



K2BSA 2013 JAMBOREE RESULTS

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Purpose and Goals

The purpose of the K2BSA Jamboree Amateur Radio Operation was to “Introduce the science, technology, and fun of amateur radio operation to Scouts and Scout leaders. Facilitate earning the Radio Merit Badge. Serve as the amateur radio voice of the Jamboree via two-way radio contacts within the Summit and worldwide.”

The goals were to:

- Provide Scouts exposure to amateur radio, explain what it is, how it is relevant to them, and provide an opportunity to try as many aspects of the hobby as possible within the constraints of the Jamboree. Provide demonstrations to at least 4,000 Scouts.
- Provide Radio Merit Badge training, counseling, and activities sufficient to allow a Scout to earn the badge within a four-hour time commitment. Target 400 badges earned.
- Provide outdoor, high energy ARDF—Foxhunting training and activities.
- Provide FCC Amateur Radio License testing services, as needed.
- Provide exposure to the Jamboree to radio amateurs around the USA and around the world.

Overall Numerical Results

Numerical results were not the key driver for the K2BSA amateur radio operation. However, these measure do provide sound goals and help to focus efforts on the key aspects of the operation. For example, providing exposure to amateur radio can clearly be represented by the number of Scouts that spend time in front of the radio. Likewise, Radio Merit Badges earned show directly the interest in this key activity for the operation. On the other hand, QSOs or contacts, show how K2BSA was reaching out to the amateur radio community across the nation and around the world.

Amateur Radio Demonstrations	QSOs or Contacts	Radio Merit Badges	ARDF Foxhunting
2,604	1,958	339	100+

Executive Summary

All 2013 Jamboree staff members received a patch with the words “Leading the Way, Summit Pioneer, First Staff”. Everyone who worked on the K2BSA staff can take these words directly to heart. Everyone pitched into the work with a true pioneering spirit. Nearly everything came right in the end with only a slight wish that less rain could have fallen on our parade. Even so, through rain, lightning, mud, and toil many, many Scouts learned about amateur radio for the first time --- making their first contact, hunting for a hidden transmitter, watching a balloon launch, participating in a contact with the International Space Station, or earning the Radio Merit Badge.

While we didn’t achieve the goals we originally set for demonstrations and merit badges, we came very close despite reduced Scout attendance, weather issues, and shorter operational hours due to the ISS contact, Jamboree events, and earlier than expected departure of Scouts from the Summit Center each evening.

Overall this was a very successful K2BSA Jamboree effort thanks to the hard work of our staff members and the support of our sponsors Icom America, SteppIR, Array Solutions, GigaParts, Heil Sound, and ARRL.





DETAILED RESULTS

Icom America Sponsorship

Sponsorship agreement signed with Icom America and BSA in May 2012. There was a joint announcement at the Dayton Hamvention that same month.

Early start with Icom America's 10 complete amateur radio stations, each in a Pelican case ready for loan to local Scout councils in support of Jamboree on the Air, Radio Merit Badge workshops, and many other local activities in support of Radio Scouting and STEM initiatives.

Provide extensive equipment list for the Jamboree including seven complete HF stations, three VHF-UHF stations, folded dipole antennas, as well as seven hand-held receivers for the ARDF operation.

Installed one VHF and two UHF amateur radio repeaters at the Summit's Rock Borrow location. These repeaters, at an estimated cost of \$200,000 will remain in place for future events at the Summit and to support the local community.

In addition to promotion throughout the past two years around Jamboree on the Air, Icom further provided June 2013 promotion in QST, ARRL Website, Ham Nation and Amateur Logic TV around the K2BSA Jamboree operation and getting on the air to generate QSOs for Scouts and QSLs for amateur radio operators.

