



Sinewaves



STONEWALL JACKSON AMATEUR RADIO ASSOCIATION

Meetings: 3rd Thursday of each month, 1930 hrs at Saint Marks Lutheran Church RT19/98 Clarksburg

SJARA Tuesday Night Net

This net meets each Tuesday evening at 2100 hours utilizing the N8FMD Repeater on 147.210 MHz with PL Tone of 103.5

March 21, 2017

<u>Net Control</u>	<u>Date</u>
1. N8FMD	March 21, 2017
2. WV8TIM	March 28, 2017
3. WV8SM	April 4, 2017
4. WD8NSC	April 11, 2017
5. N8FMD	April 18, 2017

Minutes SJARA Meeting March 16, 2017

The meeting was called to order at 8:00pm by Tim Yoos (Vice President) in the absence of the president.

The minutes of the February meeting we read by Tim in the absence of the Secretary, a motion by Ceceila with a second by Pat and a unanimous vote of the members present took care of approving the minutes.

The Treasurers report was presented by Cecelia and shows that we have \$1092.72 as of 3/16/17

Motion by Dick second by Dave to vote on motion that had been carried over from February meeting on the By-Laws Amendment, passed unanimously. There were 8 votes in favor of the Amendment and 0 votes against the Amendment.

Good of the Order

Erie Insurance has been contacted about the Certificate for the YMCA for Field Day, Ceceila is taking care of this.

Field Day is June 24 & 25 contact Tim WV8TIM

Charleston Hamfest- Saturday March 25, 2017

Dayton Hamfest- May 19 20 21, 2017

Member in Attendance: Scott Morris WV8SM, Dave Morris WD8NSC, Richard Skinner K8RAS, Pat Chumley K8PEC, Cecelia Reid KD8IZC, Tim Yoos WV8TIM, Dick Fowler N8FMD, Janice Fowler N8FXJ.

Meeting Adjourned.

Maryland ACS Activated for Presidential Inauguration

The following was noted in a FEMA publication *Public Safety and Emergency Communications News Clippings*, (January 31, 2017 issue): The Maryland Auxiliary Communications Service (ACS) was activated during the Presidential Inauguration January 20, 2017. Operators established voice and digital links with Prince George's, Montgomery and Anne Arundel Counties. The ACS is an umbrella of amateur operators under the auspices of the Maryland Joint Operations Center (MJOC). Located within the MJOC, the ACS is a modern evolution of the Radio Amateur Civil Emergency Service (RACES).

ACS allows interoperability among multiple communications resources. Many ACS personnel hold the [FEMA Independent Study](#) (IS) certifications. Some are also authorized to operate Military Auxiliary Radio Systems

stations, as well as participate directly in [SHARES](#) operations. Operators bring years of valuable operating and technical expertise, and add to the capability of the Maryland State Emergency Management Agency (MEMA) to gather localized information. The ACS concept clearly demonstrated a comprehensive ability to provide both communications flexibility and proficiency, while using minimal MEMA resources in conjunction with a volunteer staff. Please click [here](#) for more information.

ARES Monthly Report and Archives Available On-Line

To see the monthly ARES report from HQ and archived ARES Annual Reports please visit [ARES reports](#).

***Women's March Bay Area - Oakland (California)* Communications After Action Analysis**

On Saturday, January 21, 2017, approximately 100,000 people came together in downtown Oakland, California, for the [Women's March Bay Area](#), a 2.1 mile march ending in a rally at Frank Ogawa Plaza. Eighteen radio amateurs volunteered to assist with medical and March organization communications. They were drawn from several Amateur Radio organizations in the area and most had previous public event operating experience.

The planning for this event occurred over a very limited timeline - 3 weeks. The ability of radio amateurs to respond to a major event with limited planning time is a continuation of the best examples of Amateur Radio support of public service. Oakland police estimate that one hundred thousand participated in this event. Initial planning was based on a 10,000 estimate from the March organizers with a possible surge to 20,000. When 100,000 showed up and participated, the communications team was able to manage the additional requirements with some limitations due to numbers of available personnel.

