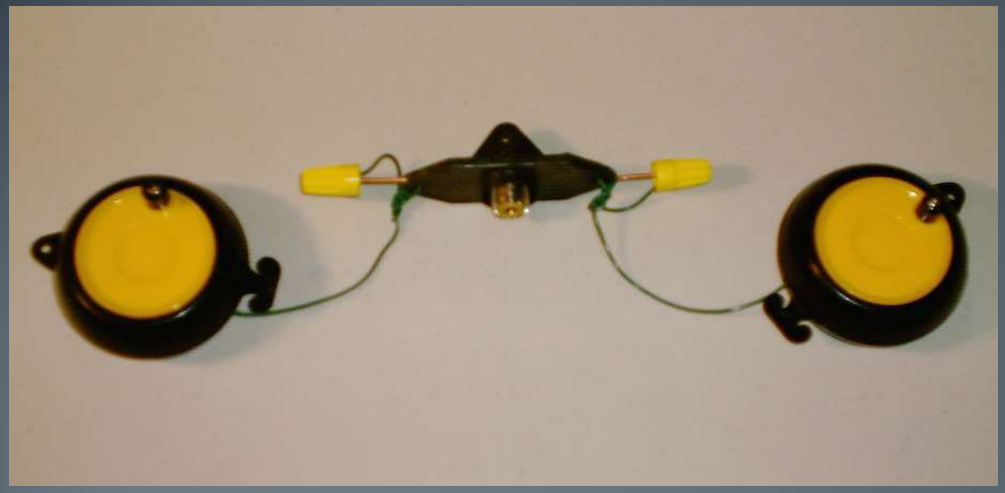
WV0H – Park Portable Doublet





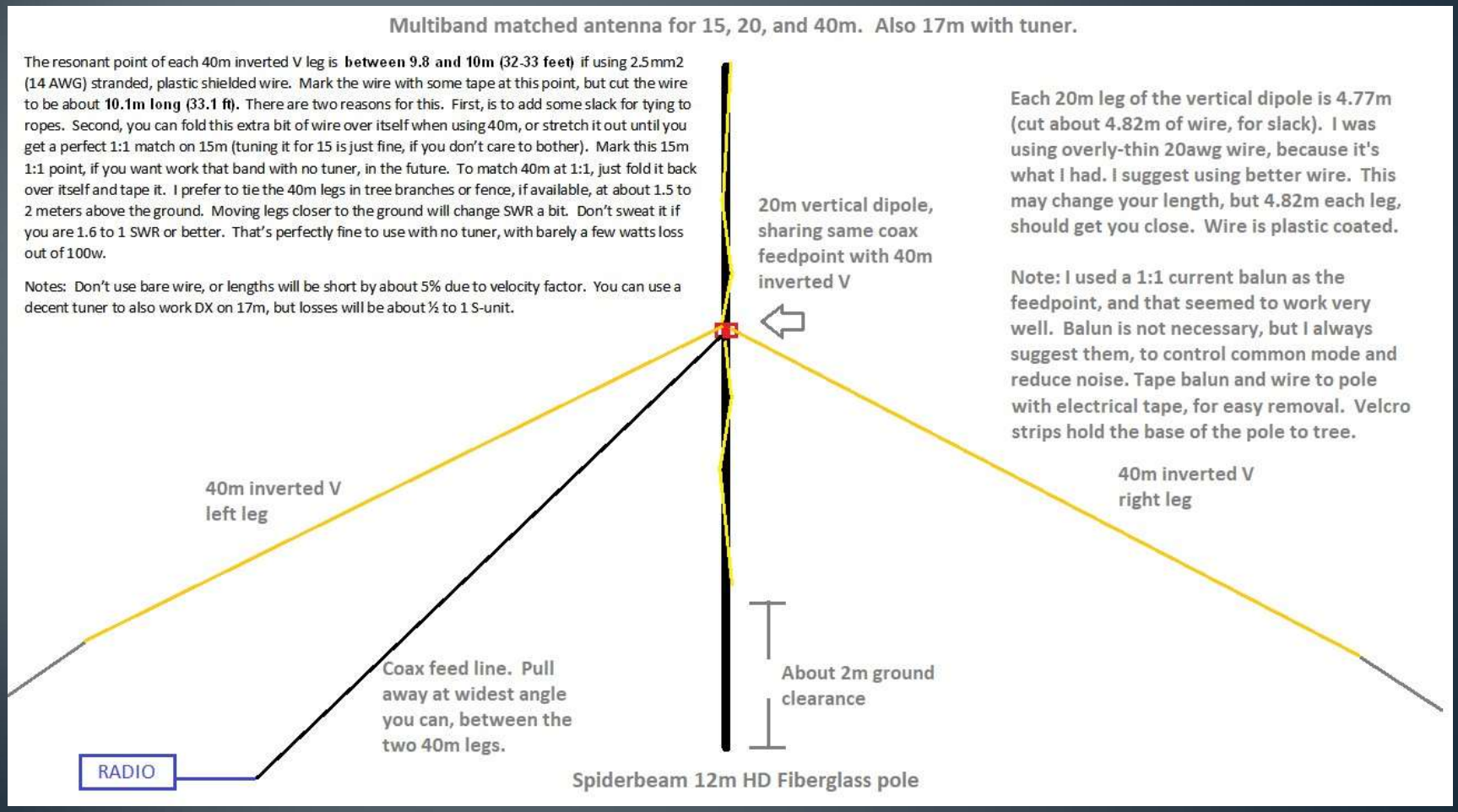
https://wv0h.blogspot.com/2014/05/the-wvh-park-portable-doublet.html