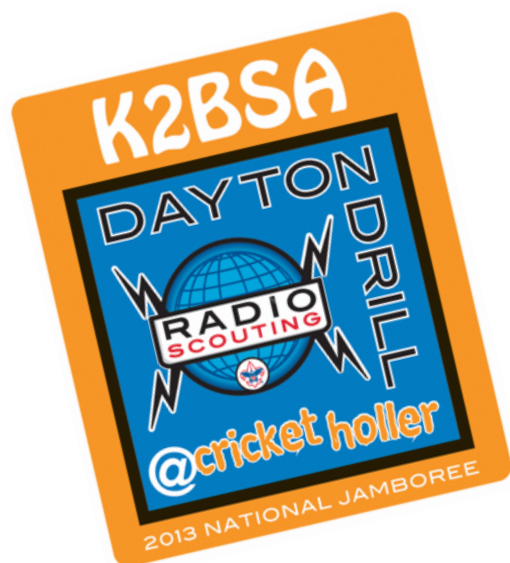
Supporters

SteppIR provided four vertical antennas and one two-element beam antenna on loan for the Jamboree. Array Solutions provided band-pass filters. GigaParts in cooperation with Heil Sound provided 21 headsets, and the ARRL provided a extensive set of study guides and supporting publications including the K2BSA license testing support.

Summit Repeaters

Icom America installed three professional grade repeaters at the Rock Borrow site and on the tower shown below. VHF and UHF FM repeaters were installed complete with Echolink nodes. In addition, a UHF D-Star repeater was installed. All are linked to the Internet and can be remotely controlled and maintained. The Summit Repeater Association was formed of local hams to maintain the repeaters moving forward.





Critical Jamboree Setup Items

As noted above, all sponsor equipment was provided in May, assembled, tested, and then shipped to the Jamboree in a trailer. The trailer was delivered to the K2BSA site early during set up week. Further, the BSA Jamboree team provided tents, tables, chairs, etc. as well as telephone poles for mounting the antennas.

All staff members pitched in to get everything set up and running. The only significant delay was the arrival of a bucket truck to install the antennas. Once it was present, the installation went perfectly.

Satellite communication was supported by a special antenna system provided by Paul Trotter, AA4ZZ.

Dayton Drill at Cricket Holler

K2BSA rented the Miami Valley Council's Cricket Holler training center for a week in May 2013 that culminated in the Dayton Hamvention. Twenty current and former K2BSA Jamboree staff members paid \$300 each to stay in the cabins with breakfast and lunch provided each day along with opening and closing dinners.

All sponsors shipped their gear to the council and it was assembled, tested, and put into play for a weekend Radio Merit Badge workshop to validate the curriculum. Then the council further provided a trailer and transportation for all the gear to the Jamboree.

This was a very valuable event that is recommended for future K2BSA Jamboree operations.

Antenna Installation



Demonstration Station

The demonstration station came up to speed very quickly with everyone pitching in to get stations set up, cables run, antennas installed, and computers networked to record all contacts. There were a total of 1,958 contacts during the Jamboree.

Our goals for the Jamboree were to not only make contact with other stations, thereby serving as the amateur radio voice of the Jamboree, but to also provide an introduction to amateur radio for Jamboree participants through hands-on demonstrations. The total youth attendance at the Jamboree was 24,682 Scouts. The K2BSA operation conducted 2,604 demonstrations, which more than met our target of reaching 10% of the participants --- which was numerically set at 4,000 when expected participation was 40,000.

The demonstration station team also proved tremendously flexible and adaptable to operating conditions. For example, after the opening show in the nearby Summit Stadium, Scouts poured out of the stadium and into our station. Over 180 Scouts participated in an amateur radio demonstration in the next 90 minutes. Daily demonstration rates were more typically 300 to 400.

Date	Demos	Date	Demos	Date	Demos
15-July	153	18-July	306	21-July	531
16-July	418	19-July	327	22-July	412
17-July	192	20-July	65 (ISS)	23-July	200

International Space Station Contact

The scheduled ARISS contact with the International Space Station came off very nicely. Apart from the technical issues with tracking software, antennas, etc. the next biggest challenge was selecting the 10 youth who would ask the questions. They were selected from those who completed the Radio Merit Badge by July 18. Once selected the work began in seeking releases from parents. This necessitated calls to youth, parents, sub-camps, etc. The last youth responded just two hours before the contact!

