



The Rumble

Next Meeting

Wed. July 3, 2024 6:00PM

Field Day, plus more

Meeting Location:

Northern AZ Fire Station #31,
2600 Northern Ave

From the Pres May 2024:

A word or two from Prez Jerry, WS7T—
Thanks to all who took part in ARRL Field Day. Walleck Ranch Park (on Willow) was a nice location for the event with shade trees, a ramada, restroom facilities, and AC power.

Thanks to the dedicated work of several individuals, solar power was available for all radios. Solar energy worked flawlessly. Monitoring of the LiFePO4 Batteries indicated they never dropped even a tenth of a volt from 13.1 volts carrying all VHF and HF radios effortlessly. AC for the trailer was possible thanks to available shore power from the ramada. Despite rather warm weather, trailer temperatures were maintained below the mid-80s at chair height.

An issue that will need to be addressed next year is the placement of antennas. Operators on 20 Meters were using antennas too closely placed, overloading the front end of adjacent radios. I learned this can easily take out the front end of a radio. Fortunately, that did not happen, but, we have been blessed with a warning and I think we should learn from it and mend our ways for future events.

A complement of several vertical antennas (Thanks Tom, N6BT) allowed operation on all daytime bands. Amazingly, 10-meters had very little activity while 15-meters and 20-meters were booming throughout most of Saturday. Various operators worked both CW and SSB and I estimate several hundred contacts were made at the Field Day site.

Lunch consisted of barbeque-grilled burgers, dogs, and brats. Sides included baked beans, chips, potato salad, watermelon, and several tasty desserts. Thanks, Chef Scott, KB7KBQ. If you think of it, bring a cup of coffee to the meeting next Wednesday as I will be bringing a dessert that was left over from Field Day to share with everyone. Come early; it won't last long.

To be considered at our next meeting is the appointment of a Club Property Manager to maintain a ledger logging all major property and where it is currently located. I spoke with Ted, K17BWO at the Airport Café Saturday morning breakfast and he indicated that he would be willing to assume this position for the Club. We have accumulated considerable real property and have reached a point where it is difficult to know where it is at and who is currently responsible for its safekeeping.

We had a delightful breakfast at the Airport Café this past Saturday with nine members in attendance. Breakfast was tasty and reasonably priced by today's standards. Even though we overwhelmed the restaurant staff, the meals were prepared and served promptly. We all had the rare opportunity to see a WW II-era British Spitfire take off and later do a low, wicked-fast fly-by.

I will look forward to seeing you all at our next meeting Wednesday, July, 3. Currently, items of business will include: appointing a new trustee for the Club call sign, approving Ted as Club Property Manager, and approving payment of miscellaneous bills related to improvements made on the trailer

and Field day expenses. If you have other items of business contact me by phone at 928-279-3516 or email jlzdvm@gmail.com. The night of the meeting will be too late to place items on the agenda unless one should rise to the level of an emergency.

73

Jerry, WS7T President HARC

CLUB EVENTS

July 20th (Third Saturday) 7:30 AM Truck Stop Dennys at on and will remain at the same monthly date, and time, for the year's balance.

From H.A.R.C. Director and immediate Past President, Rick, K7CNT:

Club Trailer Vertical Antenna:

I'm thinking with the help of Tom, N6BT and using his proven design concepts we can improve the club's 4BTV antenna a lot and still keep it simple. At least that's what I think we should experiment with. It would not ruin the 4BTV antenna in any way. Just adding a resonator (current return) system to the feed point would improve its efficiency. Just my thoughts and actual comparison experience using the N6BT Bravo Antenna design concepts. I have built and tested a 20-10 meter antenna using Tom's design and it works better than any other vertical I have built and I have built a few over the years.

Six Meter Activity:

This band has been pretty active over the last few weeks. I am seeing band openings daily to one degree or another. This summer is looking pretty good for this band so far and I for one am trying to take advantage of it. If you like challenges, then 6 meters is a band you should look at. A reasonably easy to build antenna would be an aluminum tube dipole (horizontal) antenna up around 15 to 20 feet and fed with a 1:1 choke. I get a lot of action with my antenna turned toward the NW at about 330 degrees and also facing NE at about 60 degrees. I use PSK Reporter to help me see where the action is at..... <https://pskreporter.info/pskmap.html>

Learn how to use it, as it's a great tool.

