

I hope everyone had a good time with JCRAC's First Annual VHF Shootout. I certainly did. I'd especially like to thank Tom, N0GSG for his input in developing the spreadsheet used to score the Shootout as well as his idea on how to normalize the scoring by benchmarking each participant's radio against a one watt standard. I was struggling with how a level playing field could be established. It's not a problem during the HF Shootouts as we have a Bird Watt Meter employed in the feedline to the mobile antenna to monitor the power output of each participants radio, but that just wasn't practical in the case of a hand held VHF transceiver. Enter Tom and problem solved. Thanks again Tom.

Congratulations to Bill, N0YUD for his first place finish with his self deprecating "Alien Reflector" $\frac{1}{4}\lambda$ Ground Plane . Everyone laughed while he was testing...we're still laughing after Bill's first place finish, but mainly we're laughing at the possibilities for the next VHF Shootout given the propensity for the off-the-wall creativity that many in the club possess.

Looking at the score sheet, I'm sure many of you will notice things that are of interest to you, but here is one of my own observations.

For those that tested multiple antennas, most tested the Standard Duck (SD – the antenna that came with your radio) and then tested some aftermarket antenna which was usually longer than the Standard Duck. The following fell into this category:

Danny, KE0CAE had a 1.1 dBm improvement with his aftermarket antenna(s)

John, W0BBQ had a 3 dBm improvement with his home brewed contraption

Bill, WA0CBW had a 1.3 dBm decrease with his Comet HT-224

Jay, KB8TR had a 1.6 dBm improvement with his Kenwood Duck

Keith, KE0AEP had a 2.4 dBm improvement with his Diamond SRH77CA antenna

Doug, N3PDT had a 1 dBm improvement just by adding a $\frac{1}{4}\lambda$ counterpoise

Herb, NZ0F had a 12.1 dBm decrease with his 16" aftermarket antenna (I think it's broken)

And

Bill, N0YUD increased his by a whopping 12.1 dBm with his Alien Reflector $\frac{1}{4}\lambda$ Ground Plane

Overall, I think this shows some effort on the part of the radio manufacturers to equip their radios with an antenna from the factory that performs well and still fits in the box that the radio came in.

Maybe next year's winter Shootout should be done on 440MHz to see if this year's conclusions are close to the same. 440 MHz should also make it easier to build an aftermarket antenna with much more gain and still be supported by the radio. Ahhh, the creative minds are starting to churn!

1st Annual JCRAC VHF Shootout
Friday, April 10, 2015

Procedure:

1. Set transmitter to 146.430 MHz and connect it to the RF Test Set.
2. Key the transmitter and read its power output; record in the RAW POWER OUTPUT column.
3. Connect the transmitter to the antenna.
4. Key the transmitter and record the remote spectrum analyzer reading in the POWER RECEIVED column.

Rules:

1. Any hand-held radio may be used regardless of power output.
2. Any antenna may be used that is completely supported by the radio. No hand-held antennas of any kind.
3. Counterpoises may be used as long as they are solely supported by the radio.
4. You may orient the antenna any way you want.
5. The highest recorded signal strength will be declared the winner.