Communication with the ISS went well with just a few hiccups in receiving the ISS transmissions. You can see the video at <http://youtu.be/ljFxN30OfdQ>. The press conference for the Scouts after the contact went very well. One of the Scouts described it as “an out of this world experience!”

Getting on the Air



Radio Merit Badge Workshops

The Radio Merit Badge was one of only a handful of merit badges that could be earned in their entirety at the Jamboree.

The Radio Merit Badge Team developed a curriculum that required 90 minutes of interactive presentation, followed by 30 minutes in front of a radio making on the air contacts, and ending with another 90 minutes of classroom time. Thus, in less than a four hour commitment the Scout could earn the Radio Merit Badge. Furthermore, classes started on the hour, every hour, between 9 AM and 1 PM. So waiting time was kept to a minimum for those walking up and interested in the class.

With classrooms of nine chairs each and five starting times, capacity was pretty much set at 45 badges earned each day. Further, Jamboree hours for opening show, Sunday services, and other events restricted some of the available hours. None the less, the staff at one point, based on a late starting time, set up for classes starting every half hour, just to maximize the potential for badges earned.

The nearby table shows that the classrooms reached and exceeded capacity most days. Some of this was due to squeezing in 10 Scouts to a class. In addition, it was surprising to have 11 Scouts with ham radio licenses show up and ask about the Radio Merit Badge. They were taken through the class workbooks to assure they met the requirements and in some cases needed to make their on air contact. This moved the total badges earned to 339 during the Jamboree.

Results

A total of 339 Radio Merit Badges were earned during the Jamboree. In addition to the daily totals below were 11 earned by youth who already had an amateur radio license and were tested by our merit badge counselors.

Date	MB Earned	Date	MB Earned
16-July	27	20-July	35
17-July	39	21-July	41
18-July	44	22-July	47
19-July	45	23-July	50

Merit Badge Classrooms



ARDF --- Foxhunting

ARDF and Fox Hunting are two sides of the same hobby. Adventurers who enjoy a good orienteering course and those who enjoy a nice hide-and-seek geocaching hunt both enjoy this activity. Put in the top 10 Jamboree experiences on the 'Bryan on Scouting' blog by Bryan Wendell senior editor of Scouting magazine, it attracted Scouts, Scouters, Venturers, youth and adults alike.

Fifty teams competed to find five hidden transmitters located throughout the Summit Center area. They came back with stories of success and sometimes disappointment but all agreed they had fun. This was the premier of ARDF/ Fox Hunting at the Jamboree and I'm sure the excitement will only increase for the next.

The final leader board:

Rank	Team Name	Score
1	Yammine	117
2	65 Boys	100
3	65 Leaders	98
4	Troop B410	98
5	Nate	71
6	Old Goats	70
7	Delta	65

High Altitude Balloon Launches

Very few people have images from the edge of space in their personal photo albums--snapshots in which a hazy blue atmosphere hugs the curve of our planet against a backdrop of the black abyss beyond. But of those who do, many are amateurs, average people, even Scouts, taking regular trips deep into the stratosphere and peering out from the edge of Earth. The hobby, high altitude ballooning (HAB) has been called the "poor man's space program," because they are probing an environment more similar to that found on Mars than to any down here on Earth.

K2BSA with the help of 28 youth and witnessed by thousands held four high altitude balloon launches during the Jamboree. These hydrogen filled weather balloons were expected to fly to 100,000 feet. Reports from on-board transmitters were heard as far North as Chatham, Ontario and as far South as Columbus, South Carolina, West to Louisville, Kentucky and East to Baltimore, Maryland.

ARHAB was another premier event of this year's Jamboree and I'm sure will be repeated in 2017.

