







Newsletter of the

Bella Vista area Radio Club

Arkansas' Largest Amateur Badio Glub



- BVRC Mount Magazine Special Event Station announcement
- The new SUPERFOX FT-8 mode
- Change your ham shack quartz clock to atomic
- Field Day feature article

August 2024

Monthly Meetings: 1st Thursdays @ 7 p.m. Arkansas Law Enforcement Training Academy (ALETA) 3424 S. Downum Road, Springdale AR

(HAM 101 Workshop for Newcomers @ 6pm preceding meeting)

Club Calls: N5BVA / W5NX

(Repeater Nets)

(Contesting & Special Events)

Repeaters: 147.255 +.600 khz offset, pl 162.2 444.100 + 5 mhz offset, pl 162.2

Website: www.bellavistaradioclub.org

WEEKLY NETS:

BVRC HAM 101 Net
Tuesdays @ 7 pm on the
WX5NAS Skywarn Link System:

Bentonville - 146.865, -offset, pl 103.5 Springdale - 147.315, +offset, pl 97.4 Fayetteville - 147.315, +offset, pl 110.9 Huntsville - 443.625, +5 MHz, pl 97.4 Green Forest - 145.310, -offset, pl BVRC Legacy Net
Wednesdays @ 7 pm on the
BVRC Dual Linked Repeaters:

N5BVA/Bella Vista 147.255, +offset, pl 162.2

N5BVA/Springdale 444.100, +5 MHz, pl 162.2

BVRC 3830 Roundtable
Sunday Afternoons
4 pm during CST
4:30 pm during CDT
3.830 MHz



NEXT BVRC MONTHLY MEETING



Thursday, August 1, 2024 @ 7pm
Arkansas Law Enforcement Training Academy
3424 S. Downum Road
Springdale, AR

August Meeting Information

HAM 101 Workshop, 6pm preceding monthly meeting — BVRC Vice-President Joe Hott — W5AEN has operated using solar power for many years. He is well versed in the areas of setup, operation, maintenance, and troubleshooting using solar power with ham equipment. Join us for a very informative session with Joe as he presents "Amateur Radio and Solar Power". Bring your questions for the Q&A session to follow!

BVRC August meeting, 7pm – BVRC member Mark Whatley – K5XH will be our speaker for August with his presentation on "The History and Modern Uses of RTTY". Mark is the BVRC 'guru of RTTY', winning Arkansas and placing in the Top Ten in the nation in the January RTTY contest every year. Although radioteletype, or RTTY ("ritty"), has been somewhat overshadowed by the mode of FT8, it is still fun and still an integral part of amateur radio. Mark has given several other stellar programs for BVRC in the past, and this one will be no exception. Be sure and join Mark for our main meeting at 7, and enjoy exploring the world of RTTY!

BOARD MEMBERS

President

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Dana Hill - W5DGH dana.hill1979@gmail.com

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N5BVA Trustee

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Board Member At Large and Public Information Officer

Tom Northfell – W5XNA w5xna@arrl.net



APPOINTED OFFICERS

VE Testing Committee

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Education & Elmer 911 Committee

Chair: Vinson Carter – WV5C vinsoncarter@gmail.com

Nets Committee

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Glenn Kilpatrick – WB5L

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Newsletter EditorDon Banta – K5DB

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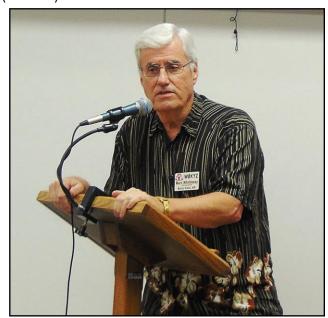


July Meeting Features Field Day Review and Volunteer Salute

It was (as always) another excellent attendance by BVRC members and guests for the July 2024 meeting on July 11 at the Arkansas Law Enforcement Training Academy (ALETA).

