



INDIAN RIVER ARC

P.O. BOX 237285, COCOA FLORIDA 32923-7285

VOLUME XLIII, NUMBER 10

SPURIOUS EMISSIONS

OCTOBER, 2017

CLUB MINUTES

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KU0R

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N4VEP

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KK4WDD

DIRECTOR

LARRY JASMANN
WD5CKN

NEWSLETTER EDITOR

ARMANDO DELGADO
KN4JN

The meeting began at 19:37 with the pledge of allegiance.

Following the pledge, visitor Roger Bonnett, WB8BOE, and new member Bill Giers, KI4SSM, were recognized. President Dave KUOR was working, so Vice President Viron N4VEP ran the meeting.

The August meeting minutes were in the August newsletter. A motion was heard to accept the meeting minutes, a second was heard and the meeting minutes were approved by acclamation.

Larry KK4WDD, our Treasurer, was not present. Viron reported that we have \$838.46 in checking and \$1277.14 in the equipment fund.

Viron reported that the hurricane exercise went well.

No Technical Committee report.

Les, W9BCH, our Emergency Coordinator, read the hurricane report that he sent to County EC, JD Shaw K7LCW.

Viron let Bill Young KA4VYH staff the Walter Butler shelter.

Technical: All repeaters are operational; the 88 repeater is in dual analog/digital mode, and there is a new 220 repeater on a tower at 390 feet using the AJ4IR call sign.

Upcoming Events: Club House hot dog [Saturday Oct 7th](#), the Melbourne hamfest is the following weekend, the 21st is QRP Saturday, and the 28th & 29th CQ World Wide Phone contest.

New Business: The 2018 Proposed Budget. Recently we have been upgrading the repeaters and this has depleted the surplus we carried from one year to the next. This year the IRS wants \$400 to reinstate our tax exempt status, which brings our presented budget \$800 more expenses than revenue. Plus there are other unpaid repeater expenses. A motion was made that we ignore the IRS notification; a second was heard and the motion passed by acclamation. Another motion was made to pass the hat on the repeater expense. A second was heard and the motion passed by acclamation.

Election officers: Dave Slawson K4UZM will serve as Director At Large and the present officers will run for reelection in their current positions and nominations will be taken from the floor next month.

Dwaine KM4HCN reported that BEARS is trying to get help. When PCARS pulled out of BEARS, they did not say why, and this was a surprise to BEARS. Bob suggested that we loan BEARS1 to FEMA for Puerto Rico support.

Viron brought up the fact that the BEARS1 vehicle has never been deployed for its intended purpose and the vehicle has not been funded through BEARS. The clubs have been requested from time to time to provide funds for vehicle maintenance. The vehicle now needs \$2000 suspension upgrade. BEARS will not hold any meetings through the end of the year due to a re-organization.

The annual club Christmas party will be at the Olive Garden on 520 on [December 7th](#).

JD Shaw K7LCW, our county EC, is looking for help staffing the ARES table at the Melbourne hamfest. Steve N4UTQ and Dwaine KM4HCN will be helping, and others are welcomed to help out.

Dwaine reported that volunteers are needed for the Brevard Epilepsy walk to assist the PCARS folks this Saturday at Wickham park [at 9am](#).

A motion to adjourn occurred at 20:34 and was moved and approved.

Respectfully Submitted,

Steve N4UTQ Secretary

HAPPENINGS

"How High is High Enough" – a discussion on the effects of antenna height – is the topic of the current episode of the "[ARRL The Doctor is In](#)" podcast.

Two DHS Apps of Interest to ARES Operators

Here are two good apps from the US Department of Homeland Security Office of Emergency Communications (DHS-OEC) of

interest to ARES members: <https://www.dhs.gov/safecom/enifog-mobile-app> <https://www.dhs.gov/safecom/casm-mobile-finder>

– Thanks, Barry Porter, KB1PA, Southern Florida Public Information Officer

The FCC has announced that the

Office of Management and Budget has approved, for 3 years, the information-collection requirement of the Commission's March 29 *Report and Order (R&O)* that spelled out Amateur Radio service rules for the two new bands – 630 meters (472-479 kHz) and 2200 meters (135.7-137.8 kHz). Notice of the action appeared in the September 15 edition of the *Federal Register*. Before

using either band, stations must [notify](#) the Utilities Technology Council (UTC) that they plan to do so. Prior to starting operation in either band, radio amateurs must notify UTC that they intend to operate by submitting their call signs, the intended band(s) of operation, and the coordinates of their antenna's fixed location. If UTC does not respond within 30 days, they may commence operation.