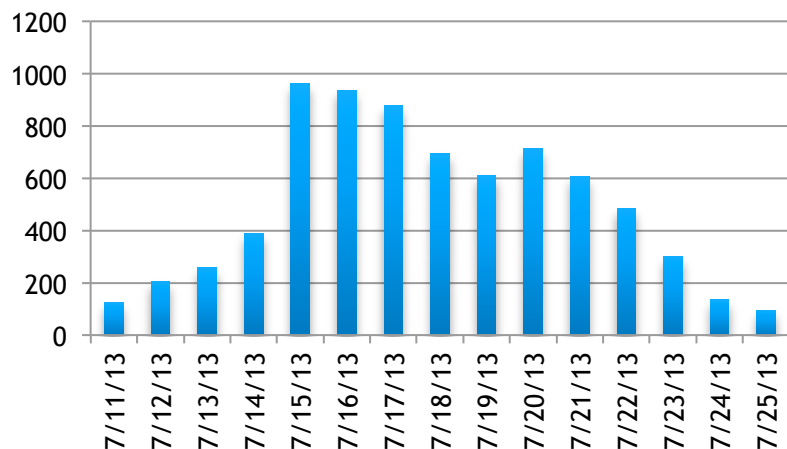
License Testing

K2BSA hosted three license testing sessions during the Jamboree. The overall total of license exams was 55. Out of that 10 new licenses were issued (9 technician licenses and 1 general license) along with 4 upgrades (two extra licenses, both K2BSA staff members, and two general licenses). The overall exam pass rate came in at 25%. Many of those taking the exam did not prepare and missed a very high percentage of the questions. This does not appear to be a suitable activity for the Jamboree in the future.



Overall K2BSA Website Traffic

K2BSA.net Website Visits



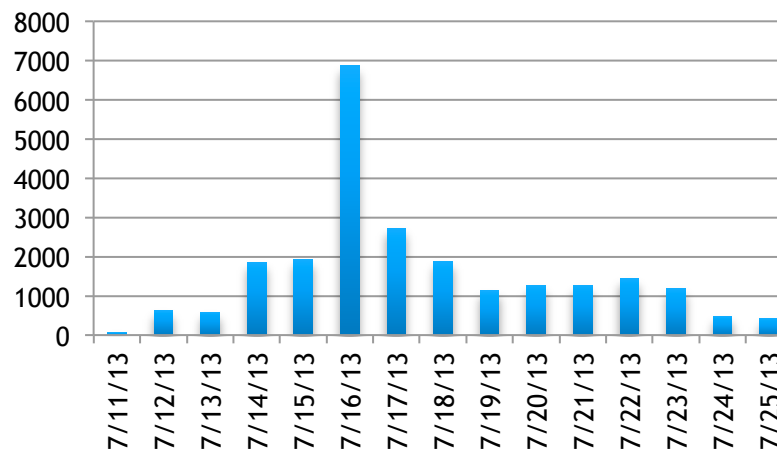
Traffic Analysis

The period of review was chosen as 11 to 25 July 2013. From the above chart you can see that website traffic peaked during the first few days of the Jamboree. The number one source of traffic was direct to the site, followed by Google searches on K2BSA and variations. Next was referrals from QRZ.com, then Facebook, followed by ARRL. The number one page was Jamboree-Live, which was promoted heavily and had the listing of frequencies. Next was the home page followed closely by Jamboree-Logbook and then the 2013 Jamboree Plan.

The K2bsa.Scouting Facebook Page shows the daily number of unique users who have seen any content associated with the page. As you can see there was a huge jump in views on the 16th.

K2BSA Facebook Traffic

Facebook Daily Total Reach



QSL Requests

Sent 190 QSLs issued as of August 6, along with 334 confirmations on Logbook of the World. This program, publicized broadly, did a great deal to generate on air contacts.



Jamboree Media

We were fortunate to garner a great deal of coverage in the Jamboree media. Jamboree Today covered the operation in three articles over the course of the 10 day Jamboree.

<http://jamboreetoday.scouting.org/talk-to-astronauts-in-space-only-part-of-k2bsa-offerings/>

<http://jamboreetoday.scouting.org/hunt-foxes-at-k2bsa-no-foxes-horses-or-dogs-required/>

<http://jamboreetoday.scouting.org/scouts-contact-international-space-station/>

The Leaders' Update Online newsletter got word out about the Radio Merit Badge and ISS contact Scout selection as well as coverage of one of the balloon launches.

