



# Reelfoot Amateur Radio Club

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501c4 Non-Profit Organization



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## Field Day 2008

June 28-29, 2008

### Prologue:

The annual Amateur Radio Relay League Field Day operating event has as its theme "Ride the Waves" this year. This proved to be prophetic as the radio operators of Reelfoot Amateur Radio Club again took to the field to demonstrate its prowess in portable and emergency radio communications. This year we decided to position our stations in the Union City Fairgrounds Activity Building just next door to the Obion County Rescue Squad. This turned out to be a



great accommodation as it was roomy, air conditioned and bug-free ! Additionally, there were threats of rain in the forecast that

thankfully never materialized. Many thanks to Brenda Baker who made this arrangement possible. And also thanks go to Craig McMannus for providing PVC wall conduits for us to pass our cables without which would have made things quite difficult.

This year, the rules changed somewhat in that the demonstration mode bonus was replaced by an Education Activity bonus. This is designed as a way of increasing the club member's fund of radio knowledge. This year, Jamie WB4YDL showcased how solar power is used to obtain the alternative power bonus during Field Day. Also this year, a strong emphasis was placed on



**Force 12 C4S on military mast**

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improving the Get-on-the-Air (GOTA) station results from previous years. Thanks to the 'hammy' Miles and Carrillo families, this goal was met admirably.

### Setup:

The weather was a bit muggy with temperatures in the upper 80's with tolerable humidity. There was a threat of rain throughout both days of Field Day but thankfully only a few sprinkles were felt. The nice thing about having an indoor facility available, is that only antennas and power cables needed to be addressed. No tents needed to be thrown up. Additionally, a kitchen with



**Jim K14KHT & Jamie WB4YDL at phone station**

coffee maker, refrigerator, and microwave oven was available as well as a rolling kitchen island. Bathrooms were indoors and fully handicapped accessible. Three tables were set up inside the facility in three of the four corners to position the three HF stations. Ray N4SLY and Dolly KN4SLY setup their camper RV under the covered parking lot. This provided a shady area from the sun's heat and a nice breeze was often felt. The camper RV was the site of the VHF station including satellite operations. It was also to be the station for Winlink passage of radio

email, but technical problems with the RMS packet node prevented this from occurring. Construction of the antenna arrays began on Friday the 27th at 18Z as allowed by the Field Day rules. The AB-577 military mast was positioned in the courtyard of the fairgrounds entrance. Two of the many short flagpoles needed to temporarily be removed to allow for the antenna to be safely mounted. With the help of Jim Erickson K14KHT, Pablo KJ4CWN, Jamie WB4YDL, and several others, the



**Glenn N4MJ with grandson Brandon at GOTA station**

April KJ4ETT with Brandon at GOTA station



**April KJ4ETT with Brandon at GOTA station**

military mast was deployed easily. This year, Jamie WB4YDL added a 40 meter linear-loaded dipole element to the Force 12 C3S beam antenna. This converted it to a C4S. This was the main antenna for the CW station manned primarily by Bob K9IL. As we shall see, the 40 meter element played very well at 50 feet elevation !

Field Day is a time to try out new things, new antennas, and different gear. This year was certainly no exception ! A Spiderbeam built from a kit by

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**Bob K9IL cranking out CW contacts**

DXpedition crowd as it is very lightweight and gives yagi performance. The structure is hollow fiberglass tubes on an aluminum hub mounted to the mast. The elements are merely Flexweave insulated wire with Kevlar parachute cord supports. All elements are Velcro'ed to appropriate spots on the fiberglass tubes. The cross structure is held up with monofilament line and Kevlar cord. Three driven elements are constructed from the Flexweave wire and fed to a 1:1 balun for a single coax feed for all three bands. The

Jamie WB4YDL was mounted on a 40 foot pushup mast for the phone station. The Spiderbeam is a German design that is quite popular with the



**Spiderbeam on 40 foot mast for phone station**

whole antenna goes together in an hour and is all of 12 pounds in weight. Once deployed to its 40 foot height, it played very loud with 3 elements on 20 and 15 meters and 4 elements on 10 meters !



**Elecraft K3 at CW station during 15 meter run**

The GOTA station primary antenna was again Bob K9IL's TA-32 triband beam mounted on the hydraulic mast of Robin WA4YGM's communications van. This allowed the TA-32 to be elevated to a height of 50 feet. Even though the bearing was fixed, it played very well indeed. All low band antennas were 135 foot doublets center-fed with ladder line. The GOTA station's was

configured as an inverted-vee and the phone and CW station's were horizontal dipoles using available vertical supports, including a 45 foot flagpole at the entrance of the fairgrounds. We also used this flagpole for its designed purpose !

This year the CW station consisted of Jamie WB4YDL's kit-built Elecraft K3/100 instead of the K2 used in previous years. This provided extra filtering capability and excellent internal CW keying. The CW station also had the only rotator for its main antenna. However, Jamie WB4YDL had to construct a nearly 60 foot extension for the control



**April KJ4ETT crashed out for night**

in antenna tuner, Bob was heard to say, "it'll load it" ! In anticipation of this bit of physics, Jamie WB4YDL brought an older model LDG autotuner which did the trick for the lower bands. Again the N3FJP Field Day software was used on all three HF stations, umm ... on three different operating systems ! This software was also used at the VHF station which consisted of Jamie WB4YDL's Yaesu FT-847. Howard W4HLR's homebrew 3-element 6 meter beam was mounted on Bob K9IL's 30 foot Rohn 20 tower. Satellite antennas consisted of a M2 2MCP14 14-element circularly-polarized 2M yagi and the M2 436CP30 30-element circularly-polarized 70cm yagi mounted on an 8 foot fiberglass crossboom. Also employed was a Penninger tipping base and 10 feet of aluminum mast. A Yaesu G-5500 altitude-azimuth rotator was used for satellite tracking with a homebrew USB computer interface. Software used was Nova and SatPC32.