Our top three officers – President Jan-WB5JAN, Vice-President Joe-W5AEN and Secretary Dana-W5DGH were all out of town for this month, so the presiding duties fell on the shoulders of our great Treasurer Marc Whittlesey-WØKYZ, and an excellent job he did.

This month's program was a review of what was one of the best BVRC Field Days on record, as well as recognition of the great members that made it possible. FD Coordinator Tom Northfell – W5XNA conferred a really nice PowerPoint presentation to the club, highlighting and saluting all the wonderful volunteers who made this year's FD a success. He then reviewed the club's scores from each mode station, comparing those numbers with the past two years.



Marc - WØKYZ



This year's numbers resulted in a record-busting year for BVRC, and a definite and worthy goal to surpass for next year.



Tom - W5XNA

Tom then unveiled the newest BVRC video, hot off the press, a very nicely put together production from our video master, Adnan Ademovic – KDØKCY. It is a first class production, and is now available for viewing on the Bella Vista Radio Club YouTube channel page.

I case you couldn't attend the meeting, follow this link to view the video:

https://www.youtube.com/watch?v=D0Xc6J4j 8XE&t=132s

If you missed out on the annual ARRL/BVRC Field Day this year, it's the biggest amateur radio of the event of the year each 4th month in June. **See you June 28-29, 2025!**



BVRC members enjoy the new 2024 Field Day video presentation

From the Desk of the President



Sharing Amateur Radio With the Public Through Parks on the Air

It turns out that activating a park through the Parks on the Air (POTA) program is a very effective public relations activity for amateur radio operators to build an awareness of our hobby with the public.

I have been fortunate enough to activate parks from several states so far in the past few years. What I have noticed is that, besides the fun and thrill of operating and making contacts from beautiful locations around the country, I also become an ad hoc ambassador for our hobby as I operate. As examples, here are my experiences at two different activations from coast to coast:

While touring the east coast to the Williamsburg Colony and several revolutionary war sites, I activated First Landing State Park, US-1299, in Virgina Beach, VA. During this activation, I was approached by a man riding up on his e-bike. He introduced himself as a ham, a newly licensed technician. He had heard all about POTA, but had not had a chance to observe or listen to POTA operations. He was excited to see a POTA operation live in action and soon he was joined by the rest of his family who rode up on their e-bikes. Before long, a crowd had gathered drawn by all the equipment on the park bench as well as the strange looking Wolf River Coil and screen door ground plane. After my activation, an impromptu Q and A session was held with the interested observers. I can tell you, several seemed interested in following up to learn more about our hobby.

On the west coast at Monlight State Beach, US-3479 in the San Diego, CA area, I was operating right on the beach, tucked in behind a sand volleyball court with a girls' volleyball league playing and next to a group of teenage boys at the next beach table taking a break from surfing the big sets coming in that morning. It was a crowded beach, and between these two groups of young people was this old man, with strange electronic equipment, and an antenna soaring up from the sand, talking into a microphone to people he couldn't see. Soon, a few came over to observe and later, after I activated, they also asked questions. I sensed from their responses, "wow, that's dope", "that's so rad, man", and "that's so the bomb" that perhaps they were impressed. One said that this would be a great addition to his #vanlife set up.

The point here is that whenever the public has a chance to see amateur radio operations, there is an opportunity for us to share our hobby that is so important to us and to leave a good impression of what amateur radio is all about.

I hope you will also have the opportunity to serve as a positive ambassador for our hobby!

73! - Jan, WB5JAN

BVRC VE REPORT
FROM DON COOPER - KC7DC
BVRC VE COORDINATOR
JULY 13, 2024



Congratulations!

Jonathan Pinto - KJ5HFG - Pea Ridge New Technician!

MAGHAN SHAW - KJ5HFX - ROGERS NEW TECHNICIAN!

COLIN SHAW - KI5BTK - ROGERS NEW AMATEUR EXTRA!

CHARLES WATTS - KFØQWK - POWELL, MO NEW GENERAL!