The mission of the Amateur Radio operators was to support communications between the medical personnel working for the March as well as provide end to end communications along the March route for the March organizers. All event planning was based on the Federal Incident Command System (ICS).

Three operators were stationed at Net Control, which was co-located with the primary event command post. Two operators were stationed at Medical Control with one operator assigned as a shadow to the Medical Team Leader. Two operators were assigned to the medical tent located in the middle of the March route. One operator was assigned to each mobile medical team. Two operators were assigned to follow the end of the March. Shadows were assigned to the March Lead, the March Security Lead, the March organizer at the start of the March, the Plaza area and the press liaisons. Lastly,

one operator roamed the March route.

A written communications plan was developed and agreed to by the March organizers as well as submitted as a component of the documentation for the parade permit and insurance. A component of the plan was requesting approval to use the Oakland Radio Communication Association (ORCA) repeater. The repeater use was discussed at the ORCA board meeting and formally approved via email from the repeater trustee upon submission of an agreed upon Net Control script and completed ICS-205 (Incident Radio Communications Plan). The planning and documentation paid dividends as all operators were able to preplan frequency usage.

The Net started at approximately 0900 and concluded at 1533. Roughly 160 messages were passed through the Net. Additionally, eleven health and welfare checks of the Amateur Radio operators were conducted over the course of the Net.

Most messages had to do with following the progress of the March and the progress of the three medical teams integrated with the March. Traffic was also passed between the Peace Ambassadors, Oakland Police Department and the medical teams.

Additionally, commercial radios and a repeater were rented to provide communications support for the Peace Ambassadors (security) as well as the March organizers for along the March route and within the Plaza during the rally. These radios were included as part of the communications planning.

What Worked Well

1. The ORCA repeater provided adequate coverage throughout the entire event with the handheld radios. An external antenna at Net Control was used and helped guarantee that Net Control was full quieting into the repeater.
2. Net Control ran a fantastic controlled net as well as a great log. The health and welfare checks were conducted regularly for operators.
3. The message traffic from all operators helped to provide situational awareness to the March command post located at the end of the March.
4. Amateur Radio ended up being the main long distance communication option for the March and there were enough operators available to shadow additional key persons.
5. All key cell phone numbers were recorded and shared with the communication team, so should private conversation be required it was available. One operator's radio could not be programmed correctly and could hear the repeater but not talk to it. Net Control was able to communicate with that person by requesting a phone call via the repeater.
6. Communications planning was included in the initial planning meetings, which was appropriate based on

estimated number of participants.

What Didn't Work So Well

1. The commercial radios did not work with the repeater as was discovered immediately prior to the March starting. This resulted in the Peace Ambassadors only having limited simplex capabilities with each other, which did not work with the size of the March. There was not a backup plan for this situation beyond having Amateur Radio operators to support key personnel.
2. The Peace Ambassadors need proper radio training. An attempt was made to provide a brief lesson prior to the March, but the Amateur Radio operators who could have provided it had other responsibilities and by the time they were clear, it was time to start the March.
3. The communications planner needed to provide maps to all operators. Furthermore, a better day of event briefing could have been provided to make sure that all operators were aware of the different positions that were on the net.
4. Simplex was attempted by the Amateur Radio operators in the Plaza during the rally, but it seemed noisy, which resulted in all operators continuing to use the repeater.

Suggested Improvements

1. In the future, commercial radios need to be tested as if they were being used during the event. The Peace Ambassadors need radio training prior to arriving at the event. With this event, there were no situations that caused the medical teams to be stopped or required them to spend a significant period of time on frequency.
2. In the future, a separate medical net should be conducted to ensure that medical communications have a dedicated channel in case they require it.
3. Simplex channels should be tested prior to the event in the areas where they are being used.
4. Assign shadows to particular persons earlier in the planning process.
5. Utilize more Amateur Radio operators to provide more information as to the progress of the March.