Yo Yo

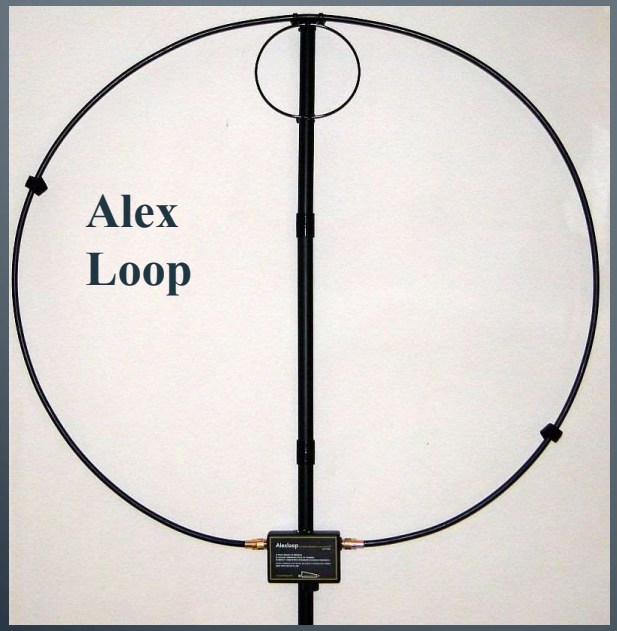



07.03
FREQUENCY
DISPLAY
SHIFT
MATCH
POWER
TUNE
RANGE
TennaDipper II
Pacific Antenna
www.qrpkits.com

Spiderbeam 40, 20, 15



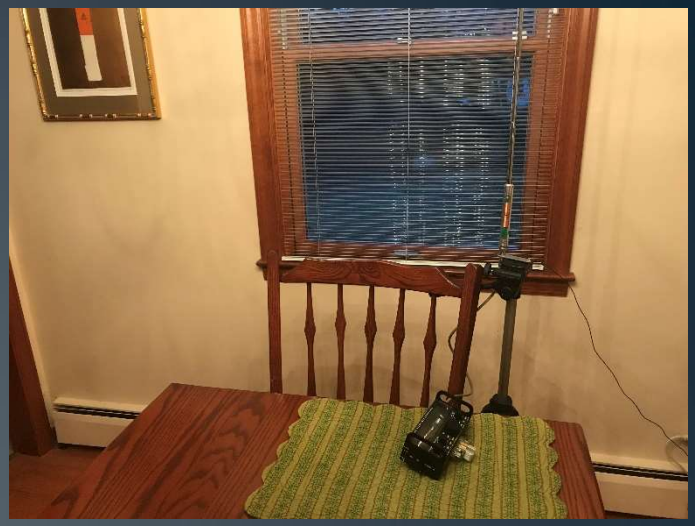
Magnetic Loop

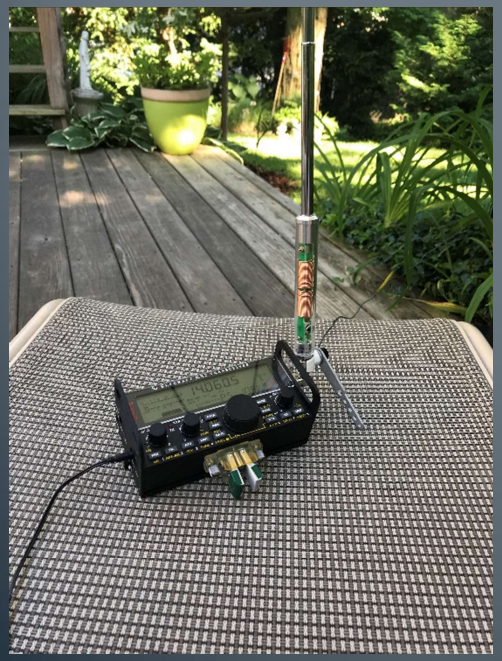


