

2023 NATIONAL SCOUT JAMBOREE AFTER ACTION REPORT



K2BSA

R A D I O S C O U T I N G

PURPOSE & GOALS

Statement of Purpose

- Introduce the science, technology, fun, and magic 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.

Jamboree Goals

- Operate a demonstration station with a goal of introducing ten percent of Jamboree participants to amateur radio.
- Teach the Radio Merit Badge with a goal of 200 Scouts earning the badge during the Jamboree.
- Operate a special event station to make contacts worldwide with amateur radio and Scouting enthusiasts to allow them to participate in the Jamboree.
- Operate social media and website channels to engage a broad audience both within and outside Scouting.



STATISTICS FOR THE OPERATION

Description	Value
Amateur Radio Demonstrations - All Participants	3,184
Amateur Radio Two-Way Contacts Logged	1,727 QSOs 40 DXCC
Radio Merit Badges Earned	309

SOCIAL MEDIA STATISTICS

Reach

Facebook reach ⓘ

88,222 ↑ 1.7K%



Instagram reach ⓘ

288 ↑ 100%



Page and profile visits

Facebook visits ⓘ

4,462 ↑ 3.8K%



Instagram profile visits ⓘ

50 ↑ 2.4K%



WHAT WORKED

- The demonstration station hosted 3,184 participants out of 15,888 participants attending, which exceeded our goals and previous operations as a percentage of participants.
- Despite having no attendance for the first class on arrival day and no classes on Sunday's program area day closure, the Radio Merit Badge team helped 309 Scouts earn their merit badge.
- Garden Ground Mountain was activated in a Summits on the Air (SOTA) operation by some of the team members using the loaner IC-705 by Icom America Inc.
- HF antennas performed perfectly, JK Antennas will remain the permanent antennas at the site of the National Scout Jamboree.
- HF transceivers performed well with minimal operator training, Icom America Inc. provided the loaner IC-7300's.
- Scouts registered themselves in the Radio Merit Badge classes at the front desk using sheets for each class in a three ring binder. When the sheet was full or the class was getting ready to start, the sheet was transferred back to the radio merit badge tent.
- Demonstration station layout was very functional for controlling traffic flow into and out of the station.
- Screens at the front desk area worked extremely well. Geochron was updated and hooked into one screen having our location, greyline, satellite orbits, and ISS on the left display. SDRSharp was running on the right display showing spectrum in the time domain. Our daily log results were plotted on the center screen as well with a keyboard and mouse hooked up to flip between other informational slides/tabs.
- Larger screen for the Radio Merit Badge class was perfect for the size of the room and provided clear vivid slides from the RMB presentation to the scouts.
- Laptops, network gear, and mini-pcs worked flawlessly, additional connectivity through Tailscale allowed quick file copies and syncing for daily logs to the front display.
- Totes being numbered in storage allowed us to quickly address and report missing items to the Arnold Logistics Center.
- Ham Alphabets cards provided by Icom America Inc. were a hit, and we had a lot of interest in them in social media posts.



CHALLENGES & POTENTIAL SOLUTIONS

- Lost equipment in the Arnold Logistics Center (ALC)
 - Although we have mitigated this in the past by labeling everything not in a tote with K2BSA, we somehow have lost a rotator this time. We have stored the remaining two rotators in our totes instead of in the original Hygain boxes and once again took a full inventory of all of our totes.
 - *We will be sourcing another rotator for the next activation.*
- Lack of Staffing
 - 15 full session staff, 2 early session staff, and 2 late session staff.
 - *Additional recruiting needs to be done, including looking into Youth Staff options for the operation, and research offsetting cost of attendance for staff.*
- Satellite Operation
 - Although we had radios provided by Icom America Inc. to deliver satellite contacts, we lacked personnel and antennas to properly activate this operation.
 - *Need to source a satellite antenna solution for the next activation and lock in expertise in staffing.*
- Damaged antennas/missing parts
 - We had several VHF/UHF antennas, and we were able to make two functional antennas out of the parts, but they have been removed from the inventory at the ALC and donated to a scout camp due to them not being able to break down enough to store safely. Other items damaged will be reduced or donated.
 - *We will be sourcing two VHF/UHF vertical antennas for the next activation (suggest 2 Arrow OSJ 146/440).*
- Possible Future Storage Issues at ALC
 - It was mentioned in several leadership discussions that the policies of storing items at the ALC may come under different terms in the near future. We were asked to reduce our footprint of items, and clear out loose storage items.
 - *We will research alternative options for storing the equipment between jamborees, a trailer was raised as one possible solution.*



POTENTIAL OPPORTUNITIES

Tent Upgrades

- The largest complaint by far was the lack of a floor in the tent. This left a certain squishiness to every step as the summers in West Virginia can be very wet and the soil doesn't drain. There are floor options for the tent rentals, but have been on the egregious side of pricing. Although we did not encounter any injuries from the unstable ground, we did have a few near misses that would justify considering the upgrade.