The situational awareness and communications provided by the Amateur Radio operators was recognized and appreciated by the March organizers. Thanks again to the efforts of our volunteer amateur radio operators: KI6BZT, KM6BRT, KJ6WEG, KB6MP, KJ6NGT, KJ6NGN, KC1AAW, KK6ZCU, KF6FIO, KT6CRT, KI6LNB, KK6RSE, KK6RSF, KK6MEH, N6DBI, K6KEL, K6LEH --
Melanie Mariotti, J.D, KC7VFT

**Hams Provide
Communications
Support to the *Miami***

Marathon for the 15th Consecutive Year

On Sunday, January 29, 2017, more than 40 South Florida hams provided medical and other event/emergency communications to the 15th running of the [Miami Marathon](#) and Half Marathon. Amateur Radio has been a critical part of this major international race from the very beginning in 2003, and clearly one of the elements contributing to its success. Depending on post location, hams report as early as 4:30 AM for race start, and stay on location as long as 8-9 hours.

Operating from the command trailer at the finish area, two net control stations (NCS) manage traffic from all of the hams on the course. In the command trailer, the NCS's have immediate access to police, fire, public safety, medical, and race officials as needed. Hams at each of the 23 aid stations along the 26 mile course coordinate communications with aid station captains and public service officials to ensure a rapid and accurate flow of critical information to command, including information on injured runners, medical supply requests, traffic, weather, and other critical situations.

There are also hams stationed at the course start, finish, course split, medical tent, sag wagon, and in the lead vehicles. For redundancy and backup, there are both primary and secondary UHF and VHF repeaters covering the entire course. Many of the hams have volunteered for many or all of the 15 years of the Miami Marathon, and all have a

great day while helping the community. With hundreds of thousands of spectators in addition to runners, ham radio has proven consistently to be the most reliable form of emergency communications in the race environment.

Starting in 2003, the Miami Marathon has grown from just over 3000 runners to more than 25,000 and has become one of the top marathons in the United States. Runners in the Miami Marathon raise millions of dollars for a multitude of charities benefiting childhood cancer, diabetes, heart disease, and many others. Participants in the race include a large number of AWD (athletes with disabilities), runners from all over the world, and more than 4000 middle school kids. The Kids Run (Run for Something Better) is a year round program in which kids run a total of 25 miles during the school year, and then complete the last 1.2 miles at the Marathon. It is a major contributor to health and fitness programs in South Florida schools and makes a big positive impact on long term health. -- *Benjamin Nemser, WA4DZS, Communications Director, Miami Marathon, Miami-Dade County ARES*

FEMA's Region IV Auxiliary Communications Working Group Notes Progress

In the July 18, 2016 issue of FEMA's *Public Safety and Emergency Communications News Clippings* [published twice a month for FEMA Regional Emergency Communications Coordination Working Group (RECCWG) stakeholders], it reported on the formation by RECCWG members in FEMA Region IV (Alabama, Florida, Georgia, Kentucky, South and North Carolina, Tennessee, and Mississippi) of an auxiliary communications working group to improve the relationship between agencies at all levels and its auxiliary communications volunteers. Steve Waterman, K4CJX, a RECCWG member, was asked to chair this working group. Goals were to provide a model plan of action for agencies at all levels to incorporate auxiliary communicators, mainly radio amateurs; promote the education of auxiliary communication volunteers through FEMA on-line and classroom NIMS/ICS and Homeland Security courses; define methods of cooperation with government and other agencies, and other volunteer communications service groups; and related objectives.

Update

The progress of the auxiliary communications working group was reported in the recent January 31 issue of the *Public Safety and Emergency Communications News Clippings*. The group met most recently by teleconference on February 24, with Waterman in the chair, bringing his extensive experience with SHARES and Winlink and insight into the needs and capabilities of the

auxiliary communications community.

The group sought and discussed examples of best practices around the Region, as well as introducing members to current successful programs such as the US Department of Homeland Security's [SHARED RESOURCES \(SHARES\) High Frequency \(HF\) Radio Program](#) and recent changes. The teleconference was opened to members in all ten RECCWGs -- all regions were represented. Ross Merlin, WA2WDT, Program Manager for DHS SHARES, briefed the members and described the "no cost" opportunities available to civil authorities and their critical infrastructure partners, and how it is specifically suited to agency use of volunteer communicator resources. The NCC SHARES program provides support through the use of exclusive HF channels for both voice and data such as the Winlink hybrid radio email network system. This digital network now supports over 45 gateways, and is expanding continuously in order to handle the volume necessary to make it an effective transport layer for complex messages to and from locations that have no local communications infrastructure available. The network, which normally operates as a radio-to-Internet bridge for standard email, may also operate as "radio-only" email through a MESH configuration over HF radio, without the Internet.

