



Reelfoot Amateur Radio Club

Western Tennessee • Western Kentucky • Southeastern Missouri

EmComm • Amateur Training • Public Service • License Testing • Special Events

501c4 Non-Profit Organization



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Field Day 2012

June 23-24, 2012

Prologue:

If there was a theme to this year's annual ARRL Field Day event, it might be "Of Sol, we thought we knew you". Indeed, the sun nearly decided not to participate with a nearly spotless disk and reduced solar flux index. The Reelfoot Amateur Radio Club members, however, would not be deterred and again took to the field with a few new tools and an attitude. This year, we knew we were going to have reduced participation from our younger folks as many of them have gone on to relocate and go off to college. In addition, Bob K9IL was not going to be able to participate this year. Bob normally holds down the CW station position and is good for several hundred points. This meant that it was up to the only other members that knew Morse Code to produce on this station - Glenn N4MJ and Jamie WB4YDL.



As before, we all gathered at "The Shop" at the QTH of Glenn N4MJ for this event.

Temperatures were the normal 90 + degrees, but the humidity was surprisingly low thanks to a mild low front and northerly breeze. Because of the lack of trained operators, this year it was decided to back down to 2A classification and eliminate the digital station. Last year Pablo KJ4CWN and Jamie WB4YDL held down this station, but Pablo has since relocated to Chattanooga and Jamie was going to be busy at the CW station.

Last year, we decided to go very simple on antennas and use mostly dipoles. After the event last year, it was decided to study the matter further and look for ways of improving performance with lightweight materials. To this end, the Reelfoot Amateur Radio Club and Jamie WB4YDL both purchased the very lightweight Mosley MINI-32 2-element triband yagi antenna. This antenna weighs in at 8 pounds and is easy to assemble and disassemble. Jamie stores his in a Cabela's duffle bag along with a simple lightweight TV rotator and PVC mast. These would prove to be excellent antennas.

Setup:

As mentioned above, the weather provided for sunny skies, temperatures in the low 90's, and a slight northerly breeze. We gathered Friday afternoon and divided into teams. This year, we were pleased to have Todd KK4JTM and Michael AK4VU available. This made setup go most smoothly. Using the newer lightweight antennas also made setup a snap. Everything was essentially mounted on 4 push-up masts.

Since the digital station was not going to be used this time around, the Spiderbeam was not going to be utilized.

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CW station antenna array

Instead, the Mosley MINI-32 lightweight tribander would be used on both the phone and CW stations. Jamie WB4YDL mounted his on a 30 foot mast that was used last year to support the Spiderbeam, along with an 80M wire doublet antenna for the lower bands. Glenn N4MJ had the club's MINI-32 on his push-up mast along with the 5-element 6M yagi. A separate mast was used as center support for another 80M wire doublet antenna for the phone station. All went up well except guying of the mast supporting the CW station was difficult, as it appeared we were staking into an iron plate ! Plastic stakes just would not work and Ray N4SLY ended up fetching some steel stakes from his home.

This year for the "Get on the Air" (GOTA) station, Phil N4PWG brought an interesting antenna known as the balanced terminated folded dipole (BTFD). This is also known as a T2FD (tilted terminated folded dipole) when it is configured as a sloping dipole. This is a very broad-banded antenna that has the advantage of not needing a tuner for the bands of operation and it turned out to also be resistant to ambient noise. This was mounted on another push-up mast in an inverted-V conformation. A separate 2M antenna was the simple mag-mount vertical on top of the metal roofed shop.

Because we were able to address the setup operation in teams, the whole setup of antennas took very little time and we were able to beat the heat and turn our attention to radio setup.

For the CW station, we used Rose W9DHD's new Kenwood TS-590S along with Jamie's Microham microkeyer. This little radio has very good selectivity and very tight DSP filtering making operation on CW a real pleasure. The microkeyer was normally used for RTTY operation last year, but it has a very smooth Winkeyer built in as well as radio control. CW macros were

setup on the N3FJP Field Day software which made rapid fire operation more reliable. Also, the TS-590S has a very nice auto-tuner built in which turned out to be an important feature. For the time being, the tuner for the wire antenna would be an LDG Z-11 Pro II mounted in an ammo can positioned at the antenna. This is a popular item to use in field operations to decrease coax losses and Jamie WB4YDL brought his unit for this purpose.

The "Get on the Air" (GOTA) station consisted of a Yaesu FT-920 transceiver that Glenn N4MJ



Obion County Mayor Benny McGuire, Obion County EMA director Danny Jowers, and Glenn N4MJ

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Phone station antenna array

this radio.