Loaded Whip

Highly Portable but the poorest radiator. Absolutely need a counterpoise.

Loaded Whip

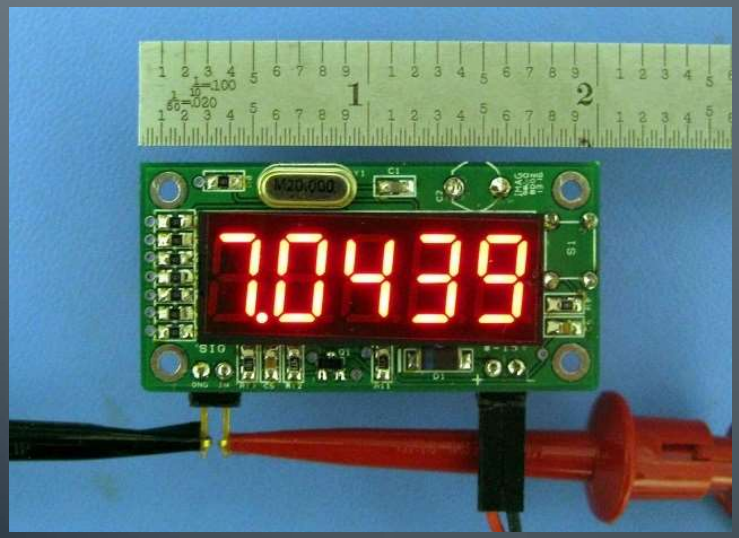




This guy can't be married!

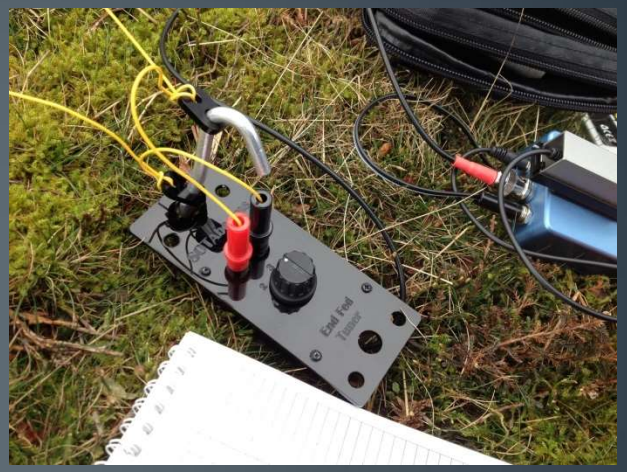
This guy can't be married!