The next task for the FEMA Region IV auxiliary communications working group will be to further define the elements of a successful

auxcomm program and share them. Also to be addressed is a template or model state and county emergency communications plan for the incorporation of auxcomm volunteer-operators in state and county EMA programs. Another update is expected in the next few months.

Capital District (Florida) ARES Developing Situational Awareness Tools

Based on its experience with Hurricane Hermine (late summer 2016, Florida Big Bend landfall), the Capital District (around Tallahassee, Florida) ARES members are developing a situation awareness map and report tool to give agencies' staffs in the Big Bend of Florida and southern Georgia a picture of what conditions are like whenever there is an area wide emergency such as a hurricane, tornado, hazardous materials spill, or other crisis.

Assistant Northern Florida Section Manager Dave Davis, WA4WES, reports that over the past several months "we have created and developed a reporting form and procedure to gather this information, and now are developing a means of recording it on a map along with a protocol for alerting hams to the need for reports on conditions on the ground, or "ground truths." Davis reports that "*Google Maps* allows us to 'pin' multiple locations and information on a map, which is precisely what we want to do."

Davis states that the key to developing this SITREP form in a

potential disaster situation is the individual ham radio operator: "What we would like hams in the Big Bend of Florida and south Georgia do is to report on the conditions they are experiencing at their home, calling reports into a designated station who will collect them and post the data to a map for forwarding to various agencies such as the National Weather Service, EOCs and the American Red Cross."

Recruitment of reporting stations and trials are planned. Davis concludes "if many hands make light work, many hams will give a good picture of what is going on in the Big Bend and southern Georgia areas in severe weather or other emergencies."

Letters: Hurricane Matthew After Action Analysis, Red Cross Issues

I am writing in response to the observations of Volusia County (Florida) EC Karl Martin, KG4HBN, in the last issue on his county ARES group's experiences with Red Cross shelters and personnel during the Hurricane Matthew situation last October. I deployed to the Red Cross shelter in Tarboro, North Carolina, for two weeks in the latter part of the month. We experienced flooding, with many residents driven from their homes.

As far as the Red Cross is concerned, prior badging or credentialing shouldn't be necessary anymore as the Red Cross now uses "Event Based Volunteers," typically registering them at the Disaster Operations

Centers (DOC). For example, for our current Disaster Response (DR) to the Oroville Dam evacuations [click [here](#) for ARES report -- ed.], our DOC has registration set up for such volunteers. I saw the processing work with one volunteer. Thus, any ARES volunteer operator that does not have Red Cross credentials should be advised to check in and register at the DOC first before proceeding to a shelter. Shelter managers and registration personnel are careful who they allow into a shelter and can deny entry to those who cannot prove that they have "official business." They rightly question whether "those guys over there in the corner with the radio equipment" should be there or not.

So far as ARES operators wanting to install antennas and cable drops in schools and other potential candidate shelters, they would be well advised to simply be prepared and self-contained with everything they think they might need to set up radio ops when they arrive at a shelter, and not rely on pre-installed equipment. Pre-staged drops and equipment would usually be found in Red Cross "hard" facilities such as chapter or regional offices where a DOC would be established. -- *Jim Piper, N6MED, Citrus Heights, California*

ARRL Executive Committee to Meet this Month in Denver

The ARRL Executive Committee (EC) will meet on March 25 in

Denver, Colorado, to tackle a wide-ranging [agenda](#). ARRL President Rick Roderick, K5UR, will chair the session.

The EC will hear a report on FCC and regulatory items. This includes a review of enforcement issues and concerns, as well as a status update on FCC-related items and filings and on open items that have not received any FCC action since the January Board of Directors meeting. One FCC-related matter that is likely to come up for discussion is the status of the ARRL *Petition for Rule Making* ([RM 11759](#)), to make changes in the 80/75-meter band. In addition, ARRL is still waiting for FCC to approve operational rules for the 2,200- and 630-meter bands or finalize the allocation of the 2,200-meter band.