HAPPENINGS

For more information go to <http://www.arri.org/news/fcc-opens-630-and-2200-meter-bands-stations-must-notify-utc-before-operating>

The Air Force Academy satellite FalconSAT-3 is now open for Amateur Radio use as a digital store-and-forward system. The Packet Bulletin Board System operates at 9600 baud with a 145.840 MHz uplink/435.103 MHz downlink. Output power is 1 W, and the downlink is continuously on. Digipeating is enabled

for live QSOs, but unattended digipeating operation is not authorized at this time. Additional information is available on the AMSAT website at <https://www.amsat.org/falconsat-3/>

60th JOTA: October 20-22, 2017 Jamboree on the Air provides the opportunity for millions of Scouts around the world to meet on the air via Amateur Radio. Get ready for the 60th year of this annual on-the-air event! More information at <http://www.arri.org/jamboree-on-the-air-jota>

Florida State Convention (52nd Annual Melbourne Hamfest)
Start Date: 10/13/2017
End Date: 10/14/2017
Location: Melbourne Auditorium
625 East Hibiscus Blvd.
Melbourne, FL 32901

Website: <http://www.pcars.org>
Sponsor: Platinum Coast Amateur Radio Society
Talk-In: 146.85

The Amateur Radio Parity Act is moving through the Senate -

and your help is needed to ensure that Senator Bill Nelson, your Senator, supports this critical legislation.

Reach out to Senator Nelson TODAY! RIGHT AWAY.

First, write him using this link: <https://arri.rallycongress.net/ctas/urge-florida-senators-to-supports-1534-amateur-radio>

Feel free to use the template, or write using your own thoughts and concerns.

Second, CALL HIS OFFICE ON THE PHONE, tell him you're a constituent, that you support S.1534, and implore him to SUPPORT THE AMATEUR RADIO PARITY ACT.

ON THE AIR

Roly, ZL1BQD will be active from Timor Leste until 10 October 2017 as **4W6RR**.

Steve, N6SJ will be active from Paro, Bhutan 12 - 19 October and again October 26 2017 as **A52SJ**

Take, JG8NQJ will be active again from Marcus Island, IOTA OC - 073, Minami Torishima, 2 month starting 15 October 2017 as **JG8NQJ/JD1**.

School Club Roundup Fall Term: October 16-20, 2017
Objective: To exchange QSO information with club stations that are part of an elementary, middle, high school or college. Non-school clubs and individuals are encouraged to participate.

Suggested HF Frequencies:
Phone (MHz): 1.855-1.865; 3.850-3.880; 7.225-7.255; 14.250-14.280; 21.300-21.330; 28.440-28.460
CW (MHz): 1.800-1.810; 3.530-3.540; 7.030-7.040; 14.030-14.040; 21.130-21.140; 28.130-28.140

For more information go to <http://www.arri.org/school-club-roundup>
10/07/2017 | RT 66 Military Vehicle Convoy On-The-Air Oct 7-Oct 14, 0000Z-2359Z, K4A, Ocala, FL. Sun Country Amateur Radio Society. As conditions allow bands from 6M - 160M; SSB, CW & PSK31. QSL Joe Scoglio, KA4WJB, 31 Lake Wood Circle, Ocala, FL 34482. QSL direct with SASE only. Multiple station event. Members of the Military Vehicle Preservation Association -MVPA- will re-trace the "original" 1926 Route 66 used as a Military Transport

Corridor from Chicago, IL to Santa Monica, CA, to move troops, supplies & equipment throughout much of the country. We honor their RT 66 Military Vehicle Convoy with (4) SES call signs, K4 "M", K4 "V", K4 "P", K4 "A". Each station will ONLY operate during (1) of the (4) weeks of the 2,448 mile month-long journey. The Convoy will use Ham Radio APRS tracking technology to follow their cross-country journey. See the host website to "track" the convoy and for all of the details about the RT 66 Military Vehicle Convoy On-The-Air Event. ConvoyOnTheAir.org

TUBE DIODES by Armando Delgado, KN4JN

Those of us who cut our amateur teeth on vacuum tube radios hold fond memories of the warm glow of the tubes that developed slowly after we turned on the radio. Hams who built their own rigs also remember the types of tubes they used, their function and their structure. Yet, many hams took those tubes for granted and had no knowledge of how they came into being. The history of vacuum tubes is a classical early Twentieth Century scientific discovery resulting from

observation, scientific curiosity, and a compilation of separate, individual developments.

