

# 2019 Huntsville Hamfest Forum Listing

8-1-2019

## ARRL

- **“Take a Fresh Look at PR”**  
Ed Tyler, N4EDT, Public information Coordinator, Alabama Section
- **ARRL Southeastern Division and Alabama Section Meeting**  
Rick Roderick, K5UR, ARRL President; Howard Michel, WB2ITX, ARRL CEO; JVann Martin, W4JVM, Alabama Section Manager and Greg Sarratt, W4OZK, Southeastern Division Director

At the ARRL forum JVann and Greg will discuss information about Alabama Section new appointments, upcoming events in Alabama, and Southeastern Division current events, news, and updates.

This year's special guests are ARRL President Rick Roderick, K5UR and ARRL CEO Howard Michel, WB2ITX. Come meet the new ARRL CEO and hear from Rick, Howard, and Greg on the ARRL's direction and activities.

- **Alabama Repeater Council**  
Dennis Littleton, K4DL
- **Alabama ARES Forum**  
Dave Gillespie, W4LHQ
- **“Recruiting New Hams”**  
Bob Inderbitzen, NQ1R, ARRL Product Development Manager

Many radio clubs organize displays and exhibits to garner interest for Amateur Radio. They recruit new hams at Maker Faires, school and Scouting events, county fairs, public events, and science and technology conventions. Clubs also set up displays for the general public during ARRL Field Day. Come learn and share different methods for organizing exhibits and engaging the public at non-radio events. Sponsored by ARRL, the national association for Amateur Radio ®.

## Education

- **Instructors' Forum**  
Carole Perry, WB2MGP

This forum is for teachers, instructors, scout leaders, or any leader of a youth group or church group, interested in incorporating or enriching the ham radio experience in their programs. FREE materials and resources will be distributed, along with curriculum and creative high motivational suggestions for recruiting and retaining young people in ham radio. As director and chairperson of both RCA and QCWA Youth Activities, Carole Perry WB2MGP will share ideas and provide excellent resource links.

- **“EDUCOM: Education through Communication”**  
Joe Fairclough, WB2JKJ

Our *EDUCOM* forum will detail how you can take ham radio back to your school and introduce it as the most effective teaching tool ever.

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- **Orlando HamCation and Dayton Hamvestion 2020**  
Michael Cauley, W4MCA, HamCation General Chairman  
Jack Gerbs, WB8SCT, Hamvention General Chairman

Come find out about HamCation 2020 and Hamvention 2020 and get a sneak preview on what will be new.

## **Public Service/EmComm**

- **Joint Services MARS Meeting (2 hours)**  
Bob Glasscock, AAA4AL, Alabama/Mississippi State MARS Director  
Jim Hamilton, AAA4RD, Army MARS Region 4 Director  
Bruce Nebergall, AFR4C, Director, USAF MARS SE Division  
John Briscoe, Jr. AAA4AL7, Army MARS Region 4 Training Officer

The current status of the MARS program and future areas of service will be discussed.

- **“Advances in Severe Weather Detection”**  
Mickey Lee, VP Enterprise Solutions, tornadoAlert

It is well known that tornadoes can be identified visually or by analysis of doppler radar. Advances in technology have allowed sensors that measure electrical energy, lightning and others sources, to determine how intense is the thunderstorm that is generating the energy. One device, tornadoAlert, even determines distance and movement as it updates every minute. This talk will describe the technology and how to utilize it - for household protection, storm spotter activity, or severe weather threat awareness. [www.tornadoalert.com](http://www.tornadoalert.com)

## **Technical**

- **“Lightning Research at NASA’s Marshall Spaceflight Center”**  
Dr. Monte Bateman, WB5RZX, Thunderstorm Physicist

NASA's Marshall Space Flight Center and the University of Alabama in Huntsville (UAH) are home to one of the top lightning research groups in the world. We study basic physics of the lightning process, its relationship to storm severity, and help with lightning protection for our nation's space program. In addition to basic and applied science, we also design and build cutting-edge instrumentation that allows us to make unique measurements to study thunderstorms. We now have 2 Geostationary Lightning Mappers (GLMs) in orbit, on both GOES-16 (East) and GOES-17 (West). This gives us lightning mapper coverage over nearly half the Earth. The mapper on GOES-16 has achieved “fully validated” status; the other should be validated this November. The GLMs were developed here in Huntsville; they add lightning information to the GOES satellite photo loop images and are becoming important in weather forecasting and warning. We also have the Lightning Imaging Sensor (LIS) aboard the ISS, and it has been working well now for over 3 years. Come see the state-of-the-art in lightning measurements and how much of it comes from Huntsville!