All stations used the fine N3FJP Field Day software updated to version 2.9. All computers were configured and macros were entered. This concluded the setup for the day and everybody was able to get home and get rested for the next day's adventure. The WIAW Field Day bulletin was copied that evening using the digital PSK31 mode - good for 100 bonus points.

The Operation:

For the second year running, the Reelfoot Amateur Radio Club held a VE testing session prior to Field Day operations actually beginning. Gene Harden KB4EMV came in with a Novice license and left with a General Class ticket, having passed both Technician and General Class license exams. Charles Ritter KDØROA, from Dixon, MO, came down from the boot heel with his fiancée Brianne KDØSDE and passed the Extra Class exam. *Congratulations to both Charles and Gene !*

The education bonus was once again performed by Glenn N4MJ and the topic was on safety in handling high voltage circuitry. This was well attended and then, just like that, we needed to get ready to start Field Day operations. As everybody took their seats, it was noted that there were none of the thunderstorms that occurred last year at this time. Just lots of sunshine !

As the bell tolled 1 o'clock (18Z), Jamie WB4YDL had the 15-watt solar panel hooked to the TS-590S via a small gel cell. Turning the power down to 5 watts output and starting out on 15 meters, Jamie easily put the required 5 QSO's in the log - good for 100 bonus points for alternative power. After going back on the generator, Glenn N4MJ took over the key and settled in for a long run. As the event wore on, it was starting to become obvious that band conditions were not that great. The solar flux index was less than 90 and the solar disk was nearly spotless. In addition, the external ammo can tuner was having difficulties with the wire doublet antenna. Tuning would work initially but it would then see erratic SWR and try to re-tune - and this went on and on. Finally, Jamie took the tuner out of line and utilized the very nice internal tuner of the TS-590S and there was never another problem loading for 40 or 80M. Why this needed to be done is still not clear.

acquired at an estate sale. This is a very nice radio that has great audio characteristics. It does not have an internal tuner but, as it turned out, it didn't need one as it was used with the balanced terminated folded dipole (BTFD). This allowed use of all available bands on one antenna.

The phone station consisted again of Glenn N4MJ's Ten Tec Omni VI transceiver with outboard tuner. ICE 419 bandpass filters were utilized at this station to combat some inter-station interference. This reduced the key clicks that were often heard from the CW station. Interestingly, the GOTA station did not require these filters. The VHF station consisted again of Jamie WB4YDL's FT-847 transceiver, but this time it was positioned inside the shop next to the phone station - where the digital station was last year. The 6M beam and 2M vertical were connected to



Todd KK4JTM at GOTA station

Everybody attempted to operate on the highest frequency band that was open. This was decidedly



Danny KJ4HRM at VHF station with Brandon KJ4FTN and friend Dillon

FT-920 transceiver. The balanced terminated folded dipole (BTFD) seemed to work flawlessly and without the need of a tuner. There were no less than nine operators that took their turn 'getting on the air', but only one operator made the double bonus requirement. It is a requirement that 20 QSO's be made to reach the double bonus threshold. And with a GOTA coach, that bonus is again doubled. Jamie WB4YDL sat down with Michael AK4VU and went over the basic controls of the fairly complex Yaesu FT-920 and then showed how to log a contact on the N3FJP software. After a couple of rather nervous contacts (this was Michael's first Field Day !), Jamie backed away and let Michael have at it. At the end of the event, Michael not only made the requisite number of QSO's for the double bonus, he did it TWICE ! Michael had a ball putting 42 QSO's in the log - and it was good for 80 bonus points. We also had a few folks who were age 18 years old or less that managed to make a few QSO's for the youth bonus and that would be Brandon KJ4FTN and his friends Ryan and Dillon. Great job, guys ! All the QSO's on this station were on 20M and 40 meters. 40 meters held a nearly 2:1 advantage here.

In between times of keeping vigil watching for fleeting openings on 6 meters, Winlink radio email traffic was passed on 2 meters via the KJ4AJP-10 Winlink node. Jamie WB4YDL used the old program Airmail for these messages and some of the messages received from around the country were quite humorous. One message was sent from a mountaintop stating that QSY was difficult due to the greasy knobs from the barbeque chicken ! Also a message was sent to greet our new Section Emergency Coordinator, Pat Lane W4OQG. In addition, an attempt was made to access the International Space Station's packet digipeater for a "satellite QSO". However, no packets were heard and it was assumed that the ISS machine was turned off.

NOT 10 meters. Not one QSO was registered on this band on any station during the entire event. Ol'Sol, we thought we knew you ! As if to emphasize the point, only 8 QSO's were made the entire event on 6 meters - and those were mostly local stations.