Next month's test sessions:

- August 10, 10 am Shiloh Museum, 118 W. Johnson Ave, Springdale
- August 10, 2 pm Bella Vista Public Library, 11 Dickens Place, Bella Vista



Welcome New BVRC Members!

Joshua Bishop - KG5DVJ Anderson, MO

Joseph Abrams - KJ5HFK Bella Vista

Maghan Shaw - KJ5HFX Rogers

Colin Shaw - KI5BTK Rogers

John Vogel - KF5CSW Rogers



The Bella Vista area Radio Club leadership team is pleased to announce our club's next big operating event!:

EVENT NAME: Special Event Station W5NX

Operating from the highest point in Arkansas – Mount Magazine

EVENT DATE: September 14 & 15, 2024

LOCATION: Cameron Bluff Campground

Mount Magazine State Park

(POTA #s US-1104 and US-8322)

A core organizing group will be traveling to Cameron Bluff Campground on Friday, September 13, to setup the two stations which will be SSB (phone) and CW. As of right now, we will be using at least three antennas – two Windom Off-Center Fed dipoles and the Model 2289 outverted-V. Other antennas will also be possible. We will be operating portable from

Cameron Bluff Campground located inside Mount Magazine State Park. The stations will be setup on sites 8, 11, and/or 12. We will go on the air at 9:00 am local time on Sept. 14.

We hope that you will be able to join us for this very unique BVRC Special Event Station / Parks on the Air event! Whether you plan to come for the weekend, or for a day trip only on Saturday, you are invited to join us for a BVRC pot luck dinner at 5:00 pm on Saturday.

If you are planning to come for the pot luck, we ask you to e-mail Don-K5DB to confirm your attendance at arsk5db@gmail.com, and also bring a side dish or dessert to contribute to the pot luck. If you wish to spend Saturday night and not have to drive back home to NW Arkansas, you can check for available accommodations in the park, or the Paris Inn in Paris, and then make reservations phone: 479-963-8502, facilities the park either by or the park's online https://www.reseze.net/servlet/WebresResDesk?hotelid=1649&buildingCode=any&roomType=any, or contact the Paris Inn for available rooms at: https://parisinnar.com/ or phone: 479-963-2400.

If you would like to spend an exciting BVRC ham radio weekend at Mount Magazine, mark your calendar now! The pileups calling us will be **BIG!** A great opportunity to sharpen you operating skills!



Thanks to Jay Bromley – W5JAY for alerting us to the Jarvis Island-N5J DXpedition website (the DXpedition starts August 5), wherein is found this VERY important information on the new version of WSJT-X software for SuperFox FT8 mode use that will be advantageous for all our BVRC DXers:

THE NEW FT-8





ITEMS OF DISCUSSION CONCERNING THE NEW SUPERFOX MODE

1. What is SuperFox mode in WSJT-X?

SuperFox mode allows an expedition to make digital QSOs at rates higher than possible with previous versions of WSJT-X. In previous versions the Fox would transmit up to 5 streams, with each stream being 50 Hz wide.

The SuperFox transmits a full power constant-envelope waveform 1512 Hz wide. The SuperFox may send reports or RR73s to as many as nine SuperHounds simultaneously. Importantly there is no reduction in received signal strength to do so. A SuperHound will experience the same received signal strength regardless of the number of Hounds being contacted by the SuperFox. In addition, the SuperFox transmits a digital signature of authenticity. This

signature allows the SuperFox transmits a digital signature of authenticity. This signature allows the SuperHound to verify the legitimacy of the expedition, thereby reducing or eliminating piracy. This is covered in more detail soon.

2. Do I need special software?

Yes, both the SuperFox and SuperHound need to run WSJT-X version 2.7.0-RC5 or newer.

