Aruba 3.0

- AA5B
- AA7V
- N3DXX
- K9RS
- K2LE

Delaware Connection

Back to P49V station. This time for ARRL CW DX 2018.


P49V

New Bencher Skyhawk Tri-banders – Much Better!

Now using K3 Radios

Much better for copying when lots are calling!

My ideas for 2 Antenna improvement projects for this trip:

- Beverage antenna
- 80 meter director


P49V
Legend
Google Earth
Image © 2018 CNES / Airbus
©2018 Google
N
100 ft


P49V
Feed
US
Legend
Beverage RX antenna
Reversible, used only in reverse
Term
Google Earth
Image © 2018 CNES / Airbus
©2018 Google
N
200 ft

2 elements on 80M ?

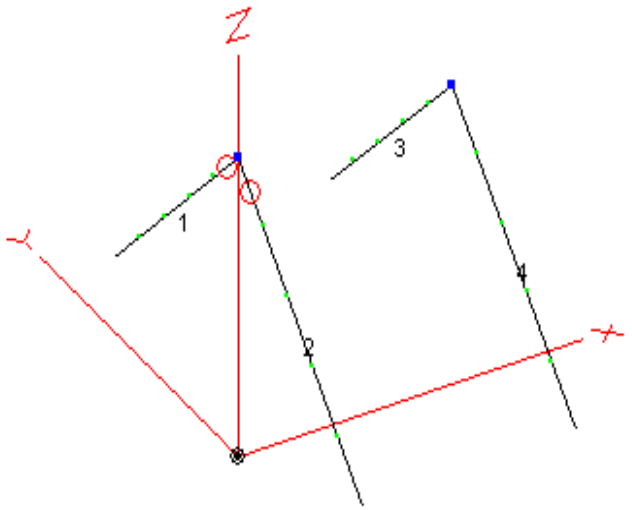
- Front tower is about 50 ft in front of 40M tower
- And right towards the US
- Only 65 ft high at the center

Could I add a director? and Would it matter?

