



## ARRL West Central Florida Section Technical Conference

**SATURDAY FEBRUARY 22, 2020  
LIST OF PRESENTATIONS**

Revision 1.1 - 2/17/20

### **ARRL PRODUCT REVIEW TESTING - BOB ALLISON WB1GCM ARRL ASSISTANT LAB MANAGER.**

The most frequently asked question the ARRL Lab is asked is, "What radio should I buy?" Bob Allison, WB1GCM, ARRL Assistant Lab Manager and Test Engineer is not permitted to answer that question, but he can certainly point you in the right direction. He will explain the key transmitting and receiving tests that are performed at the Lab and what all those numbers mean that are shown in QST Product Review articles. Terms such as Twotone Third Order Intermodulation Distortion Dynamic Range, Blocking Gain Compression Dynamic Range and Reciprocal Mixing Dynamic Range can be intimidating or confusing. Bob will explain them in simple terms, as well as some of the transmitting tests. Why is low Phase Noise Important? Bob will explain and in an entertaining way. Suitable for beginners.

### **PROPAGATION BY COLORS - KAI SIWIAK KE4PT QEX EDITOR, QST TECHNICAL EDITOR AND CONTRIBUTING EDITOR.**

Propagation by Colors Author: Kai Siwiak, KE4PT When it comes to HF operating, some modes allow you to communicate farther than others. Free software can help predict which ones are likely to be most effective. HamCAP Freeware is the propagation tool for predicting signal levels at a given range and coverage area, and the KE4PT Color Correspondence Chart is the tool for choosing the best mode for your HF operation over the given range and coverage area.

### **WRITE FOR QST AND QEX - KAI SIWIAK KE4PT QEX EDITOR, QST TECHNICAL EDITOR AND CONTRIBUTING.**

Write for QEX and QST Author: Kai Siwiak, KE4PT, QEX Editor, QST Contributing Editor QEX is devoted to detailed technical articles; or the short 1 to 2 page Technical Notes. Your audience is about to get bigger with QEX going online soon as an ARRL member benefit. QST is devoted to general interest technical and operating articles, Hints & Hacks, and Technical Correspondence.

### **LINUX FOR AMATEUR RADIO - LEE BOLINEAU KX4TT - ARRL DXCC CARD CHECKER**

The aim is to provide a light introduction to Linux as a preferable OS for amateur radio experimentation. This presentation dovetails nicely into the hands-on workshop that follows, as well as the Raspberry Pi discussion (anyone see the article on the amateur who runs a Remote station using a Raspberry Pi 4, Linux, and NoMachine?!?).....

### **BASIC LINUX SKILLS - DAVE BIRNBAUM K2LYV - ARRL TECHNICAL COORDINATOR**

Dave's two hour workshop will follow the introduction to Linux presented by Lee Bolineau KX4TT. Dave will cover the basics of working in Linux such as file searching, editing, running programs, installing programs.



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### **TECHNIQUES FOR MONITORING WINLINK COMPRESSION INCLUDING PACTOR GORDON GIBBY KX4Z - ARRL ASSISTANT DIRECTOR.**

A review of the history, beginning in 1986, of the efficient dynamic compression techniques utilized in amateur radio since Roubelat F6FBB. A discussion of the concerns raised by Theodore Rappaport beginning in 2016. A review of the developments of monitoring systems including actual experimental data, available free source code, and commercially available tools. The discussion will explain much of how FBB & Winlink transfer binary objects efficiently. Brief discussion of the newer protocol created by the PAT group.

### **CHEAP PRINTED CIRCUIT BOARDS - GORDON GIBBY KX4Z - ARRL ASSISTANT DIR.**

Making incredibly cheap printed circuit boards in China and having them back in six days. A live demonstration of how to use free version of diptrace to create printed circuit boards for your group's project, and having them fabricated in China (pre-virus).

### **AMATEUR SATELLITE COMMUNICATIONS FOR EMERGENCY SERVICES STEVE PARK W4OEP - ARRL TECHNICAL SPECIALIST.**

This presentation will introduce the Amateur Satellite Service and spaceborne amateur communications capabilities for Emergency Services. We will begin with a brief history of the Amateur Satellite Corporation known as AMSAT and discuss the 50 year international evolution of amateur satellite payloads. There will be tips on "Getting Started" with an emphasis on "Working the Digital Satellites." Some technical insight will be provided for "FM & APRS Satellite Communications Link Budgets" and equipment requirements. Finally, we will have an open forum discussion on "APRS Satellite Digipeaters for Safe & Well Messaging" and propose a minimal go-kit as a possible Amateur Radio Emergency Services capability.

### **COMBINING SIX FM BROADCAST STATIONS INTO ONE ANTENNA ED ALLEN WA4ISB - ARRL TECHNICAL SPECIALIST.**

The American Tower site in Riverview Florida combines six FM broadcast station into one Master antenna. The output power of the combiner into the antenna is 150kw. How do you combine so many powerful FM signals without them interacting with each other and without creating Inter-modulation (IM). This presentation will show how it's done.

### **RECAP OF INTRODUCTION TO INTERNET OF THINGS JON PELLANT W1JP - ARRL TECHNICAL SPECIALIST.**

Jon will do a brief recap of the Friday Afternoon Workshop on how to control a basic devices and or read sensors via the internet.

### **INTRODUCTION TO THE RASPBERRY PI - DARRELL DAVIS KT4WX.**

Darrell Davis KT4WX will show you what the Raspberry PI is and a basic overview of the Raspberry PI and products currently available. At the end of the presentation, you will be shown how to get a distribution of Raspbian Linux up and running on the Rapsberry PI.