- **“Lightning Protection for the Radio Amateur”**  
Dr. Monte Bateman, WB5RZX, Thunderstorm Physicist, NASA/Marshall Space Flight Center

Protect your shack and your tower! With a lot of anecdotal grounding discussions generating more heat than light, here's a solid approach to the best protection practices and the theory behind how and why they work. Learn how a lightning flash occurs and how to convince it to go elsewhere!

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- **“SDR Technology that Changes how you Operate HF”**  
Steve Hicks, N5AC, VP Engineering and CTO, FlexRadio Systems

FlexRadio, the Software Defined Radio pioneer and leader in the amateur radio market, has brought leading-edge capabilities, operating methods and equipment to the amateur world for over 15 years. In this session we will discuss the benefits for contesters, rag chews and DXers of software defined radios. The discussion will include the differences between SDRs and more traditional HF radios (superheterodyne and homodyne) with an emphasis on the technology differences, the unique operating benefits afforded by those differences and cost advantages. In addition, we will discuss multiFLEX, a new capability unique in the world of amateur radio. This new capability, included in SmartSDR 3.0, will be explored and the operating benefits for different types of operators will be discussed.

- **“The K4 Next-Generation Direct-Sampling SDR Transceiver”**  
Eric Swartz, WA6HHQ

- **Yaesu Forum**  
John Kruk, N9UPC

- **“Pico Balloons Around the World”**  
Bill Brown, WB8ELK

- **“Introduction to Software Defined Radio”**  
Steve Brightman, KI5ENW, SDRPlay

This talk covers the basics of SDRs and how they have evolved from simple dongles. Some non-traditional radio applications made possible by the advent of affordable, high-performance SDRs (including adding panadapter capabilities to an existing rig) are discussed. Without delving into the technical side too deeply this review has proven popular with both new and experienced users contemplating the jump into the rapidly growing field of SDRs, or wanting to make the most of the capabilities they offer.

Steve, KI5ENW, is a veteran of the semiconductor industry having worked at Texas Instruments, Dallas Semiconductor and Maxim. He has worked on RF circuits for consumer TV and radio applications as well as mobile communications devices and satellites. Now, reunited with former colleagues at SDRplay he enjoys putting his RF experience to practical use. A long time SWLer, Steve finally acquired his general license this year!

- **“How to Easily Extend the Matching of your Low Band Antenna”**  
Bob DePierre, K8KI

Would you like to operate on 75m when your antenna is really tuned to 80m CW, and achieve that match without buying an expensive antenna tuner? With the new antenna analyzers now available, making yourself a tiny, cheap matching unit is really easy.

- **“Rambo Rover Station”**  
Ben Lowe, K4QF

This presentation describes how to construct microwave rover stations in an ammo can. The ammo can is configured to keep out water and insects while providing ports for RF and airflow and drip loops for in/out lines.

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- **“Coax Tips for the Radio Amateur”**  
**John Stensby, Ph. D., N5DF**

Coax cable is a major component of most modern amateur radio stations. When used as an antenna feedline, it can impact significantly station performance and installation costs. Every few years, its attenuation should be measured since, due to environmental influences, all coax degrades over time. When the cable terminates at the top of a tower, loss measurements may be difficult to make, especially if bulky and heavy diagnostic equipment must be transported up the tower. Hence, an accurate shack-end loss measurement technique, where all measurement equipment remains on the ground, is of interest. Such a measurement technique is presented along with examples of its application. In addition, general tips are given on coax selection and installation.

- **“Understanding Speech Articulation”**  
**Dr. Bob Heil, K9EID, Heil Audio**

Bob Heil, licensed in 1956 as KN9EID became an avid experimenter and builder of VHF equipment. One of the first to do serious moon bounce and was one of the first SSB stations on 6 and 2 meters in 1958. As a professional theatre pipe organist, Heil was also learning to voice and tune massive theatre pipe organs which taught him how to listen. In 1966 he started a retail music store and through his intense ham radio background and listening abilities, Heil was able to repair guitar amplifiers and build massive arena sound systems for some of the world's top performers. He invented the first high powered 'Talk Box' for Joe Walsh and Peter Frampton. His invite from the WHO to design and build the first quadraphonic PA made rock history. It was some of that equipment that landed Heil Sound in the Rock and Roll Hall of Fame, the only manufacturer invited to do so. Heil continues to build high quality microphones for amateur radio and well as professional musicians. You can find him on many of the ham radio frequencies each night – many times operating some of his original 1956 AM and early SSB equipment from his station lab. Heil is constantly designing new and exciting audio products for his beloved ham radio friends.

