



# 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 2018

June 23 - 24 , 2018

### Prologue:

The last full weekend of June is a weekend every ham operator in the Reelfoot Amateur Radio Club, as in most ham clubs across the country, mark on their calendar. This is always the weekend of the annual ham radio Field Day sponsored by the Amateur Radio Relay League. Besides showing the public and their officials that ham operators can deploy multiple stations in less-than-optimal conditions, it's also a LOT of fun ! The event covers many aspects of amateur radio communication and starts at 1 PM on Saturday and runs 24 hours to 1 PM on Sunday.



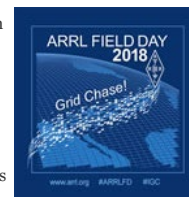
**Harold & Jamie hooking up Old Glory**

Weather conditions during this time of year here in South usually range from hot to miserably humid and hot. We were fortunate this year to have moderate weather with recent thunderstorms cooling things a bit to the mid-80's. Predicted thunderstorm activity managed to stay away for the entirety of the event weekend.

Glenn N4MJ has for many years generously allowed use of his shop for Field Day operations to provide cover and air conditioning and a comfortable venue for the event. During the "off season", Glenn managed to add a front awning to the shop which really adds functionality. Now, if he could just dig up that battleship he has buried in the lot that we keep hammering stakes into ... !!

As with last year, the decision was made to use a simplified antenna for the digital station as it performed quite well last year. So the Spiderbeam was again not deployed for this year's event. The *TN07 Engineering* vertical configured as an inverted-L was again the choice for this station. The sunspot situation we knew would negatively effect propagation of radio signals and deploying a labor-intensive antenna with limited usefulness on the upper bands was not seen as efficient. Food this year was supplied - in abundance !! - by the XYL's of the club members and was a grab and go affair.

Plans were to compete again in the very competitive class 3A which affords three HF stations, a free VHF station, and a "Get On The Air" (GOTA) station bearing Glenn's N4MJ call sign. Captains for the HF stations were Bob K9IL for CW with XYL Rose W9DHD's very nice Kenwood TS-590S, Michael AK4VU on phone with his Kenwood TS-480HX, and Jamie WB4YDL on digital with his Elecraft K3S station. The VHF station was also supplied by Jamie



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WB4YDL and consisted of his Yaesu FT-847 including satellite communications capability. Steve KK4NNH was captain of the GOTA station, but unfortunately, his work schedule precluded him from doing much in the way of setup. Jamie WB4YDL stepped in and provided the necessary components to get Steve's nice Kenwood TS-590S on the air.

There were no changes to rules regarding bonus points this year. The first points garnered for Field Day this year was actually an announcement for the event on Facebook - worth 100 points for the Social Media bonus. Both Noel KJ4UNX and Jamie WB4YDL shared Safety Officer duties and Jamie demonstrated availability of an AED - automatic emergency defibrillator. First Aid was available but thankfully was not needed. Noel also sent out the press release which was printed in the Union City Messenger - good for another 100 points !

## Setup:

As is allowed by Field Day rules, set up began at 7 PM Thursday before the event weekend. This is a time of waning sunlight so time is used to set up the radio stations and configure them for operation. Glenn and son, Brandon provided the pizza for the occasion ! The shop looked great and tables were in position for the various stations. Set up of the various radios with their computers went off well. Michael AK4VU had his new Kenwood TS-480HX still in its box along with a new power supply. His old station was unfortunately consumed by a house



## CW antennas at dawn

fire back in January. He is slowly recovering from this tragic event and has not had time to operate his new radio. Getting this radio running and performing was a bit of a challenge due to unfamiliarity.

Also new for this Field Day setup session was the addition of the first Hamfest Planning Committee. It is hoped that this committee will bare fruit when hamfest time comes around next spring.

Rose W9DHD provided her very nice Kenwood TS-590S transceiver for the CW station. The Winkeyer was also provided along with Bob K9IL's laptop computer for logging using the N3FJP Field Day logging software. The CW station is used to acquire the alternative energy bonus by using solar energy. This year Jamie used a new Bioenno 28-watt foldable solar panel that, with his solar charge controller and an SLA battery, made making the first 5 QSO's for this bonus a snap.