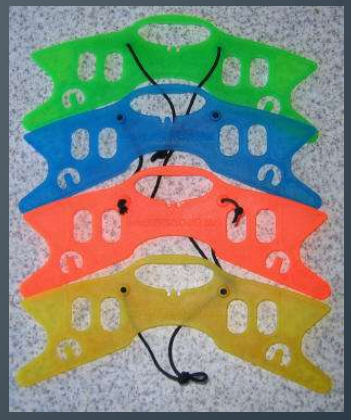
Qrpguys.com sells nice stuff



Qrpkits.com does too

Sotabeams.co.uk does too

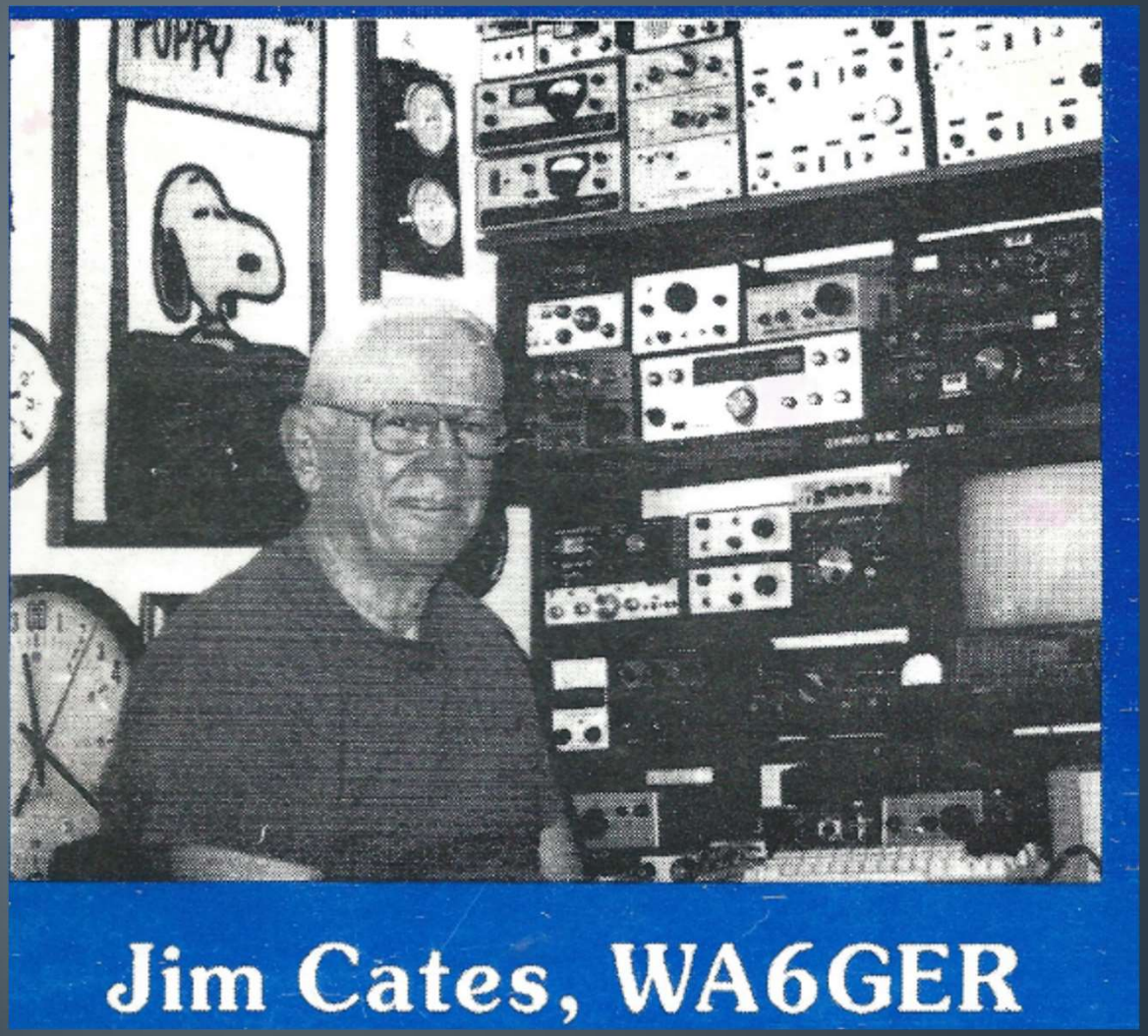




Summary

- Don't skimp on the antenna. Let the entire wave get radiated.
- Choose a CW or an SSB rig.
- Have fun. That's what this hobby is all about.

Keep it simple? Even QRP Guys Collect Stuff



My First QRP Rig was the Heathkit HW8.
Direct Conversion means you hear signals on both sides of zero beat.

Any Questions?

Thank you! CUL

73,

John W2XS