There is also the meteor scatter challenge on 6-meters, but does require more of an investment in equipment. A minimum of 100 watts and at least a 3 element Yagi.

D-Star Repeater update:

Well the last issue, I hope, is the Internet connection. This has become a real problem as we must have a dedicated IP address through the Internet. The hospital's "guest WIFI" will not work for a D-Star system. Alan, KM6KPW our veteran Network tech, had a chat with a ICOM representative for D-Star systems and confirmed we needed a dedicated IP address. So that's what we are trying to deal with now.

Balloon updates:

WB6RER balloon still has not been heard from in a long time. It may be gone, but it was sure a great run for that Pico Balloon and we sure had fun tracking it.

The KJ7VBX balloon that Bob Goulden launched has failed over Japan and was on its 2nd orbit. Great effort, Bob, you accomplished your goal of at least one orbit and that ain't easy! More Pico balloon trackers to come this year.

May God bless you

Thank you, Rick/K7CNT 73

Chs-rick@live.com

From the Secretary

Space reserved for Mike!

73 de KG6ECW

Something New, or, Old plus New

The antenna Rick, K7CNT, has proposed for the Club trailer enhancement is a design developed back in 2010, initially used and tested in worldwide competition. The Bravo history follows:

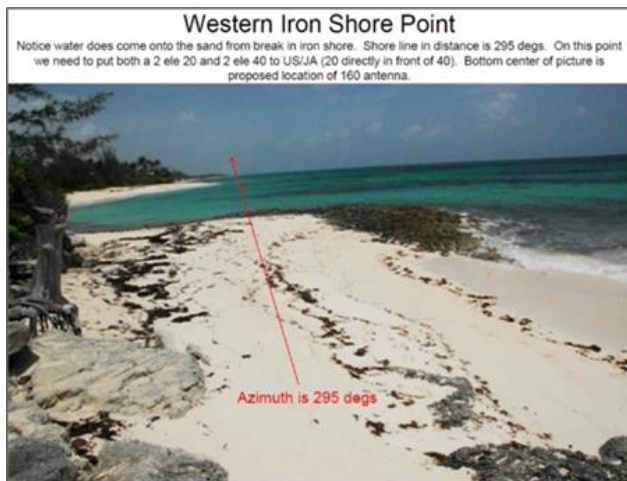
2006 found our Team Vertical heading to Eleuthera, Bahamas after operating in Jamaica for ten (10) years and setting almost 20 world records. The propagation had ben changing and we decided to move farther to the east.

Kenny and the Team go through lots of analysis before committing time and money to a Contest DXpedition, with the goal of breaking/setting another world record or two, or three.



This 2010 trip had Kenny (K2KW) on 40 meters, Fred (KE7X, now SK) on 20 meters, Walt (N6XG) on 15 meters and I was on 160. We were all running LP (low power) in our respective CQWW CW single op categories. At this third location on the island, Kenny’s layout for verticals on the beach ran out of room for our full-length, elevated Gull Wing radials which had enabled us to achieve all those records.

Our small peninsula offered excellent coverage to the west. The problem is the word, “small.”



The eastern iron shore had more space, but not much depth to the surf line, so it was also a

challenge for full-length, elevated Gull Wing radial locations.



The challenge fell to me to solve and after months of design and testing, the “Bravo” (our internal code name) came to fruition.

It is a simplified Sigma design, shown at the right as a 2-element 40-meter array on the shores of Jamaica. Although an efficient antenna (produced in a variety of models), the main issue with the Sigma was always the center feed point. This location required the feed line and control cable to run off at least at a 45° angle to avoid distorting the pattern. The Bravo solved the feed line, as well as the space issue.



The Bravo uses a vertical radiator and a pair of horizontal “resonators” at the base, which are the current return. The resonators are short (not resonant, less than $\frac{1}{4}$ wavelength) and are center loaded. This places the feed point at the bottom of the antenna and allows complete freedom for adding inductors, relays, baluns, etc. The design provides excellent efficiency and operating bandwidth, due to the radiator being full length. Later production Bravos included multi-band with adjustable radiator and resonator lengths, plus fixed radiator and resonator lengths and relay-controlled center loading for all the components. The most

bands covered was the Bravo 7K for 40 through 10 meters and was full size for 20 meters on up.