Jamie WB4YDL once again provided his Elecraft K3S station for the digital HF station. This includes USB connectivity which makes it simple to configure "sound card" modes including



## Harold & Jamie at digital station

PSK31 and RTTY (run as AFSK). Bandpass filters were used at this station. His laptop was in place and ran the ever popular N1MM+ contest software running the f1Digi digital engine for those modes. This station was easy to setup.

Jamie WB4YDL brought Steve KK4NNH's Kenwood TS-590S transceiver and set up the GOTA station. A simple USB interface to an available laptop computer running Windows 7 was easily set up. The N1MM+ contest logger running with f1Digi was configured for the N4MJ call sign. Also available besides digital modes was phone and CW. A large screen LCD monitor was added for visual comfort.

The following morning was beautiful with temperatures in the low to mid 80's. There was no rain in the forecast of any consequence until after the event. At 11 AM, those available RARC members came to put up the antennas. Also Noel KJ4UNX arrived with his very nice camper where the VHF station would reside.

As in previous years, the CW station uses the nice two element Mosley MINI-32 tri band beam mounted on a 30 foot push-up mast and turned by a simple TV rotator mounted on a

PVC mast. The antenna was stored in the shop already constructed and was trivial to mount and raise. Along with this antenna, a 135 foot dipole doublet was mounted with the mast as its center support. Ladder-line fed, its LDG tuner is mounted in an ammo box and sits on a nearby ladder. It is controlled in the shack using a bias-T to power it.

The digital station again made use of the very nice *TNO7 Engineering* vertical antenna which is a conducting wire inside an extendible 30+ foot fiberglass tube mast. This radiator was extended with an attached wire to convert this to a 66 foot inverted-L antenna. This antenna is easy to mount and, with the addition of 16 sixty foot ground radials, made it an efficient antenna for all ham bands. It was loaded with an LDG tuner at the station and a 4:1 UNUN at the antenna.

As with last year, the phone station also sported a two element Mosley MINI-32 triband beam mounted near the shop. The low band duties would be supported by an Extended Double Zepp antenna. Three VHF antennas were mounted on Michael AK4VU's push-up mast and raised near Noel's camper. The old "junkyard dog" 6M beam was mounted as was the Cushcraft AR-270 vertical. This year the push up mast was a new MFJ fiberglass mast with push down locks on the various sections - very nice. No antenna rotator was mounted on this mast and the 6M antenna was simply pointed Northeast.



**Mike AK4VU at phone station**

contact with one of the four available FM LEO (low Earth orbiting) satellites.

## The Operation:

The W1AW Field Day bulletin was copied by Phil N4PWG - good for 100 points. The Visitor list eventually included two elected officials - Benny McGuire, Obion County Mayor and Ralph Puckett, County Commission Chairman. Also, our own Phil Green N4PWG is EMA/NIMS director at Troy, TN and he also gave the educational talk on Solar Propagation. This was quite timely as Ol' Sol is taking a long nap and the solar indices are all down for this point in the 11 year solar cycle.

As is traditional for Field Day and the Reelfoot Amateur Radio Club, a VE testing session was



**Samantha, Seth, & Mary at GOTA**

The GOTA station is normally our experimental antenna station. However, without Steve KK4NNH's presence, we resorted to simple dipoles for this station.