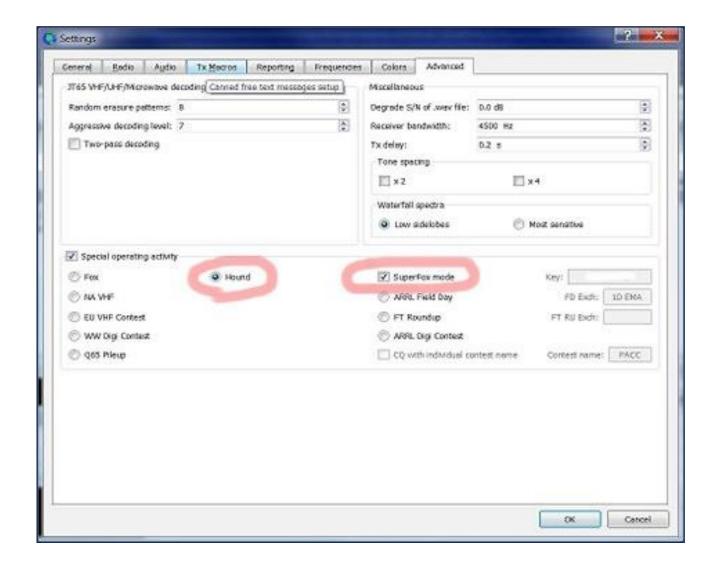
3. Do I need to set my receiver or transmitter to a certain bandwidth for SuperFox decoding?

No, because the SuperFox transmits a signal 1512 Hz wide. If you use the same settings you use now with WSJT-X, it will work fine.

4. What software settings do I need to be a SuperFox or SuperHound?

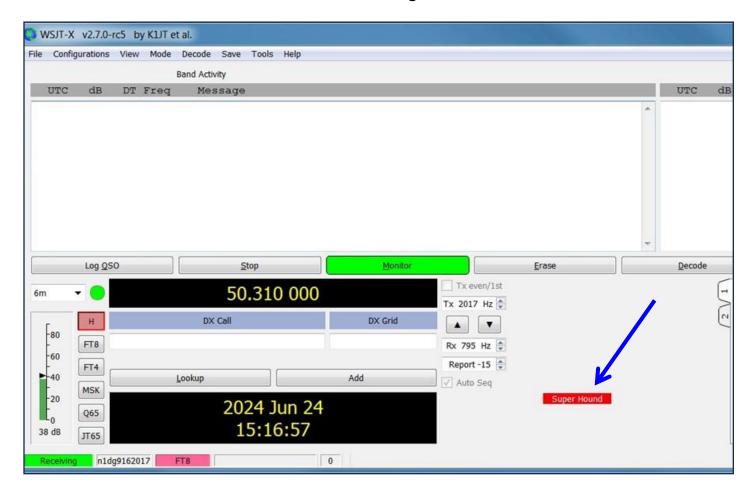
FOR THE SUPERFOX: In the Settings / Advanced tab of WSJT-X, select the Fox radio button, and check the SuperFox mode box. You also need to obtain a Key and fill in the Key field. (More detail on the Key field is below).

FOR THE SUPERHOUND: In the Settings / Advanced tab of WSJT-X, select the Hound radio button, and check the SuperFox mode box. No Key setting is needed.



(NOTE TO BVRC members: <u>Superhound</u> is the mode you will use, not SuperFox. The DXpedition station will be using SUPERFOX. The Superfox description in the preceding paragraph is just additional information for you. Again, you'll be using <u>SUPERHOUND</u> mode only.)

In both cases a red SuperFox or SuperHound marker will be displayed in the lower center of the WSJT-X screen after the Settings window is closed.



5. Where will the SuperFox transmit?

Using a 1512 Hz bandwidth, the SuperFox will start at 750 Hz and go up to 2262 Hz.

6. Where should the SuperHound (me) transmit?

The previous limitation of Hounds sending above 1000 Hz has been removed. A SuperHound may transmit anywhere from 200 Hz and up. Unlike the old-style Fox and Hound operation, the SuperHound's frequency is <u>not</u> shifted down after being contacted.