Hometown News conducted a press conference with the 10 Scouts involved with the ISS contact.

Pre-Jamboree Promotion

- Icom America conducted a campaign supporting the Jamboree on their website, the Ham Nation web television show, and Amateur Logic TV. This was underway throughout the month of June promoting getting on the air and working the K2BSA operation.
- ARRL QST Magazine's June issue carried an article by K5ND about Radio Scouting.
- HQA Radio Video conducted a web video interview with K5ND about the Jamboree on July 5.
- Ham Radio Now published their Dayton Hamvention video interview of K5ND during the month of June.
- There was also extensive promotion on the K2BSA website and Facebook page.

Outside Media

Scouting Magazine and Bryan's Blog gave the K2BSA operation great coverage including going along on a ARDF-Foxhunt with a group of Scouts.

<http://blog.scoutingmagazine.org/2013/07/16/at-the-k2bsa-tent-i-go-fox-hunting-with-scouts-from-n-c/>

This story was also ranked #6 in Bryan's Top 10 Jamboree Memories.

<http://blog.scoutingmagazine.org/2013/07/29/my-top-10-jamboree-memories/>

ARRL provided coverage in their ARRL Letter on July 19 and 25, Contest Update on July 17, and on their website July 12.

Amateur Radio Newsline covered the Jamboree in their July 19 episode.

Example from Icom website promotion





COMMENTS

Jamboree Staffing

K2BSA had 32 staff members that attended the full Jamboree, 7 who attended the first half, and 9 who attended the second half. This system worked well in getting younger staff members involved. Second half staff members were challenged to connect at first arrival, but worked themselves into the routine well. More could be done to better introduce them to the operation and other staff members.

Staff dining and general accommodations appeared to work well. Cold showers got old in a hurry but the tents and bunks worked well. Meals were good, save for the lunches which got old --- how many days can you eat crackers and trail mix?

Staff shirts and patches were well received, but I recommend some sort of order fulfillment house to provide them in the future. I'll also note that T-shirts widely worn by all staff areas and should be considered at the next Jamboree versus the button front and polo shirts that K2BSA provided.

Radio Merit Badge

As noted previously, the Radio Merit Badge team did a great job with the curriculum and in the throughput of Scouts through the classroom despite all conditions.

In the future we recommend wooden floors in the classrooms to combat the mud and flow of water during the rain. We also recommend floor to ceiling partitions to better separate the four classrooms. We may also want to consider providing more classrooms to meet demand.

It would also be wise to provide handouts for Scouts to encourage them to get online when they get home and study for the amateur radio license exam. It would include links to various study options and information on the Amateur Radio Operator Rating Strip for wear on their uniform.

Demonstration Station & Media

The demonstration station had challenges with propagation and meeting the demand for QSOs from outside the Jamboree and for demonstrations, particularly for the Radio Merit Badge students. We recommend the use of more than one directional antenna at future Jamborees to better facilitate contacts.

The K2BSA Chairman took care of all website and Facebook communication which needed to be a full time position for one or more staff members. The Facebook page addressed a high number of queries and was able to make some operational adjustments due to the feedback provided. This needs to be ramped up for the next Jamboree.

Other Notes

"Powered by Icom" was particularly true for this Jamboree. They are to be applauded and nurtured over the next several years to ensure they come back again, and again.

The Dayton Drill itself and in particular the Miami Valley Council were extraordinarily helpful.

Finally, license courses are not compatible with the outdoor adventure and extreme sports focus of the Jamboree. Likewise, few people showed up actually prepared for the exams and worse some Scouts thought they could pass the exam based on their work in the Radio Merit Badge class. Exams should be dropped for future Jamborees.





THANKS TO ALL OUR STAFF MEMBERS FOR THEIR GREAT
WORK AT THE 2013 NATIONAL SCOUT JAMBOREE.
THEY WERE TRULY “SUMMIT PIONEERS”.



73/BEST WISHES FROM THE K2BSA JAMBOREE TEAM