Bob just received an Honorary Doctorate Degree from the University of Missouri for his years of bringing new technologies to the Amateur radio and Professional Sound industries.

- **“How we Talked from the Moon”**  
**Rob Suggs, Ph. D., NN4NT**

50 years ago we were amazed to see and hear our astronauts walking on the Moon. Today we are amazed what was accomplished then with 1960's technology. The communications system was one of many technology developments which enabled us to experience those historic moments. Basics of the architecture of the Apollo voice, video, and telemetry system will be described and our current lunar exploration plans will be previewed.

- **“Kit Building Techniques for Success”**  
**Joe Eisenberg, K0NEB**

We will cover how to identify and test and sort parts and how to best assemble kits as well as go over techniques for dealing with things like toroids and suggestions of some great beginner's kits that are available as well as kits for more advanced builders. I am the Kit Building Editor for CQ Magazine as well as the current author of the Construction Techniques chapter of the ARRL Handbook.

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- **“HamSCI Personal Space Weather Station”**  
**Bill Engelke, AB4EJ**

A new software-defined radio system is being designed by TAPR, HamSCI, and several universities (including UA). This Personal Space Weather Station will provide propagation and ionospheric conditions and let any user participate in a scientific effort to observe and map the ionosphere in near-real time, showing Traveling Ionospheric Disturbances, gravity waves, and other phenomena. A major project will be monitoring the ionospheric effects of the 2024 total solar eclipse. Learn how you can participate!

## **Operating**

- **AMSAT Forum**  
**John Kludt, K4SQC, AMSAT Area Coordinator**

The year's AMSAT forum will focus on the skills, techniques and equipment needed to successfully use the current crop of amateur radio-carrying satellites. In addition we will be discussing upcoming launches and future opportunities.

- **D-STAR Forum**  
**Ray Novak, N9JA, Senior Sales Manager, Icom**

- **SOTA Forum**  
**Michael Fiedler, KM4CRB**

Summits on the Air, or 'SOTA,' is a program for amateur radio to operate portably from mountain summits designated by the SOTA organization. You can participate as a SOTA activator or as a 'chaser.' SOTA activators do not need to be mountain climbers. Some summits can be accessed by driving up in your car. Other summits are enjoyable hikes on established trails. And, yes, some summits are a major hike for experienced outdoor enthusiasts. Chasers make contact with a SOTA activator from the comfort of their home station. Every amateur operator can participate in SOTA!!!

This talk will describe the SOTA program, hiking considerations, and how to choose your radio equipment for a SOTA activation. I will share my own experiences, what I've learned from successful, and unsuccessful, SOTA trips - with photos and video of all the fun. Your questions and discussion will be welcome.

- **“50 States QSL Card Quilt”**  
**Margie Spangenberg, KK4AGN**

Margie will show her 5' x 5' One of A Kind Wall Hanging 50 States QSL Card Quilt displaying copies of the 50 QSL cards she received since 2011. She will also have a presentation about the hobby of exchanging QSL cards and the history of the amateur radio pioneers. In 2018 and 2019, Margie gave her QSL quilt presentation at the Young Ladies Radio League 2018 Convention, Hamcation 2019, and several Hamfests (Atlanta, Gwinnett Amateur Radio Society, Shelby, Western Carolina) and to radio clubs in South Carolina, North Carolina, and Georgia.

- **“Selecting a Perfect SOTA Summit – Tools and Tips”**  
**Patrick Harris, KI4SVM**

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## - Contest Forums

### 1. “New Blood – Drafting the Next Generation”

**Bryant Rascoll, KG5HVO**

Bryant is 15 years old and was the 2018 Ham of the Year.

### 2. “Remote Station Contesting”

**Fred Dennin, WW4LL, BeLoud**

Trials and tribulations of putting together a world-class remote station for contesting.

### 3. “NCJ and the Future of Contesting”

**Dr. Fred Regennitter, K4IU, Deputy Editor, National Contest Journal**

## - “Cycle 24, Cycle 25 and Propagation During Solar Minimum”

**Carl Luetzelschwab, K9LA**

Carl, K9LA will give an update on Cycle 24 and review propagation throughout the current solar minimum. He will then discuss predictions for Cycle 25.