Something new this year was the addition of satellite antennas to attempt to claim the 100 point bonus for communicating via a ham satellite. In previous years, this was attempted by utilizing the digipeater on the International Space Station to make contact basically via 2M packet. This would not be possible this year as the digipeater on the ISS was inoperable. So Jamie WB4YDL, not wanting to leave 100 points on the table, made plans to try conventional satellite communications - something he has not done for about a decade ! After watching a few YouTube videos for ideas, a simple array was constructed using parts of two Arrow hand-held antennas - each one would be configured for one band, 2M or 70cm. Jamie had a spare Yaesu G-5500 EL-AZ rotator and this was mounted on a simple TV tripod with 1 1/4" PVC. Also some of this PVC was used as a cross-boom to mount the two antennas using an ingenious clamp by Arrow Antennas. The antenna system is quite light and was staked to the ground near the camper. Control of these antennas would be via the G-5500 controller with a Fox Delta ST2 tracker (LVB Tracker clone built as kit). The goal would be to try and make



held Saturday morning before the event. This year we had four testers - three took the Technician Class exam and young Seth KN4FLM took the General Class exam. Seth's mom Mary took the Tech exam and passed as did Austin Chlupsa and John McMahan. However, Seth came up short in his effort to pass the General exam. No doubt he will study some more and take the exam again real soon.

With all antennas set up and tested in record time, and all systems functioning well, at the appointed time of 1 PM, the bands exploded in activity. This year we actually remembered the extension cords to get the stations powered by the generator ! Bob K9IL quickly racked up the QRP solar powered QSO's with the help of Jamie WB4YDL's new solar panel and battery. After that, the battery was taken off line and the transceiver connected to the power supply. Bob then took off on 20M CW with no issues.

Jamie WB4YDL got to work running RTTY on 20M without interfering with the other stations on the same band. Samantha KK4NNM had no issues getting the GOTA station running and began logging PSK31 contacts. The band conditions from the outset were quite poor but contacts were being made - just not in the usual volume.

The phone station was manned by Michael AK4VU and his new Kenwood TS-480HX. Michael had a difficult time making contacts due to noise and the fact that the radio just came out of the box. There was much noise on the bands and also noise due to proximity of antennas.



Glenn N4MJ cranking out CW



VHF camper and antennas

Normally the GOTA station is configured as a digital station only as this is most popular with the youth. We did this year have some youth participation which added to our score nicely. Also this station was configured to allow phone and CW contacts. Steve KK4NNH was able to finally make it to Field Day after his work allowed him and he put in a fine effort at this station.

Noel KJ4UNX's camper is the site of the VHF station. Jamie's Yaesu FT-847 was used to pass Winlink traffic to obtain bonuses in passed traffic and send a message to our Tennessee Section Manager Keith Miller N9DGK. Lots of traffic was received as well from many Winlink stations across the country. 6 meters was pretty dead and stayed that way until Sunday morning when there was a brief opening to the west. During that time, 15 meters and 10 meters had fleeting openings.

The attempts to obtain the satellite communications bonus started Saturday afternoon with a few passes with AO-29 and SO-50. The antennas tracked well and voices were heard, except ... they weren't connected !! D'oh ! The antenna still connected was the old vertical at the top of the mast. Did I mention that Jamie had not done this in a LONG time ?! Anyway, AO-92, known as Fox-1D, is known to be a loud bird in mode V/u (formally Mode J - which makes

this a "Jaybird"). It had a near overhead pass late Saturday night and contact was successfully made with a station in West Virginia to complete the satcom bonus !

The Results:

This year we had 18 licensed operators participating in Field Day operations. A Youth Bonus was achieved. The following are the bottom line results :

Score Summary:

	CW	Digital	Phone	Total

Total QSO's	445	378	103	926
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**Band / Mode QSO Breakdown:**

	CW	Digital	Phone	Total
<b>80M</b>	8	72	0	80
<b>40M</b>	110	51	0	161
<b>20M</b>	121	73	40	234
<b>15M</b>	204	43	19	266
<b>10M</b>	0	14	0	14
<b>6M</b>	2	0	29	31
<b>SAT</b>	0	0	1	1
<b>2M</b>	0	0	0	0
<b>GOTA</b>	0	125	14	139
<b>TOTAL</b>	445	378	103	926

The bonus point total this year was up from last year to **1850 points**. This was primarily due to increased youth participation and the addition of a satellite communications bonus. Bonus points at the GOTA station were earned by Samantha KK4NNM, Steve KK4NNH, Seth KN4LFM and visitors Lucas Clark and Austin Chlupsa, who passed his Tech license exam at the VE test session. A total of four operators (Steve, Samantha, Seth and Lucas) earned double bonus status with Steve making a double bonus of 120 points ! The total number of bonus points generated by the GOTA station this year was a very good 240 points.