The EC also is expected to receive an update on the ARRL's January 12 *Petition for Rule Making* to allocate a new, secondary amateur band in the vicinity of 5 MHz, while keeping four of the current five 60-meter channels and the 100 W power limit. The FCC designated the League's *Petition* as [RM-11785](#); comments on the League's petition are due on March 20, and ARRL will file comments to bolster its assertions.

The report to the EC also will address noteworthy antenna and RF interference cases.

On the legislative front, the EC will get a status report on the Amateur Radio Parity Act of 2017 (H.R. 555). The bill has passed the US House, with Senate action still pending. The EC also will discuss the Amateur Radio implications of [H.R. 588](#), "Securing Access to Networks in

Disasters Act." Introduced by New Jersey Democrat Frank Pallone Jr., this measure -- which already has received House approval -- would require the FCC to submit to Congress "a study on the public safety benefits, technical feasibility, and cost of providing the public with access to 9-1-1 services during times of emergency, when mobile service is unavailable" through open Wi-Fi access points and "other alternative means."

It would amend the Stafford Act to "expand the categories of essential service providers that may access a disaster site to restore and repair essential services in an emergency or major disaster without being denied or impeded by a federal agency."

The EC also will review the status of the Amateur Auxiliary Study Ad Hoc Committee. Meetings have been held with the FCC concerning more effective FCC use of the volunteer resources of the Amateur Auxiliary (Official Observers) program, the current FCC-ARRL Amateur Auxiliary Agreement, and the development of a new *Memorandum of Understanding* that better incorporates the Amateur Auxiliary program.

The Executive Committee is tasked by the ARRL Bylaws to address League matters between regular Board meetings.

ARRL Weighs In on New California "Driving While Wireless" Statute

ARRL is recommending that Amateur Radio be specifically excluded from a California statute prohibiting the use of "wireless communication devices" while driving. ARRL Southwestern Division Vice Director Marty Woll, N6VI, is taking point on the effort to revise the statute, known by its legislative bill number [AB 1785](#). It was signed into law last September, and it took effect on January 1, amending §23123.5 of the state's Vehicle Code.

"ARRL has received a huge volume of inquiries and complaints about this statute in particular, since its enactment," ARRL General Counsel Chris Imlay, W3KD, wrote in a letter to Woll to provide guidance in amending the California statute. "I would urge that you present this letter at any meetings you have with California State legislators on this topic, thus to bring the issues contained herein to their attention."

Imlay pointed out that that the prior statute excluded Amateur Radio by definition. The new law, which completely replaced the earlier statute, never mentions Amateur Radio, but instead contains an open-ended definition of an "electronic wireless communications device," the operation of which while driving is prohibited. According to the statute, this "includes, but is not limited to, a broadband personal communication device, a specialized mobile radio device, a handheld device or laptop computer with mobile data access, a pager, or a two-way messaging device."

"Because of the 'not limited to' language, such a device is whatever a law enforcement officer thinks might be included, and an Amateur Radio operator is not at all protected," Imlay wrote. Such a broad definition could stymie "even the most diligent law enforcement officers," who might interpret the new Vehicle Code language more broadly than intended.

"Radio amateurs have regularly used mobile two-way radio systems for the past 70 years," Imlay said. "ARRL is aware of no evidence that such operation contributes to driver inattention," he stressed. "Quite the contrary: Radio amateurs are public service-minded individuals who utilize their radio-equipped motor vehicles to assist others, and they are focused on driving in the execution of that function."

Imlay also cited a 2009 letter to ARRL from the National Safety Council stating that there was no evidence using Amateur Radio while driving is a significant risk.

"Given the necessity of unrestricted mobile Amateur Radio communications in order for the benefits of Amateur Radio to the public to continue to be realized, ARRL urges California legislators to reconsider and amend AB 1785, to more narrowly define the class of devices included in the prohibition," or to include a specific exemption for Amateur Radio, Imlay wrote. Read [more](#).