7. Do I need to change the rig Split operation settings for SuperFox or SuperHound modes?

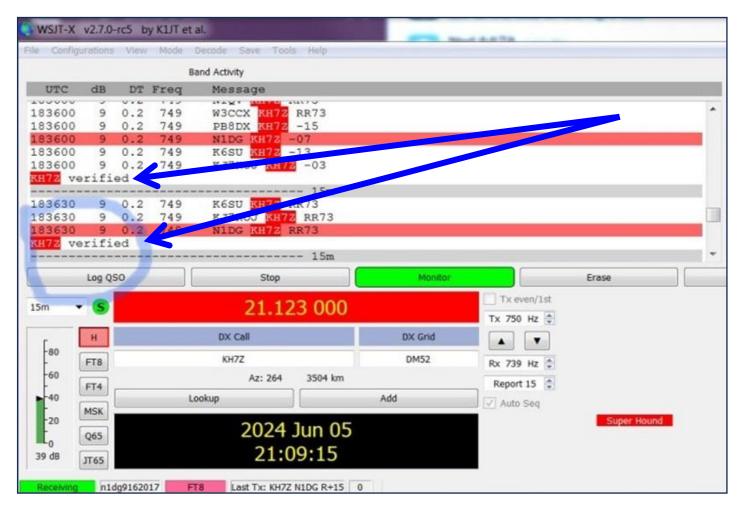
No, you can use the same Split settings as before. (For Fox you may also use None, as no VFO shifting will be done.)

8. Are there special SuperFox frequencies on each band?

This is up to each DXpedition to define. Expeditions should post their desired frequencies on web sites or live via a DX spotting network. SuperFox stations should never transmit on standard FT8 frequencies.

9. How will I know the SuperFox is not a pirate?

This is the premier feature of this new mode. – The SuperFox will transmit a digital signature which will be verified by the SuperHound when received. A displayed message will state the SuperFox's callsign has been verified. If no such message appears, the transmission is not verified. (See illustration below.)



10. Do I need special equipment to work a SuperFox?

No, your hardware will remain identical to your current usage. As stated in question #2, only your WSJT-X software needs to be upgraded.

11. How do I know if the QSO is complete?

An RR73 message will be received as in previous versions of WSJT-X. If you did not receive RR73 after repeatedly sending your R+report, you can wait a few minutes and call again.

- 12. How do I know that the mode is SuperFox mode vs regular FT8?

 A normal FT8 signal is only 50 Hz wide; the SuperFox signal is 1512 Hz wide.

 The sequence of tones is also markedly different and it is easy to tell that SuperFox is not a normal FT8 signal.
- 13. Do I keep calling on every odd cycle until the SuperFox comes back to me?

This is difficult to answer. A Hound or SuperHound has no way to know where you are in the Queue or if you are in the Queue at all. Generally, it is suggested to continue calling until a reply is received.

14. Is the old-style Fox/Hound Mode still available?

Yes, there are now three major FT8 sub-modes in the new WSJT-X version: Normal FT8, Fox/Hound and SuperFox/SuperHound.

ADDITIONAL INFORMATION:

- In the old WSJT-X version, when in Fox/Hound mode the more streams the Fox runs, the more the output power from its transmitter is divided among the streams. More streams, weaker transmit signals; less streams stronger signals. With SuperFox, messages can be transmitted simultaneously to as many as 9 Hounds with no signal strength loss, resulting in a system gain of about +10 dB compared to the older Fox-and-Hound operation with 5 streams.
- Right-clicking on the FT8 button toggles SuperFox mode on/off for either Fox or Hound, allowing quick transitions between SuperFox and old-style Fox and Hound operation.
- IMPORTANT: Hounds must use either WSJT-X 2.7.0-rc5 or WSJT-X_improved 2.7.1-devel "240701-RC5" (or a later release, when available) to receive SuperFox messages! Older revisions of WSJT-X and derivative programs will not be able to decode SuperFox transmissions.
- Hounds chasing the DX station will transmit normal FT8 signals, as in the old-style Fox and Hound mode. QSOs will be logged as FT8 mode.
- With the old-style Fox and Hound mode, the Fox (DX station) could not copy stations replying between 0 1000 Hz. When the Fox answers them, the Fox "brings the Hound's transmit frequency down to their own to ensure the Hound receives their report and RR73. When using SuperFox mode, Hound stations may call at any frequency in Fox's received passband, including the 0 1000 Hz range. Hounds will not be moved to a lower frequency for their final transmission.
- Every SuperFox transmission includes a unique digital signature. Hounds receiving a SuperFox message will see a "[callsign] verified" flag if the transmitted signature is valid, and the on-screen "Super Hound" label will turn from red to green. This should result in putting an END to pirate stations that have plagued major DXpeditions and small group DX stations on FT8 for years!