Power was provided by three Honda 1 and 2KW gasoline generators and a 15-watt solar panel and battery for the alternative energy bonus. Also Ray N4SLY used their generator for the VHF station.

### **The Operation:**

At the appointed time of 18Z, Field Day operations commenced. The higher bands of 10 and 15 meters were closed, so Bob K9IL jumped on 20 meters with a good opening. The GOTA and phone stations began racking up QSO's on 40 meters. Unfortunately, this didn't last long for the phone

cable prior to the beginning of the event. The Spiderbeam was

rotated by "Armstrong" method and the GOTA station's was fixed. All HF stations used ICE bandpass filters to help minimize interstation interference. The phone station consisted of Tracy N4IL's Kenwood TS-480AT with built-in antenna tuner. Tracy was unable to attend this year's event as he was called to Dallas on business. The built-in antenna tuner, it was later learned, did not have the range to appropriately load the low dipole on 40 and 80 meters. This limited phone operations on these bands severely. Bob K9IL brought a vintage Icom IC-730 transceiver for the GOTA station. After being asked if this radio had a built-



**Brittany holding down information booth**



**Jamie WB4YDL logging for Rose W9DHD at phone station**

station as the antenna tuner of the TS-480 couldn't handle the impedance. The phone station dropped down to 20 meters and saw good success there. The GOTA station was manned primarily by Rose W9DHD with Jamie WB4YDL as "GOTA Coach". Glenn N4MJ, who was recovering from coronary bypass surgery, relegated most of the duties to grandson Brandon. Brandon is not yet licensed, but under Rose and Glenn's tutelage, Brandon racked up 42 QSO's ! Well done, Brandon !! Pablo KJ4CWN and kids April KJ4ETT, Estevan KJ4ETW, and Brittany each took turns on the GOTA station with impressive results. Brittany does not have a callsign yet - she passed her Technician Class license *that morning* ! Estevan KJ4ETW qualified for a triple double-bonus, a first for Reelfoot Amateur Radio Club !



Phil N4PWG listening for 6 meter activity

Chris KI4TRM and Charles "Tom" Turner WD9ART manned the grill where



Brandon observing Jim KL4KHT and Rose W9DHD on phone station

a pork shoulder and chicken breasts were smoking away. Excellent food was again served, and thanks go out to all the XYL's who provided so much !

The VHF station got off to a slow start as 6 meters was not open initially. Later in the evening, 6 meters started to produce some contacts. Also later in the evening, an attempt was made to make a satellite QSO. It was here that we learned that ol' Murphy had paid us a visit. Inadvertently, the rotator was mounted on the mast backwards such that when asked to rotate the antennas upward, the antennas rotated *downward* !! As Homer Simpson is famous for saying, "D'oh !". Quickly Jamie WB4YDL flattened the antennas to zero elevation and rotated the antennas to the bearing of LOS (loss of signal) and waited. Sure enough the signals on the VO-52 transponder began to strengthen. A successful contact was made just before the 'bird' went over the horizon.

The night was long but comfortable - cool and bug-free with lot's of available lighting ! All stations continued to churn out QSO's and the kids began to peel off and take much earned naps. That morning as the dawn's early light was upon us, the phone station decided to check on 15 meters and found it to be wide open. *Surfs Up* !! The phone station made a solid run and soon the CW and GOTA stations were making higher bands QSO's. At about the same time, 6 meters opened up significantly and suddenly 10 meters opened !! What a wave ! The wave of contacts lasted for several hours and really helped our final score. All logs were able to be collected by a USB thumb drive except for the older Windows 98 computer, whose data had to be extracted manually.

## The Results:

This year we had 20 licensed operators participate in Field Day operations and 2 un-licensed operators. The Youth Participation bonus was obtained by 2 licensed and 2 un-licensed operators -Brandon and Brittany. The following are the 'Bottom Line' results:

### Score Summary:



	CW	Digital	Phone	Total
<b>Total QSO's</b>	857	0	583	1440

**Band / Mode QSO Breakdown:**

	CW	Digital	Phone	Total
<b>80M</b>	38	0	1	39
<b>40M</b>	326	0	1	327
<b>20M</b>	390	0	151	541
<b>15M</b>	74	0	150	224
<b>10M</b>	29	0	27	56
<b>6M</b>	0	0	23	23
<b>Satellite</b>	0	0	1	1
<b>GOTA</b>	0	0	229	229
<b>TOTAL</b>	857	0	583	1440

The bonus point total was 1930 - this was primarily carried by our GOTA station kids where 880 bonus points were obtained ! April - 42 Q's, Brandon - 42 Q's, Brittany - 25 Q's, Estevan - 65 Q's, Pablo - 15 Q's, and Rose - 40 Q's. This all combined to a total claimed score of **6524 points**. This is nearly 300 points more than our previous best year - 2006 ! *What an outstanding result !*

**Epilogue:**

The above results again proved that Reelfoot Amateur Radio Club is capable of fielding a successful portable operation during ARRL Field Day. Ol' Murphy for the most part stayed away and was not a factor. We were blessed with great weather this year which allowed us to expedite deployment and tear-down. Our young operators carried RARC to a record claimed score !! Everybody that participated deserves accolades and thanks for another successful Field Day operation.

Final results will be printed in the December issue of QST. Next year, we will concentrate on improving our low band operations and build upon our GOTA experience to attract new operators. The new 'digs' certainly played to our advantage and, now that we know what to expect, will add to our future enjoyment and success on Field Day.

**See you on Field Day 2009 !**



**Brandon with military mast 'rocket' tube**

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



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