Permanence

- There were many discussions on the future of our operations at the National Scout Jamboree, and one that kept recurring was the one of creating a permanent station at the Summit. A permanent station would not only be useful for the NSJ and future WSJs, but for every event and program held at the Summit throughout the year. This is something that the Camp Station Committee should take into consideration as a possible special project.

Additional Training or Engineering

- Opportunities to improve operator training should be taken into account in future operations. Many amateurs do not operate with directional antennas or on SSB in the HF bands. Suggest operators attend one of the many free events throughout the year that teach contest operation (e.g. Contest University Online) and participate in a larger SSB contest for experience. Logging contacts seemed to be occurring on paper first rather than straight into the logger, this is undesirable. If we added rotator control to the logging, this could aid with properly pointing the beam for the most effective single path, and improve the direct to logging behavior.

Scouts Running the Nightly Net

- The nightly net at Jamboree went really well. We had one of the scouts, who eventually passed his Extra at our testing session, run the net with our script on the second week of the Jamboree. We should enlist the youth to run the net earlier in the session.



SPECIAL ACTIVITIES

Due to the reduced staffing, our availability for doing additional activities was quite limited. High altitude balloon launches and amateur radio direction finding were cut from our normal program.

Summits on the Air

- From the SOTA website:
 - *SOTA is fully operational in nearly a hundred countries across the world. Each summit earns the activators and chasers a score which is related to the height of the summit. Certificates are available for various scores, leading to the prestigious "Mountain Goat" and "Shack Sloth" trophies. An Honour Roll for Activators and Chasers is maintained at the SOTA online database.*
- A subset of our team took their only day off during the NSJ to hike up to the summit of Garden Ground Mountain WV8/NR-058 to activate and have some fun!

VE Testing Session

- An impromptu VE session was organized between our team and the Appalachian Repeater Association. 14 individuals took tests and 5 individuals passed (3 Technicians, 1 General, and 1 Extra)



GRANTS AND SPONSORS

ARDC (Amateur Radio Digital Communications)

- A grant to cover costs associated with the activation of K2BSA at the National Scout Jamboree was applied for and awarded in 2022.
- Funding was used to rent or acquire:
 - Commercial tents, tables, chairs, dividers, and boom truck services.
 - Standalone SDR for display
 - Large displays for front of demonstration tent
 - Large display for radio merit badge class
 - Laptops for stations and radio merit badge
 - Mini-PCs for demonstration tent displays and SDR server
 - Print services for station guides, station placards, and radio merit badge workbooks
 - Updated power distributions for stations/radio merit badge area
- The tent rental and printed items were more expensive than originally budgeted for, however we weren't charged for the rental of the delivery pod which allowed us to move funds into those other areas. Overall the project was under budget, remaining funds will be applied to future Jamboree related expenses.

Icom America, Inc.

- Icom America's support to Scouting and the Jamboree has grown to legendary proportions. Their local Scout council loan program began in 2012 and continues to supply complete stations, with the IC-7300, for local events. Installation of three repeaters at the Summit in 2013 and follow-on maintenance in 2017 has ensured that this substantial investment continues to support the Jamboree as well as operations throughout the year on site and in the local community.
- Icom is the official amateur radio transceiver supplier for the 2023 Jamboree. They provided IC-7300, IC-9700, IC-705, ID-5100, and ID-52A along with power supplies, speakers, and microphones to support the operation.
- Icom also provided for the Ham Alphabets cards, contact cards, staff patches, and QSL cards all bearing the Icom logo.

ARRL (Amateur Radio Relay League)

- A Radio Communication Banner was provided that we used on the outside of the demonstration tent.
- Polo shirts were provided to the staff.
- 2 Ham Radio License Manuals were provided and raffled off to interested radio merit badge participants
- Bundles of Stickers to handout to participants were provided as well.

THANK YOU

This list is sure to miss some of the individuals who helped us make this event a success, for those of you who I've missed I thank you even more!

- All those that provided QSOs for our Scouts during the event!
- K2BSA Jamboree Staff Members
- Members of the K2BSA ARA for their financial support
- WV8BSA Summit Repeater Association and in particular Chris Hatcher, KC8AFH, for his ongoing work and support of the repeater installations and help in ensuring our Internet connectivity
- Dan Busse, KA0TER, for his support of the amateur radio repeaters from his position as Chairman, Jamboree Two-Way Commercial Communications.
- Donald Sonnefeld, KD2FIL, K2BSA ARA Secretary for his design work and ensuring our team had contact cards, patches, and lanyard cards in hand and on time for the operation
- Mike Crownover, AD5A, K2BSA ARA Finance Chair for his help in managing the grant funding for the operation and ensuring disbursements were made on time
- Our grant provider, ARDC, without which we could not have made most of this possible
- Icom America Inc for always being a huge partner in the success of delivering quality programs to the youth
- ARRL for your support of education and youth programs
- Our Jamboree teams of Communicore and FrontierQuest for your leadership and patience
- Scouts BSA Arnold Logistics Center for storing and finding (almost) all of our gear for the 2023 operation



THANKS TO OUR 2023 JAMBOREE STAFF



DEMONSTRATION STATION



RADIO MERIT BADGE CLASSROOM