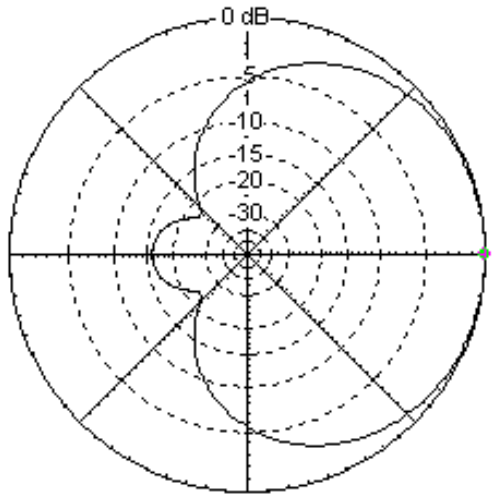
Yes and Yes

Modeled using EZNEC6

EZNEC+



Total Field



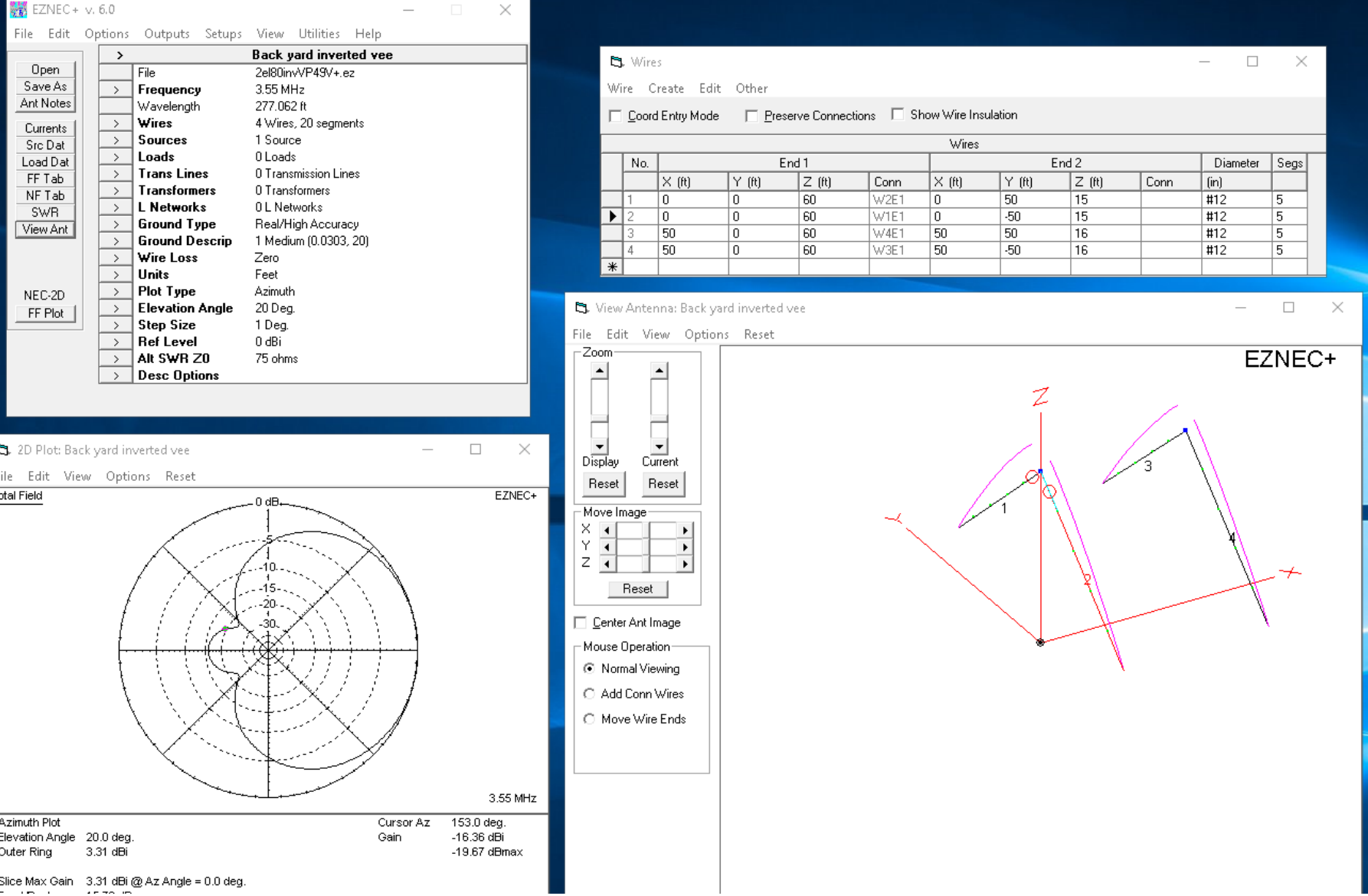
EZNEC+

3.55 MHz

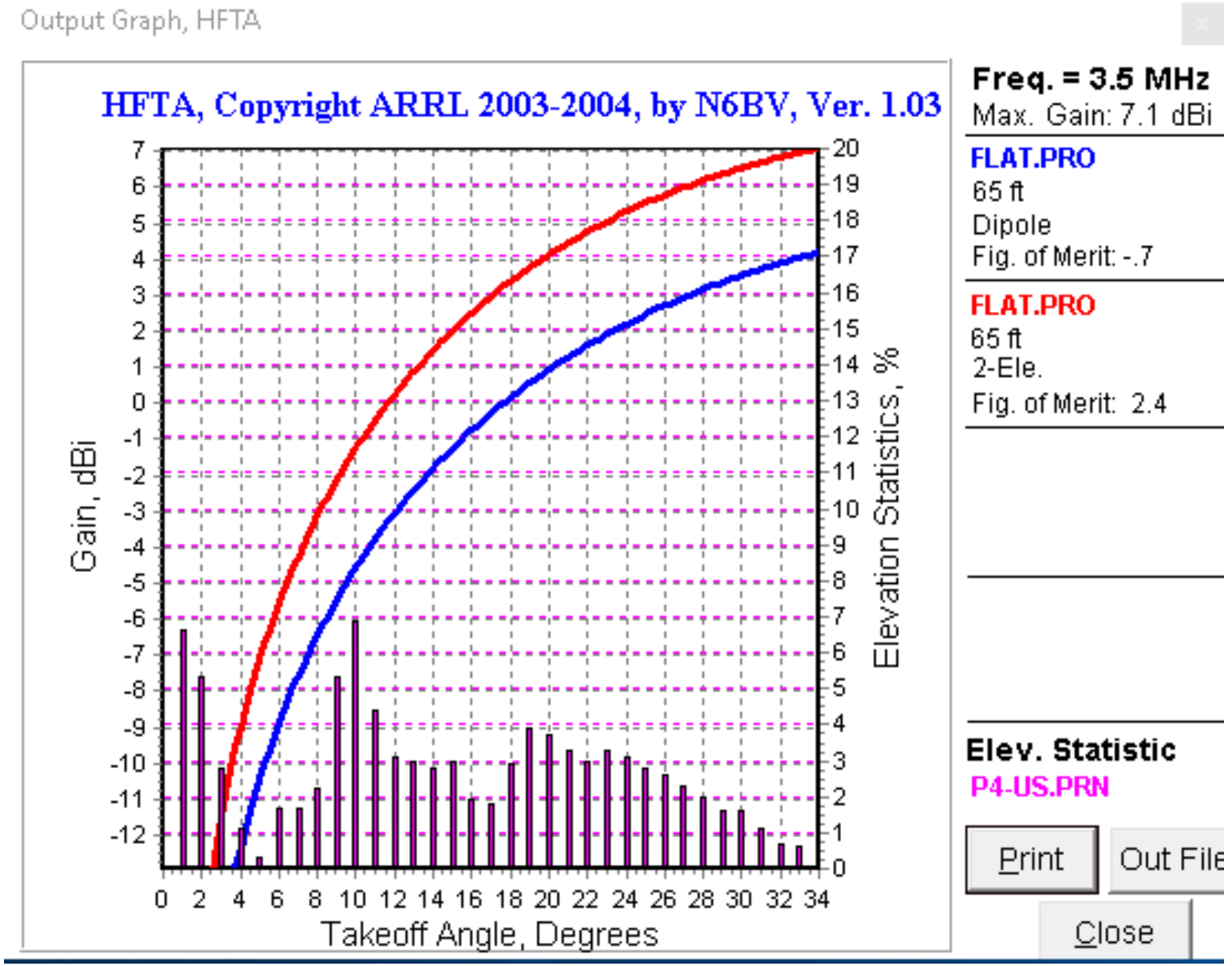
Azimuth Plot		Cursor Az	0.0 deg.
Elevation Angle	20.0 deg.	Gain	3.31 dBi
Outer Ring	3.31 dBi		0.0 dBmax

