



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 2010

June 26-27, 2010

Prologue:

The annual ARRL Field Day event is the most popular amateur radio operating event in Region 2, encompassing North and South America. For many years, the Reelfoot Amateur Radio Club has deployed to a public location to setup stations (and many times tents !) to participate in the event. Setting up in a public location for Field Day is worth 100 points. However, this year the Reelfoot Amateur Radio club decided to forgo these points and instead setup at the farm of Glenn Snow N4MJ. Glenn has worked most of the year getting his 'shop' rigged and ready for this year's Field Day event and the result was nothing short of fabulous ! Somehow, the operators would have to make up for the loss of the 100 points ... and they did !



Force 12 C4S going up on AB-577 mast

Glenn's farm is nestled just outside of scenic South Fulton, TN. As usual, the weather was hot and humid and Murphy was lurking in the bushes ready to pounce !

Setup:

The temperatures were in the low 90's and the humidity was around 60% - about average for this time of year. The site Glenn picked out for the antennas was a nice open field with only one power line to avoid. There were trees around three sides of this field and this made the wire antenna situation workable without having to setup multiple vertical mast supports. The 'shop' itself has an air-conditioned large room with bathroom facility. The large room also has kitchen utilities and room

enough to easily run the four HF stations and a run of tables for food and snacks.

Construction of the antenna arrays began on Friday the 25th after 18Z as allowed by the Field Day rules. The AB-577 military mast was located in the middle of the field. The hardest part of this construction is the installation of the 3 foot ground anchors into hard pack Tennessee clay ! This was finally accomplished thanks to some young backs ! The Force 12 C4S tri-band yagi with 40 meter dipole element was easily constructed and this year, we remembered the hairpin matching coil for the 40M feed point ! Perhaps it was familiarity of the system that made it all go up well.

Jamie WB4YDL has been using this setup at

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This antenna was easy last year !

Day. The position of the Spiderbeam was too close to the tree lines to position the normally-used 135 foot wire doublet. On the following morning, Jamie WB4YDL brought a 77 foot long Windom antenna that was also hung as an inverted-V. This fit perfectly in the space provided and the ends were again successfully launched high into the trees.

The GOTA antenna was again Bob K9IL's TA-32 which was mounted on Robin WA4YGM's Satcomm van. This van has a hydraulically extendable mast to get the antenna to 50 feet. Pablo KJ4CWN was able to mount the antenna to the mast which again had a provided rotator for directional pointing. The 80 meter doublet wire antenna was configured as an inverted-V with the ends supported by the VHF tower and Glenn's vertical antenna in the field ! The Reelfoot Amateur Radio Club again added an HF station specifically for digital (RTTY) communications. The main antenna for this station consisted of Glenn

his home QTH as THE antennas for his radios ever since the devastating 2009 ice storm. New antennas are now installed at the home QTH which relieved this Field Day system to be used. In addition, the long wire doublet belonging formerly to Ron W9RVR (SK), was used as the 80M antenna. It could have also been used on 160M as it was 260 feet long ! The wire antenna was configured as an inverted-V with the ends successfully launched high into the surrounding trees.

The Spiderbeam used for the phone station was positioned on the other side of the power line. Construction of the Spiderbeam went slowly as it is a complex antenna that is only constructed once a year. After a water break and consultation of the instruction manual, the antenna began to take shape. It was again positioned on a 40 foot pushup mast. Raising the antenna actually had to wait until the next morning as a late afternoon thunderstorm was approaching. This would prove to be an omen for this Field



Building C4S antenna



Bob K9IL & Harold KJ4FTM repairing 6M antenna

N4MJ's Cushcraft A3S triband yagi and this was

mounted on a 30 foot push-up mast. The 80M wire doublet was configured as an inverted-V with this center mast support. As with last year, the 6 meter antenna was Howard W4HLR's homebrew 3-element design and this was mounted on Bob K9IL's lightweight 30 foot Rohn tower. Prior to the elevation of this antenna, Jamie WB4YDL decided to place a Cushcraft 2M/440 'stinger' vertical antenna on top of this mast. This would primarily be used for Winlink (radio email) traffic to pass messages for points. Also an attempt would be made to use the International Space Station packet digipeater to contact another station doing the same to qualify as a satellite contact.