Sorted By Order of Finish

Entry No.	Call	Name	Radio Model	Antenna Description SD = Stock Duck	Raw Power Output (Watts)	Power Output (dBW)	Actual Received Power (dBm)	Receive Power - Corrected (dBm)
26	N0YUD	Bill	FT-60	¼ Ground Plane +Aluminum Foil Alien Reflector	0.391	- 4.08	3.9	+ 7.98
11	W0BBQ	John	FT-60	Bill Brinker Close Coupled Maple Antenna	1.54	+ 1.88	2.7	+ 0.82
23	N3PDT	Doug	FT-270	SD w/19" Counterpoise	3.61	+ 5.58	5.9	+ 0.32
17	AA0RN	Aaron	FT-270	Smiley 5/8 w	3.28	+ 5.16	4.9	- 0.26
1	AD0AB	Jaimie	FT-60	Coat Hanger Ground Plane	3.75	+ 5.74	5.3	- 0.44
24	N3PDT	Doug	FT-269	SD	3.61	+ 5.58	4.9	- 0.68
35	N0QF	Steven	FT-60	Diamond SRH77CA	3.75	+ 5.74	4.9	- 0.84
30	KC0VDH	Rich	Baofeng UV5R	½ w HB Verticle w/Tiger Tail	4.85	+ 6.86	6	- 0.86
19	KB8TR	Jay	AT-600	Kenwood Duck 1	4.11	+ 6.14	4.9	- 1.24
20	KB8TR	Jay	AT-600	Kenwood Duck 2	4.11	+ 6.14	4.9	- 1.24
32	K6TBJ	Rod	Baofeng GT3	Diamond SRJ77CA	5.25	+ 7.20	5.9	- 1.30
31	N0FB	Jay	Baofeng UVB5	Nagoya NA-771	3.52	+ 5.47	3.3	- 2.17
10	W0BBQ	John	FT-60	SD	1.54	+ 1.88	-0.3	- 2.18
12	KC0BS	Brian	VX-8GR	Diamond 19" Rat Tail	3.22	+ 5.08	2.7	- 2.38
16	KC0CL	Cal	VX7R	SD	0.037	- 14.32	-17	- 2.68
7	KE0CAE	Danny	Baofeng GT3	INF-661	4.7	+ 6.72	3.9	- 2.82
8	KE0CAE	Danny	Baofeng GT3	INF-641	4.7	+ 6.72	3.9	- 2.82
18	KB8TR	Jay	AT-600	SD	4.11	+ 6.14	3.3	- 2.84
29	KC0VDH	Rich	Baofeng UV5R	Nagoya NA-771 w/Tiger Tail	4.85	+ 6.86	3.9	- 2.96
33	K6TBJ	Rod	Baofeng GT3	Nagoya NA-771	5.25	+ 7.20	3.9	- 3.30
34	K6TBJ	Rod	Baofeng GT3	Wouxan SD	5.25	+ 7.20	3.9	- 3.30
9	KE0CAE	Danny	Baofeng GT3	SD	4.7	+ 6.72	2.4	- 4.32
3	KY0F	Eddy	FT-60	Diamond SRH77CA	3.85	+ 5.85	0.7	- 5.15
25	N0YUD	Bill	FT-60	SD	0.391	- 4.08	-10	- 5.92
22	KE0AEP	Keith	IC-T70A	Diamond SRH77CA	0.492	- 3.08	-10	- 6.92
5	KY0F	Eddy	VX-2	Comet HT-224	0.107	- 9.71	-17	- 7.29
6	W0AJB	AJ	FT-60	Diamond SRH77CA	0.385	- 4.15	-11.7	- 7.55
36	N0EI	John	V5RA	Baofeng SD	4.48	+ 6.51	-1.3	- 7.81
2	AD0AB	Jaimie	FT-60	SD	3.75	+ 5.74	-3.7	- 9.44
21	KE0AEP	Keith	IC-T70A	SD	0.492	- 3.08	-12.6	- 9.52
27	NZ0F	Herb	FT-60	SD	1.61	+ 2.07	-7.6	- 9.67
13	WA0CBW	Bill	TH-F6A	SD	0.375	- 4.26	-16	- 11.74
14	WA0CBW	Bill	TH-F6A	Comet HT-224	0.375	- 4.26	-17.3	- 13.04
15	KC0CL	Cal	FT1D	SD	4.1	+ 6.13	-9.7	- 15.83
4	KY0F	Eddy	FT-60	Nagoya NA-771	3.85	+ 5.85	-15.3	- 21.15
28	NZ0F	Herb	FT-60	16" Duck	1.61	+ 2.07	-19.7	- 21.77