Slice Max Gain	3.31 dBi @ Az Angle = 0.0 deg.
Front/Back	15.73 dB
Beamwidth	145.6 deg.; -3dB @ 287.2, 72.8 deg.
Sidelobe Gain	-12.42 dBi @ Az Angle = 180.0 deg.
Front/Sidelobe	15.73 dB

Director only 2% shorter than Driven



This is what it looks like to model with EZNEC



Use HFTA to look at useful angles from P4 to US

What did it take to do it?

- Repositioned 80M inverted V broadside to US
- Climbed front tower and attached director
- Find some tie points
- Folded back 6 feet of one end as it wouldn’t fit

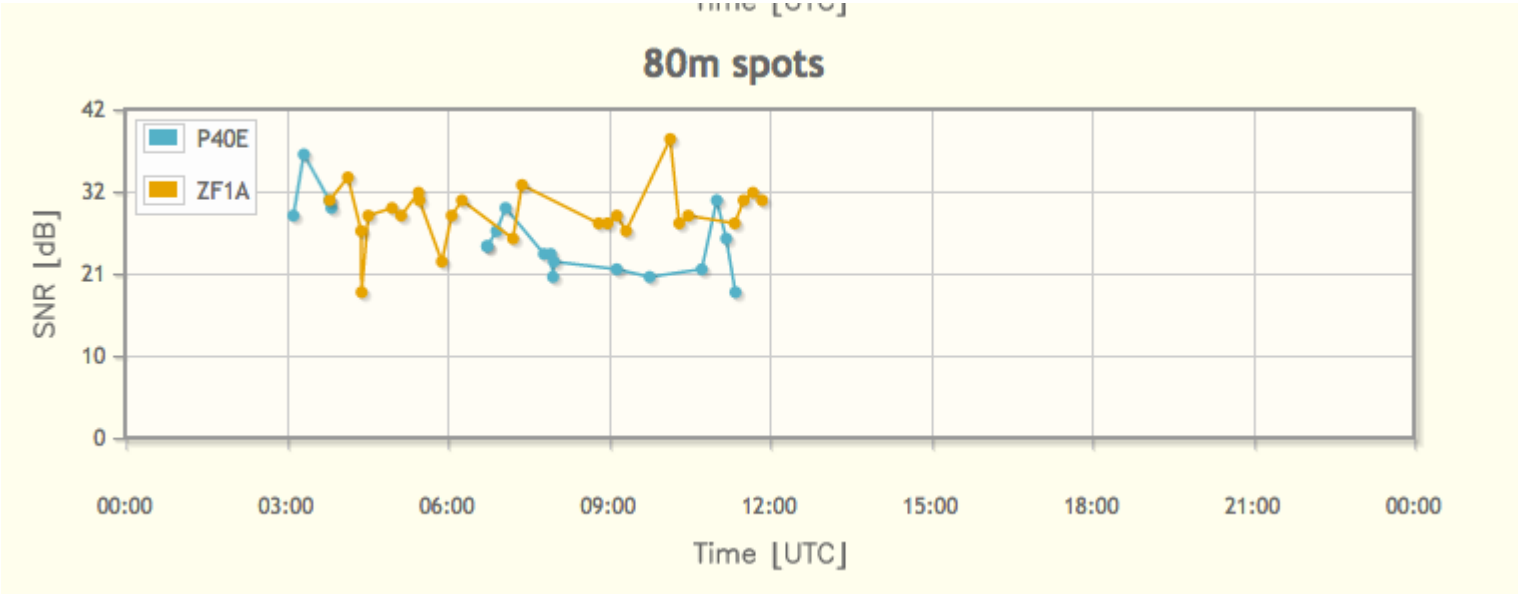
Antennas are forgiving, particularly at the ends