The CW station would again consist primarily of Bob K9IL's Elecraft K3/100 and an outboard keyer. The programmable buttons on top of the keyer seem to be more convenient for Bob to control rather than the

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Glenn N4MJ and OC Vice Mayor Ralph Puckett

again pressed into action at the digital station along with Rose W9DHD's laptop for rig control. This year, for the first time, Tracy N4IL was able to finally participate with the club during Field Day with his Kenwood TS-2000 and outboard autotuner. These were utilized as the phone station. ICE bandpass filters were utilized on the phone, digital, and CW stations to help with inter-station interference. This year Jim KI4KHT again brought his Yaesu FT-897 and this was used with Jamie's LDG autotuner at the GOTA station position. Jim had



Pablo KJ4CWN mounting GOTA antenna

bought an INRAD 200 kHz SSB filter for it but, for some reason, it was not working. When the radio was opened up, it was discovered that the filter was installed upside down ! Ooops ! After this was corrected, the filter performed flawlessly. As with last year, the VHF station consisted of Jamie WB4YDL's Yaesu FT-847. The radio delivers 100 watts on 6M and 50 watts output on 2M. The station played a key role in gaining bonus points by connecting to the local Winlink node (KJ4AJP-10) for passage of NTS messages and a message to our Section Emergency Coordinator, Lowell Bennington, WD4DJW.

The software for Field Day logging was the very easy N3FJP software except for the digital RTTY station, which used the NIMM Logger software with MMTTY engine. All stations had computer logging. Power was provided by a 10 KW generator. The exception was 5 CW contacts which were made on a 15 watt solar panel and battery for the alternative power source bonus. Also Ray N4SLY used their generator for the VHF station.

The Operation:

The one thing we very nearly ran out of was coaxial cable ! Luckily, thanks to extra runs brought by Jamie, Glenn, and Tracy and a 'borrowed' coax from an unused satellite antenna, everything was connected - or so we thought.

Just minutes before the start time of 18Z, when we thought we were all going to get started on time as a group for the first time in club history (!), Murphy decided to pounce. A fairly fierce thunderstorm kicked up and began blowing hard and dumping at least 2 inches of rain in a short time. The antennas had to be unplugged during this time. This delayed our start for about 40 minutes until the main squall passed by. The education bonus was done by Glenn N4MJ as he demonstrated putting PL-

computer's function keys.

Jamie's Elecraft K3/100 was



Michael KJ4KHx & Noel KJ4UNx at GOTA



Jim KI4KHT & Phil N4PWG at GOTA station



Tracy N4IL cranking out phone QSO's

not rotating. This led Glenn N4MJ and Jamie WB4YDL on a merry chase to discover control cable faults. It was thought that the brief but torrential rain had caused shorting in the Cinch-Jones connectors of the two extension lengths of control cable. However, it was discovered that there were at least 3 cold solder joints in addition to the water-logging. After these items were corrected, the antenna began to rotate as it should. Bob was back in business again.

The GOTA station consisting of Jim KI4KHT's Yaesu FT-897 performed very well. There were no fewer than ten separate operators at the GOTA station and two operators achieved the double bonus after successfully making at least 20 contacts - Michael Snow KJ4KHX and Ashley Cunningham. Jamie and Glenn both served as "GOTA Coaches". Phillip Green N4PWW, the Obion County Local Emergency Planning Committee chairman, also made several QSO's. We had four operators that were less than 18 years of age and qualified for the youth bonus.

The phone station consisted primarily of Tracy N4IL's Kenwood TS-2000 transceiver. This particular transceiver has a peculiar setup for DSP filtering and made it difficult for some operators to hear the stations. However, after these settings were tweaked sufficiently, QSO's picked up nicely. One thing that appeared after a switch was made to the wire antenna is that there appeared to be a coax fault. After sweeping the coax leading to the antenna with an analyzer, it was found that a crimped coax connector had become loose and was making intermittent contact.

259 connectors on RG-8 type coax cable - more than once ! The main generator functioned perfectly even when the lights went out ! Electricity was lost temporarily more than once during Field Day with the passage of thunderstorms.

Bob K9IL got off to a great start but had a few bugs to stamp out. The first one was the normally very reliable ICE 419B bandpass filters decided to go dysfunctional on the 14 MHz band setting. This caused Bob's K3 to fold back 100% of its power and shut off the radio ! This is a designed failsafe. The other positions of the bandpass filters still functioned and were utilized to keep interstation interference down as much as possible.

Bob also discovered that the rotator on the military mast was



Pablo KJ4CWN at RTTY station

This coax was replaced and all appeared fine - until we plugged it into the second port of the autotuner. This port either was faulty or not correctly activated. This was easily rectified by simply manually using a single port with the two coax runs. Murphy strikes again !