Above is one of our 40-meter Bravos that utilized another "first" - offset resonators. The resonators are fed at the center via the horizontal aluminum tube standoff and use a common inductor to resonate. Walt, N6XG (left) and Kenny, K2KW are looking on to be sure I do this correctly.

Below is a 2-element 20-meter Bravo on the far peninsula of our beach front. The close-in area is a 2-element 15-meter array. 2-element Bravos for 40 meters were added on the peninsula with the 20's.



For Kenny's new record, a 4-element 2X2 40-meter array was set up aimed at EU on this narrow section of beach. This is a parasitic, phased broadside array: the "Flame thrower."



The Bravo used at Field Day is one of these two Bravos that were a 2-element 15-meter array in 2010 that we initially placed a bit too aggressively in the surf.



Yes, Walt and I got a bit wet in the Atlantic surf.

A typical, production Bravo series antenna:



Additional info from Rick, K7CNT
Build an inexpensive Solar Power System to run your radios:

- 1 – 100w solar panel
- 1 – 30A controller
- 1 – 13.8V 25A booster

\$120 give or take purchasing items on eBay. Excluding battery choice.

Any lead acid type 12v battery will do, which will probably be the most expensive item. Could be a car battery or 2 car batteries or however many you can get your hands on (new or used).

I have scrounged up 3 car batteries and 1 deep cycle marine for my system. Been in service for going on 3 years now. The cheap controllers even have 2 USB ports that I am using to power led lights in the radio room, very cool I think.

Also planning on expanding the lighting to have my main lighting in the radio room all powered by solar/battery. I am keeping it all very simple and reliable.

Oh yeah you should own a cheap hydrometer!

OPERATING

(use ctrl-click to follow the links)

Marconi Memorial HF Contest 1400Z, Jul 6 to 1400Z, Jul 7

http://www.arifano.it/contest_marconi.html

QRP ARCI Summer Homebrew Sprint 2000Z-2300Z, Jul 14 <http://qrparci.org/contest/summer-homebrew-sprint-2020>

NAQCC CW Sprint 0030Z-0230Z, Jul 18 http://naqcc.info/sprint_rules.html

Maidenhead Mayhem Contest 0000Z, Jul 20 to 2359Z, Jul 28 <https://w9et.com/rules.html>

CQ Worldwide VHF Contest 1800Z, Jul 20 to 2100Z, Jul 21 <https://www.cqww-vhf.com/>

Alabama QSO Party 1500Z, Jul 27 to 0300Z, Jul 28 <http://alabamacontestgroup.org/aqp/>

North American QSO Party, CW 1800Z, Aug 3 to 0559Z, Aug 4 <https://www.ncjweb.com/NAQP-Rules.pdf>

ARRL 222 MHz and Up Distance Contest 1800Z, Aug 3 to 1800Z, Aug 4 <https://www.arrl.org/222-mhz-and-up-distance-contest>

The [Amateur Radio Council of Arizona](#) and the [Northern Arizona DX Association](#) are proud to announce that we are holding the second annual

July 2024

RUMBLE



Northern Arizona DX Association

Presents the

FLAGSTAFF HAMFEST

Sponsored by The Amateur Radio Council of Arizona

Flagstaff Hamfest ham radio festival on July 20th, 2024. The event will be held at the Sinagua Middle School, which is located at 3950 E Butler Ave Flagstaff, AZ 86004.

We have some exciting changes planned for the 2024 festival! Among those changes are: Moving the tailgater area to the front of the school and putting general parking in the back. We'll also have more handicapped parking available close to the back entrance, which has the best access to the Commons area where vendors are located. We'll also have a 12 passenger van to shuttle people between the back parking area and the tailgater area. Another change will be that all the classroom areas will be air conditioned this year!

We've arranged for a special rate at the [Flagstaff Super 8 Motel](#). Call 928-526-0818 and ask for the Hamfest discount. We advise making reservations early as rooms in Flagstaff fill up quickly during the summer months.

We'll have something for everyone in our vendor area this year! In addition to the usual ham related vendors, we will have some local vendors selling Quilts, Jewelry, Pottery, Purses and more.

Please explore the menus above to learn more about the hamfest, or [Click here to see the Flagstaff Hamfest flier](#)

[Here is our wrap-up of the 2023 Flagstaff Hamfest.](#)

P.S. There are also speakers – I will be there and possibly Dave, WI6R if he can recover quickly enough from his leg accident.

...end

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