It was fun to see many operators working the "Get on the Air" (GOTA) station and the fine Yaesu



Jamie WB4YDL & Michael AK4VU cranking out QSO's

The phone station got off to a slow start as the bands were quite noisy. A Heil Proset was adapted to the Ten Tec Omni VI and this was helpful in suppressing in-the shop QRM, but then nobody else could hear. There were many operators that took advantage of the phone station, including our visitors from Dixon, MO. Both Charles KDØROA and Brianne KDØSDE enjoyed making QSO's on this station. In fact, Brianne's YL voice caused a small pile-up when she called CQ ! The band conditions were quite noisy on 40M and 20M decided to close early. Finally, going against convention, Jamie WB4YDL decided to change to 80M (75M for phone). Rather than have all stations on one band which would cause significant inter-station interference, Jamie set up the phone station on 75M and called CQ. Yes, it was noisy, but as it turned out, the signals were louder than the noise - much louder. At about 11 PM, Jamie started a run of 80 QSO's before it died down. Glenn N4MJ took the cue and started up on 80M CW and found that the conditions were good and



Gene KB4EMV & Charles KDØROA taking licensing exams at VE session

also got a good run.

Ray N4SLY and Dolly KN4SLY's camper was this year not utilized for the VHF station. Instead it was converted to the "Field Day Chairman's Sleeping Quarters". Jamie WB4YDL was most appreciative ! The night time crew kept up the low band action until the dawn's early light.

And then ... the "surprise muffins" came !! At precisely 6 AM Sunday, Ms. Linda (Glenn's XYL) brought in manna from heaven with her special morning treats. In fact with June (Jamie's XYL), Linda, Ruth (Marv KK4MAC's XYL), Dolly KN4SLY, Dianna (Jeff W5VNH's XYL), Noel KJ4UNX, Phil N4PWG, and others, we were all kept well fed and watered. Also the strawberry cake was awesome ! Many thanks to all that contributed to this effort !

The final run to the finish occurred rather quickly and tear down of the stations and antennas was accomplished in record time. Jamie WB4YDL collected all the logs on each computer using his thumb drive and another Reelfoot Amateur Radio Club Field Day event was in the books.

The Results:

This year we had 10 licensed operators participate in Field Day operations and 2 unlicensed operators. The Youth Participation bonus was obtained by Brandon KJ4FTN and his two unlicensed friends. The following are the 'Bottom Line' results:



Charles KDØROA from Dixon, MO at phone station

Score Summary:

	CW	Phone	Total
Total QSO's	371	266	637

Band / Mode QSO Breakdown:

	CW	Phone	Total
80M	91	80	171
40M	55	37	92

20M	162	36	198
15M	63	24	87
10M	0	0	0
6M	0	8	8
GOTA	0	81	81
TOTAL	371	266	637

The bonus point total was 1290 -significantly down from last year. NTS message handling and site visitations by the Obion County Commissioner/Vice Mayor, Ralph Puckett, Obion County Mayor Benny McGuire, Obion County EMA director Danny Jowers, and Troy EMA, Phillip Green N4PWG, contributed significantly to our overall bonus point total. The biggest reason for the bonus point reduction this year was the decreased participation by youth and GOTA station operators - they simply weren't available this year. This all combined to a total claimed score of **3306 points**. The total score does not tell the whole story in this case, as several new operators were on hand getting a significant learning experience. It is expected that these and other new operators will contribute even more to the final score in future events.
Congratulations to one and all !

Epilogue:

Ol'Sol had a lot to say about how well we would ultimately do on the final number of QSO's made. However, the primary goal of getting new hams significant operating time and increasing operating skill was certainly attained. We were also visited by many folks, some of whom were just interested in seeing ham radio in action. Also many friends came by that we haven't seen in a long time such as David Nailling N4JDN from the West TN Amateur Radio Society in Jackson, TN. This of course makes this event very special and satisfying.

The new Mosley MINI-32 antennas performed very well. It is expected that we will learn more about using lightweight materials in portable operations in order to better our performance and increase our scores. Certainly having the ability to deploy quickly and efficiently will allow us to beat the heat and make better use of our time.

As usual, Glenn N4MJ and XYL Linda were the perfect host and hostess. Thanks go to them for allowing the use of "The Shop" for this great club activity. The final results are usually posted in the December issue of QST. Be sure and check the forum on the RARC web site for up-to-date discussion on the Field Day event. Until then ...

See you on Field Day 2013 !

When all else fails ... Amateur Radio.



Glenn N4MJ at the CW station