There is also a YouTube video on Superfox use here:



I have a standard 12-hour station quartz clock in my shack that I purchased from a vendor many years ago. I use with my 24-hour digital atomic clock.



A few years ago the quartz movement gave out, and I needed to go shopping for a new movement. As I was surfing the internet for a movement that would fit the faceplate of the clock, it occurred to me, "I want the additional accuracy of a WWV-synchronized clock. Why not replace the old quartz movement with an atomic movement?" So I refined my web search for an atomic unit.

My search was rewarded when I found



They had one atomic movement unit available. After measuring the thickness of my clock's faceplate, and also taking into consideration the distance from the inside of the faceplate to the inside surface of the clock's clear cover, I determined the that shaft specification of the atomic unit was the right length and would not prohibit reattaching the clock cover after installing the new movement. I ordered it.





Upon arrival of the unit and proceeding to install it in my old clock, the shaft length was (as I suspected from researching the

the measurement) correct and compatible. There was one catch: I had to file down the clips on the back of my clock that held the old movement to allow room to install the new atomic movement, as the atomic's casing was a little larger. (The clips are just an additional securement to attach the movement to the back of the clock. and really not that critical. The nut that secures the shaft of the the clock movement to securement enough.)

After removing the old clips and tightening the nut on the shaft, the new movement fit flush against the back of the clock and we were in business. The only other modification I had to perform was to take a pair of scissors and cut the minute hand a little shorter as it was longer than the radius from the shaft to the edge of the clock face. I now have a new and improved atomic station clock.

The atomic unit available from Klockit (https://www.klockit.com/) is reasonably priced at \$12.50 + shipping. (Be sure and measure the clearance from the faceplate to the inside, or concave, surface of

of your clock cover before ordering, making sure the shaft of the movement will fit in that space! The page for this device on the Klockit website gives all the dimensions.) The movement receives the time signal on 60 kHz from WWVB in Fort Collins, CO. The minute hand advances every 15 seconds.

A set pin comes with the unit, and to make SURE you don't lose it, I suggest taping it to the back of the movement.

When/if you order the unit, the movement comes with a free set of hour and minute hands that you need to select at the time of purchase. To add the hands, you will first need to add the movement to your cart. There is then a pop-up that instructs you to select your free hands. Then, click on the set of your choice. Next, you will add the free hands by checking off the box under the hands you want and then put the quantity as well next to that. Then you need to click "add to cart" on the top of the page.



Only the hands that are compatible with the unit will show on the free list of hands. Those are the only ones that will fit on the

movement. Klockit has a great customer service department as well. Before ordering the unit, I asked them a couple of other questions via their FAQ online form and they e-mailed me back with the answers in less than 24 hours.

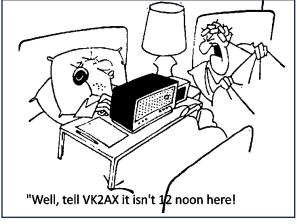
So if you have an analog clock with an old quartz movement and want to upgrade it to atomic, here's your opportunity to do so without much expense.