International Crystal Manufacturing Going Out of Business

International Crystal Manufacturing ([ICM](#)) of Oklahoma City has announced that it will be going out of business, probably at the end of May. Royden Freeland Jr., son of the company's founder, posted a letter this week on the ICM website.

"We will be honoring all orders that we have already taken and will be able to fill a limited amount of new orders, dependent upon raw materials available," Freeland said. "We would like to thank you for your past business. The success of ICM over the previous 66 years has been largely due to its amazing customer base."

International Crystal produces RF control devices -- quartz crystals, oscillators, QCM crystals, filters, TCXOs/VCTCXOs, and precision crystals.

Royden R. Freeland Sr. founded International Crystal in 1950, at first operating out of his garage. One of his first contracts was to produce crystals for Collins Radio. The elder Freeland and his wife died in a 1978 air crash, and his son took over the company, which expanded into the production of other electronics in the 1980s.

In the 1990s, though, it sold off some of its equipment and distribution business to concentrate on its core enterprise -- the manufacture of crystal and oscillator products.

The announcement caught some manufacturers off guard, and they are seeking to source the products they had been buying from ICM, one of the remaining US-based manufacturers of

crystal products. Radio amateurs requiring crystals for projects or as replacement parts for older equipment also will have to look elsewhere. Read [more](#).

The Doctor Will See You Now!

"Remote Antenna Tuners" is the topic of the just-released episode of the "[ARRL The Doctor is In](#)" podcast. Listen...and learn!

Sponsored by [DX Engineering](#), "ARRL The Doctor is In" is an informative discussion of all things technical. Listen on your computer, tablet, or smartphone - whenever and wherever you like!

Every 2 weeks, your host, QST Editor-in-Chief Steve Ford, WB8IMY, and the Doctor himself, Joel Hallas, W1ZR, will discuss a broad range of technical topics. You can also e-mail your questions to doctor@arrl.org, and the Doctor may answer them in a future podcast.

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If you've never listened to a podcast before, download our [beginner's guide](#).

ARRISS Moves Closer to Launching New Radio System to Space Station

Amateur Radio on the International Space Station ([ARRISS](#)) reports it has met a major milestone and now is "one giant step" closer to flying its new interoperable radio system to the International Space Station. Eventual plans call for installing a new JVC Kenwood TM-D710GA-based radio system on the station as part of an overall approach that will allow greater interoperability between the *Columbus* module and the Russian *Service Module*.

Lou McFadin, W5DID, and Kerry Banke, N6IZW, travelled to NASA Johnson Space Center (JSC) in Houston in mid-February for preliminary testing of Banke's "breadboard" version of the ARISS multi-voltage power supply that's essential to the upgrade. They worked with JSC engineers and Electromagnetic Compatibility (EMC) Lab personnel to put the specially built power supply through its paces, checking against US and Russian space specifications for preliminary power quality and EMC tests.

With positive test results in hand, ARISS now can move on to the next step -- fabrication of prototype and flight units. The JSC engineers said the ARISS breadboard power supply was the first hardware to have passed all of the space agency's tests and complimented the ARISS Team on its professional-level hardware development and design.

"I was looking to come away with what we needed to move forward," said Banke. "We achieved that." Banke also said he was impressed with the support he and McFadin

received from the testing group. Key players on those teams, who are also radio amateurs, told him and McFadin that they find equipment supported by hams earns particularly good marks.

ARRISS-International Chair Frank Bauer, KA3HDO, thanked Banke and McFadin for spending several days putting the unit through the rigorous battery of NASA and Russian preliminary electrical tests. McFadin credited the level of cooperation and experience within the ARISS Team with the multi-voltage power supply's high marks.

Now that testing of the breadboard unit has been completed, McFadin can purchase the necessary -- and pricey -- space-certified parts, to fabricate the final prototype and flight power supplies. He and Banke expressed confidence that the prototype and flight units will pass the even more rigorous final testing with flying colors.