Tested using the Reverse Beacon Network (RBN) http://www.reversebeacon.net/

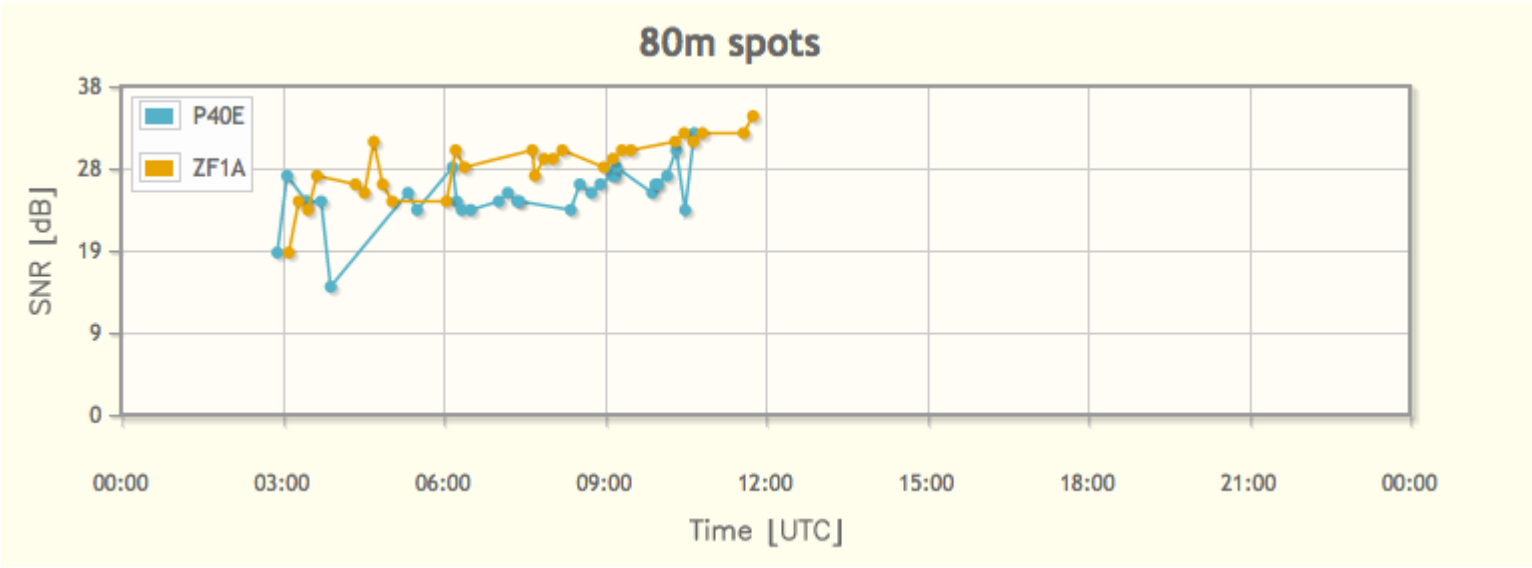
- Called CQ using P4/K9RS
- Lowered director
- Called CQ using P4/AA5B
- Data from the US varied from +1 to +7 dB with director vs without director
- Average +3dB with Director
- Data from Europe was the same with or without

Also used RBN to compare to ZF1A

1st night



2nd night
After changing director



2018 ARRL CW DX

Band	QSOs	Mults
160:	357	56
80:	687	58
40:	1500	60
20:	1456	61
15:	1234	59
10:	561	45
Total:	5795	339

Total Score **5,892,498**

2018 ARRL DX CW Results

M/S HP

Call	SO2R	Remote	QSOs	Mults	Op Time	Score	Club
ZF1A			6284	333	48	6,262,731	Cayman ARS
P4ØE(@P49V)			**5795**	**339**	**48**	**5,892,498**	**FRC**
VP2MSS			5653	322	47	5,444,376	
KP2M(@NP2X)			5494	324	48	5,324,626	PVRC
NP2N			5199	311	48	4,849,734	WVDXC
W2FU			3497	455	48	4,747,470	NCC
VP5K			5228	292	48	4,577,976	MWA
K2QMF			3058	437	44	4,007,727	OBONY
CU4DX			4712	282	48	3,974,508	
KH7M(@KH6ZM)			4171	297	48	3,716,361	AOCC

2nd place, but a good effort

over 2 QSO's per minute for entire contest