73 – Don, K5DB









BVRC 2024 FIED DAY Feature Article Feature Article

It was another *typical and hot* late June weekend for the annual ARRL Field Day event. But that did not hamper the efforts of the volunteers and the excitement of the participants at the Bella Vista area Radio Club's 2024 ARRL Field Day event on June 22-23, 2024. Field Day Coordinator Tom Northfell – W5XNA did another stellar job as he did last year, in the arrangement, coordination, and planning for the event. *(THANKS TOM!!!)* And just as last year, many valued members stepped forward to serve in all kinds of capacities from antenna installation to station setup to meal preparation and many other needed areas.

BVRC's members are, and have always been, top notch in lending a helping hand with all our operating events, but especially Field Day. Many

veteran members have already voiced this was the best BVRC Field Day they have ever experienced. There were many, many newcomers to amateur radio also present who stated they had no idea that event would be so interesting, exciting, and they learned a lot. THIS is what Field Day is all about.



A miniscule portion of the excellent crowd attending BVRC Field Day 2024

Pre-Field Day activities started on Friday afternoon with the customary raising of the club antennas. Again, we had an excellent turnout of volunteers to help with this task in addition to braving the high heat and humidity. Eight different antennas were raised and every one of them was utilized. A vertical and G5RV dipole was used by the Digital station, a Hexx beam and Windom off-center fed dipole was devoted to the SSB (phone) station, a combination twin dipole was fed by the CW station, a DX Commander vertical was paired with the GOTA (Get On The Air) station, and another vertical/directional beam combo was used for the VHF SSB station.

The diversity of antennas present rewarded the club with statistics surpassing last year's FD numbers. – The CW station led the way with 1,429 QSOs, the SSB station netted 746 Qs, and the Digital station almost doubled its total from last year garnering 348 contacts. Great job BVRC!!!!