The total QSO score after the power multiplier (x2) came out to **3498 points** - a big drop from last year's score. This was due primarily to poor production from the phone station and noisy band conditions as the sunspot cycle continues its downturn. The number of digital QSO's was consistent and on par with the CW QSO total, but both were significantly down from last year. The digital station was the only station to manage 10M QSO's. This made the total submitted score **5348 points** for Reelfoot Amateur Radio Club in the class 3A category. This represents a big downturn over last year's excellent result.

**Epilogue:**

As they say, "Sometimes you get the bear; sometimes the bear gets you." The bear this time was the poor solar propagation. Although 15 meters showed up to play, there were simply not enough contacts made. Noisy conditions pushed operators into remaining open bands which reduced band/point potential and increased noise. Interstation interference was also noticeable particularly on the phone station which had the toughest time making contacts. Sadly, all HF phone contacts were on just 2 bands of operation.

On the good side, all stations performed as expected and Ol' Murphy was kept at bay. Bonus points were up and a satellite contact was made.

Photography for this event was provided by Michael AK4VU, Phil N4PWG, and Jamie WB4YDL .

The Shop at the QTH of Glenn N4MJ was once again the perfect Field Day location and the club members owe many thanks to Glenn and XYL Linda for a wonderful experience. Thanks also go to our XYL's who kept us fed and hydrated. The full Field Day results are published in the December issue of QST.

**Soapbox Comments :**



**Harold KJ4FTM at digital station**

**Glenn N4MJ :**

Field Day 2018 -

As a believer in 'making the best of a situation', FD 2018 offered an opportunity for practice.

Propagation was not in our favor; not just our group but seemingly nationwide. Contacts were made, albeit lower in number than usual, but redundancy of stations heard/worked was high. Once that was recognized and accepted the 'opportunity for practice' came into being.

The group took advantage of the opportunity and various amateur radio and technical topics were discussed; some one-on-one, others in small group exchanges. The 'bad situation' afforded ample time to discuss, teach, listen & learn. The was especially important as we had several new and newer hams in our midst. Mentoring was in high order for the time.

More experienced club members took time to show & tell not just the new and newer hams how to use digital amateur radio but some of us older hams got exposure as well. It was gratifying to watch this happening and to know not only an awareness had been created but to know some learned and would be enticed to try what they learned once FD 2018 was over.

This was our first year to have a 'hamfest committee' meeting. New ideas for improving Hamfest 2019 came forth during our meeting on Thursday evening.

The basics of FD didn't change. We still put up antennas, ran coax, ground radials, tried new antennas, fueled and kept watch on the generator, kept up with visitors and of course had tremendous support from our XYs - if anyone went away hungry it wasn't for lack of excellent cuisine being available !

Weather-wise this was one of our best FD weekend's in a long while. Temperatures in the low to mid 80s during the day was welcomed, especially during antenna installation and disassembly. The call for bad weather, rain and thunderstorms, faded for our area although it was heard that some areas near experienced rain.

Overall FD 2018 was a success even if the propagation princess didn't favor us.

Three new Technician class licenses were earned in our VE session on Saturday morning. Congratulations to Austin Chlupsa, Mary Irby, John McMahan.

Opportunities for club members and visitor interaction were ample and used effectively; that is 'success' anyway it is presented.

Thanks to visitors, club members, and XYs for a GREAT weekend of amateur radio activity.

73 and on to other opportunities, be they amateur radio or otherwise always look to make the best of each opportunity.

n4mj//Glenn

RARC President Emeritus

**See you on Field Day 2019 !**



**Bob K9IL at CW Station**

**When all else fails ... Amateur Radio.**