Jamie WB4YDL and Pablo KJ4CWN held down the digital (RTTY) station. This year a Microham digital interface was used with the Elecraft K3 and it performed flawlessly in FSK mode. Pablo made a valiant effort for 200 QSO's and just missed that mark. This was still a considerable improvement and a great effort. There certainly was more activity on RTTY this year than in last year's event.

The VHF station was again positioned in Ray N4SLY's camper. Several operators including Ray, Jamie WB4YDL, and Glenn N4MJ contributed and had fun with the wild 6 meter band conditions. A record 79 contacts were made on the phone section of the 6M band. 21 states were in the log ! When 6 meters cooled off for awhile, Jamie handled the Winlink

duties and sent NTS messages to various Field Day groups across North America as well as the Section Emergency Coordinator - all of which were confirmed. Ray and Dolly couldn't spend the night this time around so that left Jamie WB4YDL trying to 'hit' the ISS digipeater

using 2M packet. Finally, at nearly 4AM, on a high orbital pass, a successful packet contact was made with a station in North Dakota - good for the 100 point satellite contact. The 2M activity was all done using that 'stinger' vertical antenna not used on Field Day in several years - all good for 300 points.

The grill was kept very busy by Harold KJ4FTM who grilled chicken for dinner and later as a late night snack ! Jim KI4KHT also provided excellent barbeque with all the fixin's. The XYL's also brought great side dishes and desserts as well as Sunday breakfast. We were all well fed ! Needless to say, the coffee pot was also kept very active !

Harold also kept us entertained with a homebrew potato gun which he used hair spray to launch potatoes several hundred feet ! Later in the night, before the nearly full moon's light washed the sky, Harold set up his telescope and provided a wonderful tour of the night sky. Harold is an avid amateur astronomer and a member of the West KY Amateur Astronomers. Harold wrote up his experience on this night in an article posted in their club newsletter.

Sunday morning came around with more rain and later, a rainbow arcing over the military mast. The final sprint to the finish line was not as tiring as in past years and all felt good about the result. After the final bell, the blazing sun beat down on the Field Day site. Tear down of the antennas went considerably slower due to the intense heat and humidity - but it got done. All the logs were collected by Jamie WB4YDL on a thumb drive and another Reelfoot Amateur Radio Club Field Day event was in the books.



Sunday morning rainbow at Field Day

The Results:

This year we had 18 licensed operators participate in Field Day operations and 3 un-licensed operators. The Youth Participation bonus was obtained by 2 licensed and 2 un-licensed operators -Katie and Ashley Cunningham. The following are the 'Bottom Line' results:

Score Summary:

	CW	Digital	Phone	Total
Total QSO's	787	194	374	1355

Band / Mode QSO Breakdown:

	CW	Digital	Phone	Total
80M	37	0	1	38
40M	151	0	52	203
20M	372	193	72	637
15M	197	0	52	249
10M	30	0	15	45
6M	0	0	79	79
Satellite	0	1	0	1

GOTA	0	0	103	103
TOTAL	787	194	374	1355

The bonus point total was 1510 -exactly the same as last year. This was primarily due to originating NTS messages and site visitation by the Obion County Commissioner/Vice Mayor, Ralph Puckett and the Obion County LEPC chairman, Phillip Green N4PWG. Also a packet contact was successful via the digipeater on the International Space Station - good for the 100 point satellite bonus. This all combined to a total claimed score of **6182 points**. This is the best result that Reelfoot Amateur Radio Club has achieved for Field Day since 2008 when 6524 points were scored on a class 2A entry. *Outstanding !*

Epilogue:

This was a most enjoyable Field Day event and Glenn and Linda Snow were perfect as host and hostess. Several new operators were on hand to make it a special event for them as well. As the results above show, Ol' Sol is starting to show some spots and the upper bands are once again active. This has the effect of spreading out the activity and making it easier for our new operators. Certainly there is room for improvement and in future weeks and months, Glenn N4MJ has offered to establish "The Shop" as the club's contest training center ! This is an exciting possibility especially for our newer operators to gain experience in contest situations and become more efficient.

The final results are usually posted in the December issue of QST. Before next year's event rolls around several improvements will be in the works both for station and antenna improvement as well as operator improvement. And that just makes for a fun and enjoyable experience !

See you on Field Day 2011 !

When all else fails ... Amateur Radio.