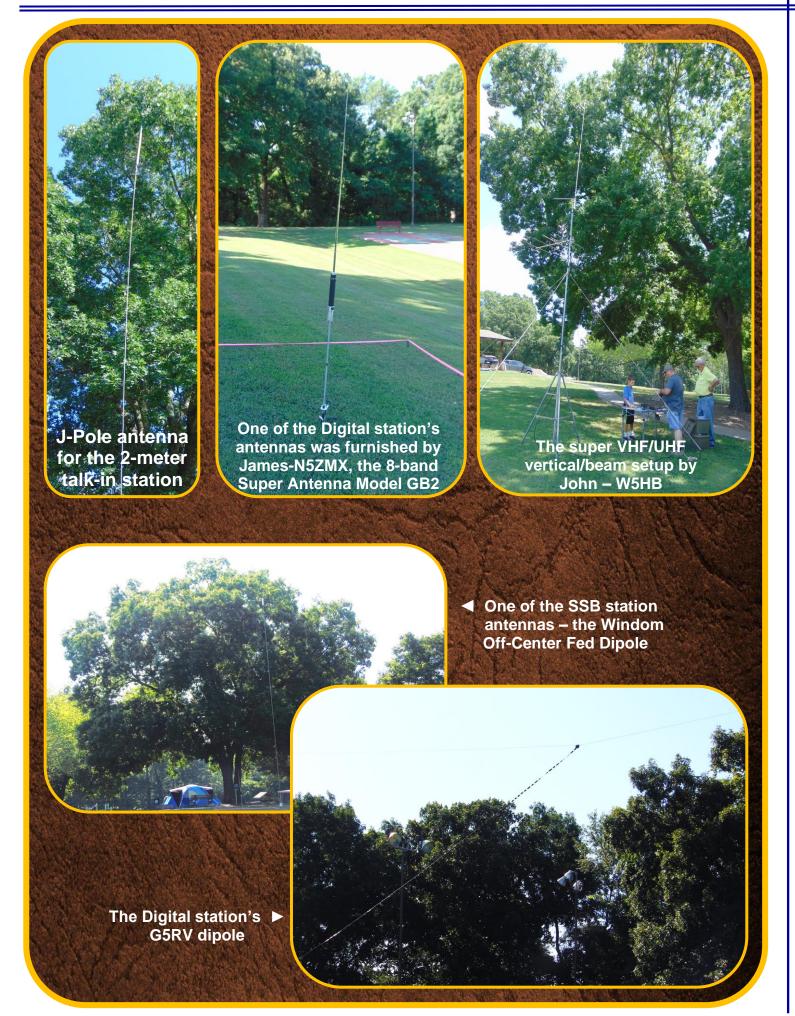


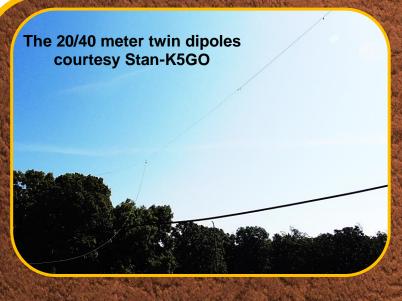
As with each annual FD event, the GOTA (Get On The Air) station is always rewarding to include in the event. The GOTA station is designed for any member from the public at large that visits the FD site to be able to sit down at a radio and make a live, on air contact(s). It is always exciting to see the amazement on peoples' faces when they realize they have spoken to someone hundreds or thousands of miles from them. The GOTA station always uses a callsign independent from the main FD callsign. This year and for the first time, BVRC utilized both its club callsigns, W5NX being used as the main FD call and N5BVA for the GOTA station (the Mayor of Bella Vista making the first QSO on GOTA).



BVRC also broke its FD attendance record this year with our first triple digit attendance. 101 people attended this year's Field Day spectacular. The following pages contain a pictorial of another huge and successful BVRC Field Day Event. Enjoy!

(Photos courtesy K5DB)







The honor of the first QSO of FD-2024 was given to our distinguished visitor, John Flynn, Mayor of Bella Vista shown here preparing to make the contact, which was with Wyoming







BVRC FD Chair Tom-W5XNA reviews the FD protocol and the amateur's Code of Conduct





As he sets-up the BVRC info booth, Rick-KG5MWG explains aspects of some of the literature to Mark Darter - KG5TOR. Tom-KN4SLP (left background) and Dana-KI5TGY did a stellar, job manning the booth this year.



to Jeff-N7YKW and Chuck-NS5C at the digital station.



BVRC VE Coordinator Don-KC7DC and Ralph Singleton-KJ5GJJ (Ralph passed his Amateur Extra at FD this year...congratulations Ralph!



Roger-KJ4QIS (right) explains the Field Day protocol and QSO exchange to new ham and BVRC member Charles (FØQWK.



BVRC's painting artist Sharron-KC5SKY and BVRC FD videographer Adnan-KDØKCY enjoy an eyeball QSO





Rick-KG5MWG did a super job keeping us stocked with ice







It's 2 o'clock in the morning and dedicated BVRC operators are braving the "sandman's attack"!: David-K5WDG (right foreground), Chris Johnson-KE4EIF with son Canaan-KJ5EMJ and daughter Viviana (right), Jon-K5DVT and Tom-W5XNA (left), and SSB Co-Captain Stephen-N5ZE visiting with Nick-WA5BDU (background center)



■ BVRC Membership Coordinator Tom-W5XNA, President Jan-WB5JAN, and BVRC Treasurer Marc-WØKYZ



After a super dinner the night before coordinated by Bill-KG5ZCI, the sun rises on Field Day Sunday morning and BVRC member Alex Smith – KI5EQK is up with it as our FD breakfast chef. Alex, along with Rebecca Garrett-N5REB, did an outstanding job in preparing our wonderful club breakfast. – Cracker Barrel and IHOP, eat your heart out!



Rebecca-N5REB runs the logging program as Kathy-WQ5T racks-up another QSO on the SSB station. They later switched with Rebecca rackin' 'em up.....great job, gals!

Bella Vista Mayor John Flynn and his XYL Linda dropped by the FD site on Sunday, at which time Linda made her first ham radio contact with a California station. Kathy-WQ5T logged the QSO for her.



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