The initial observation of what came to be known as thermionic emission was by Frederick Guthrie in 1873 when he noted that an electrically charged red-hot iron sphere with a negative charge lost its charge gradually, while the same did not occur to a positively charged one. Then in 1880, while experimenting on

the invention of light bulbs, Thomas Edison noted that several experimental lamp bulbs built with an extra wire, metal plate, or foil inside the bulb, that was separate from the filament and thus could serve as an electrode, when connected to a galvanometer at the output of the extra metal electrode, if the foil held a negative potential relative to the filament, there was no measurable current between the filament and the foil. When

the foil was raised to a positive potential relative to the filament, there could be a significant current between the filament through the vacuum to the foil, if the filament was heated sufficiently (by its own external power source). Edison recognized the potential importance of his observation and obtained a patent for it, but found no immediate application at the time.

The knowledge of this so called "Edison effect" remained dormant until years later when Ambrose

Fleming, who worked earlier at the Edison laboratories, reasoned that the phenomenon could be utilized to rectify and to detect (demodulate) radio signals, a substantial improvement on the early cat's-whisker detector already used for rectification in the early radios. The Fleming diode (Figure 1) was an outstanding success that gave radios more stability and ease of signal tuning.

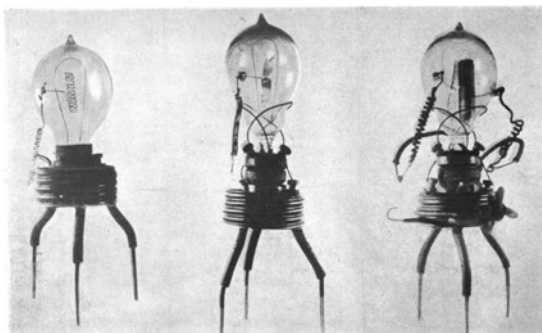


Figure 1. Fleming Diodes.

A few years later, in 1907, DeForest improved on the concept of the diode by adding a third element in the tube, which he called the *Audion* (Figure 2), that allowed the amplification of the signal being received. This modification revolutionized radio and made it possible for it to be a part of every American home within a few short years.



Figure 2. De Forest's Audion tube, 1908.

Although the triode permitted signal amplification, technically it was fraught with many problems due to oscillations and signal instability. Over the years, technical improvements designed to deal with these difficulties led to the invention of the tetrode and later the pentode tubes that eventually populated more modern radios. Yet, it was the invention of the diode that served as the foundation for those later developments.



W1AW CW PRACTICE TRANSMISSIONS

7 PM EST Slow CW : 5-15 WPM
Mon, Wed, Fri

7 PM EST Fast CW: 35-10 WPM
Tue, Thu

FREQUENCIES: 1.8025,
3.5815, 7.0475, 14.0475,
18.0975, 21.0675, 28.0675,
147.555



UPCOMING ARRL CONTESTS

October 2017

7-8 **EME - 50 to 1296 MHz**

16-20 **School Club Roundup :**

Third full school week of October

November 2017

4-5 **EME - 50 to 1296 MHz**

4-6 **Nov. Sweepstakes -**

CW : First full weekend in November, 2100 UTC Saturday through 0259 UTC Monday.

18-20 **Nov. Sweepstakes -**

Phone: Third full weekend in November, 2100 UTC Saturday through 0259 UTC Monday.

December 2017

1-3 **160 Meter:** First full weekend in December, 2200 UTC Friday through 1559 UTC Sunday.

9-10 **10 Meter :** Second full weekend in December, 0000 UTC Saturday through 2359 UTC Sunday.

17 **Rookie Roundup-CW :** Third Sunday, 1800 UTC through 2359 UTC.

Other Contests:

CQ WW Contest Dates

SSB: October 28-29, 2017

CW: November 25-26, 2017

Starts: 0000 UTC Saturday

Ends: 2359 UTC Sunday

Arizona QSO Party
1600Z, Oct 14 to 0600Z, Oct 15
and
1400Z-2359Z, Oct 15

California QSO Party
1600Z, Oct 7 to 2200Z, Oct 8

Pennsylvania QSO Party
1600Z, Oct 14 to 0500Z, Oct 15
and
1300Z-2200Z, Oct 15

10-10 Int. Fall Contest, CW
0001Z, Oct 21 to 2359Z, Oct 22

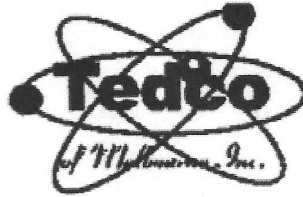


Editor's Note:

Send comments about the Newsletter or to contribute information or articles to the Editor's email address:

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