The ARISS radio gear on board the ISS is aging. A February supply vehicle carried a new Ericsson 2-meter handheld radio to replace one that failed a few months ago, disrupting ARISS activities. The VHF radio in the *Columbus* module was used for school group contacts and for Amateur Radio packet, temporarily shifted to UHF after the VHF radio failure. The newly arrived Ericsson radio will replace the Ericsson UHF radio supporting APRS packet and some school contacts, but Bauer made it clear last month that the new Ericsson transceiver is an interim measure.

To help support final fabrication and flight tests of the ARISS interoperable radio system, [visit](#)

the ARISS website. Contributions are tax deductible. Those contributing at least \$100 will receive an ARISS Challenge Coin.

New ARRL Repeater Directory is Biggest Ever!

With a whopping 31,000+ listings, the new [ARRL Repeater Directory](#)® is the most complete printed directory of on-the-air repeaters ever! The 2017-2018 edition (46th edition) has 10,000 more listings than the previous edition, covering repeater systems throughout the US and Canada. Repeater systems are listed by state/province, city, and operating mode. Analog and digital repeater systems are included: FM, FUSION, D-STAR, DMR, NXDN, and P25 systems.

ARRL partner [RFinder](#), the creator of a web and app-based directory of Amateur Radio repeaters worldwide, supplied all data for the 2017-2018 *ARRL Repeater Directory*. RFinder uses "crowdsourcing" technology to aggregate timely and accurate information for its online directory. Crowdsourcing is a means of using data gathered from public resources. Although RFinder's data is primarily supplied by users and repeater owners (listings are reviewed for accuracy), ARRL invited volunteer frequency coordinators to contribute their coordination data to RFinder. Every coordinator that supplied repeater data to RFinder has its listings credited as coordinated repeaters in *The Repeater Directory*. RFinder provides support for contributing

information for new repeaters, and changes to current listings. RFinder also collects reports on instances of repeater jamming -- data that is made available to repeater owners and frequency coordinators upon request.

The new *ARRL Repeater Directory* is available in one size -- 6 x 9 inches -- with a convenient lay-flat spiral binding. Pages of supplemental information include VHF/UHF and microwave band plans, as well as repeater operating practices.

For decades, *The ARRL Repeater Directory* has been an invaluable source for locating repeater frequencies while traveling. New hams often use the *Directory* to find local activity after purchasing a new handheld radio. And, public service volunteers keep a copy nearby or in their emergency "go kit."

The [2017-2018 ARRL Repeater Directory](#) begins shipping in early April. Order from the [ARRL Store](#), or find an [ARRL publication dealer](#); ARRL Item No. 0697, ISBN: 978-1-62595-069-7, \$19.95 retail; ARRL member price \$17.95. For additional questions or ordering, call 860-594-0355 (toll-free in the US, 888-277-5289).

Boy Scouts Announce 2017 JOTA-JOTI Theme

Scouting's World Jamboree on the Air/Jamboree on the Internet (JOTA-JOTI) Team has [announced](#) the theme for this fall's JOTA-JOTI event: "60 Years Connecting Scouts." The 2017 theme recognizes the

event's beginnings in 1957 and commemorates its growth in participation and in the expanding communication channels activated this coming October. In addition to Amateur Radio, those channels include internet-based channels and other internet-based options, including social media, ScoutLink, IRC chat services, Skype, and more.

"It also recognizes the goal of the event -- connecting Scouts so that they can engage in conversations with other Scouts across town and around the world," said JOTA Coordinator Jim Wilson, K5ND. "This allows them to discover geographic and cultural differences and similarities. Plus, they are exposed to the technology that makes all this happen."

The JOTA-JOTI logo contest is about to start. Plans for 2017 include a simplified registration system. According to the [World JOTA-JOTI Report 2016](#), more than 1 million Scouters in 156 countries and at 33,000+ locations took part in JOTA-JOTI last fall. The numbers for US participants were 10,700 for JOTA and 560 for JOTI. Wilson said there was a problem integrating those statistics into the final report.

The K7RA Solar Update

Tad Cook, K7RA, Seattle, reports: There have been no sunspots since March 3, except for the one that appeared on March 5. Also, solar flux values have recently dipped below 70 for the first time since the other side of this solar cycle. Solar flux [appears](#) at 70 over the past

week, but this is an approximation.

The average daily sunspot number dropped from 14.1 last week to zero. Average daily solar flux went from 74.3 to 70.3.

Average daily planetary A Index quieted from 20.9 to 8.1, while the average mid-latitude A index went from 15 to 6.4.

Predicted solar flux is 70 and 71 on March 16-17; 72 on March 18-20; 74 on March 21-23; 76 on March 24-25; 74 on March 26-29; 72 on March 30-April 3, and 70 on April 4-9.

The predicted planetary A index is 5, 10, and 8 on March 16-18; 5 on March 19-20; 8, 10, 8, and 8 on March 21-24; 5 on March 25-27; 35, 30, 20, 18, 15, 20, and 15 on March 28-April 3, and 12 on April 4-5.

Sunspot numbers for March 9 through 15, 2017 were 0, 0, 0, 0, 0, 0, and 0, with a mean of 0. The 10.7-centimeter flux was 71.2, 71, 70, 70.1, 70.3, 69.6, and 69.8, with a mean of 70.3. Estimated planetary A indices were 15, 12, 6, 9, 3, 5, and 7, with a mean of 8.1. Estimated mid-latitude A indices were 10, 14, 4, 7, 2, 3, and 5, with a mean of 6.4.

[Send](#) me your reports or observations.

Just Ahead in Radiosport

- March 18 -- AGCW VHF/UHF Contest (CW)
- March 18 -- Feld Hell Sprint
- March 18-19 --Russian DX Contest (CW, phone)

- March 18-19 -- Louisiana QSO Party (CW, phone, digital)
- March 18-19 -- All Virginia QSO Party (CW, phone, digital)
- March 18-20 -- BARTG HF RTTY Contest
- March 19 -- UBA Spring Contest (SSB)
- March 20 -- Run for the Bacon QRP Contest (CW)
- March 20 -- Bucharest Contest (CW, phone, digital)
- March 21-26 -- CLARA Chatter Party (CW, phone)
- March 22 -- SKCC Sprint (CW)
- March 23 -- RSGB 80-Meter Club Championship (SSB)

See the [ARRL Contest Calendar](#) for more information. For in-depth reporting on Amateur Radio contesting, subscribe to [The ARRL Contest Update](#) via your ARRL member profile e-mail preferences.

Upcoming ARRL Section, State, and Division Conventions

- March 18 -- [West Texas Section Convention](#), Midland, Texas
- March 18 -- [MicroHAMS Digital Conference](#), Redmond, Washington
- March 24-25 -- [Texas State Convention](#), Rosenberg, Texas

- March 31-April 1 -- [Maine State Convention](#), Lewiston, Maine
- March 31-April 2 -- [Nevada State Convention](#), Las Vegas, Nevada
- April 7-8 -- [OzarkCon QRP Conference](#), Branson, Missouri
- April 7-8 -- [Oklahoma Section Convention](#), Claremore, Oklahoma
- April 15 -- [Roanoke Division Convention](#), Raleigh, North Carolina
- Apr 21-23 -- [International DX Convention](#), Visalia, California
- April 21-23 -- [Eastern VHF-UHF Microwave Conference](#), Manchester, Connecticut
- April 21-23 -- [Idaho State Convention](#), Boise, Idaho
- April 22 -- [Delaware State Convention](#), Georgetown, Delaware
- April 22 -- [Aurora '17 Convention](#), White Bear Lake, Minnesota
- Apr 22-23 -- [Communications Academy XIX](#), Seattle, Washington
- April 28-29 -- [Southeastern VHF Society Conference](#), Charlotte, North Carolina
- April 29 -- [Louisiana Section Convention](#), West Monroe, Louisiana
- May 4-6 -- [Military Radio Collector's Group Convention](#), San Luis Obispo, California

- May 7 -- [Eastern Pennsylvania Section Convention](#), Bristol, Pennsylvania
- May 13 -- [Iowa Section Convention](#), Boone, Iowa
- May 19-21 -- [Ohio State Convention \(Dayton Hamvention\)](#), Xenia, Ohio
- May 27-28 -- [Rocky Mountain Division Convention](#), Cody, Wyoming

Find conventions and hamfests [in your area](#).
