



**INDIAN  
RIVER ARC**

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

VOLUME XLV, NUMBER 2

# SPURIOUS EMISSIONS

FEBRUARY, 2019

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**ARMANDO DELGADO**  
KN4JN

## CLUB MINUTES

President Dave KUOR began the meeting at 7:31 PM with the Pledge of Allegiance led by Armando KN4JN. Visitor Jeff Stewart KX4NM was recognized.

The January meeting minutes were published in the January newsletter. A motion was heard to approve the January meeting minutes. A second was heard and the January meeting minutes were approved by acclamation.

The Treasurer's report showed \$2410.82 in checking and \$1777.69 in the Equipment Fund. A motion to approve the treasurer's report was heard, a second was heard and the Treasurer's report was approved by acclamation.

Dave reported for the Tech Committee and he noted that there was an issue with the 37 machine and the repeater would not come up. Phil went out there and power-cycled it to get it working again. All other repeaters are working fine and no additional progress has been made on the go kits.

Orlando Hamcation starts tomorrow, February 8, and the MS Walk will take place March 16<sup>th</sup> at the church in Viera.

Dave mentioned the effort to find out what capabilities the general

amateur population has using the website. He also talked about the background checks required by RACES that need to be renewed every 5 years but they don't contact you when it expires. Shelter communicators need to have a current background check. There needs to be a better coordinated system of notification otherwise, as happened after hurricane Matthew in the Panhandle, some volunteers will be rejected because their background check is not up to date.

Next Dave discussed the upgrade to the radio room at the Red Cross facility. Dave wants to have two dual band VHF/UHF radios and backup power. Our two multi-band HF dipoles are out of service at the moment. The 40-80 meter antenna was destroyed and will be replaced with an 80-10 meter Alpha Delta. Dave also wants to replace the 10-15-20 fan-dipole with an additional 80-10 meter antenna. We also have a digital TV antenna to provide TV in the radio room, but we need a wall mount for the TV as well as a flat screen 29-32 inch TV set. We need AGM batteries for battery backup for a capacity of 200 to 300 amp hours. No batteries other than AGM can be considered, due to the potential for hydrogen gas and danger of explosion, since the batteries will be stored in the radio

room. We also need an additional small compact computer to be used for digital modes. A second HF radio is desired but only a newer radio design will be considered. A 220 MHz radio is needed since we have a 220 MHz repeater, which is usually connected to the 37 repeater. All donations will be appreciated. All upgrades are intended to be complete by Field Day. Dave also showed some pictures of the work party fixing things up in the past weeks.

No 50-50 drawing took place since our Treasurer Larry KK4WDD was not present this evening.

Dwain KM4HCN shared his experience at the interoperability conference where they set up emergency equipment on different bands and different modes and passed simulated traffic.

A motion to adjourn occurred at 2008 and was moved and approved.

Respectfully Submitted

Steve N4UTQ

Secretary

## HAPPENINGS

"Life Above 50 MHz" is the topic of the January 17 episode of the "ARRL The Doctor is In" podcast and "FT8" is the topic of the January 31 episode.

FEMA Region 10 will conduct monthly communications exercises (COMMEM) on the third Wednesday of each month, starting on January 16, 1730 - 1900 UTC. Amateur Radio operators are invited to take part.

The intent of these exercises is to test and exercise interoperable communication (federal/state/local/tribal/Amateur Radio) during a major disaster in which the communication infrastructure is significantly damaged or destroyed. FEMA Region 10 will use the call sign WGY910. The COMMEM will use these "dial" or "window" frequencies on 60 meters - including 5,330.5 kHz, 5,346.5 kHz, 5,357.0 kHz,

5,371.5 kHz, and 5,403.5 kHz - as part of the exercise. The area of operation is the continental US.

Every year, in the month of February, a special event called **ANTARCTIC ACTIVITY WEEK** is set up. This year, the **16<sup>th</sup> AAW** will be held from **February 16<sup>th</sup> to 24<sup>th</sup>**. All WAP (Worldwide Antarctic Program) special stations have been issued a WAP reference

number to be given during the QSO. Hams from all over the world are invited to join the unique worldwide event launched by radio amateurs. To celebrate this event, **Paolo IK3GER** has set a **free** diploma for OM/SWL, available at his web <https://www.ik3ger.it> starting Febr. 1st 2019. More information at <http://www.waponline.it/>

## HAPPENINGS

### MIT Radio Society, EE and Computer Science Department Hosting Radio Technology Lectures

The Massachusetts Institute of Technology (MIT) Radio Society (W1MX) and the Department of Electrical Engineering and Computer Science (EECS) hosted a series of public lectures on "everything radio," presented by academics and industry professionals. The series began on Tuesday, January 8 and is available in [YouTube](#). Each self-contained talk will address a different facet of radio, ranging from modulation, propagation, and Amateur Radio, to radar, radio astronomy, space-based applications, and cellular and 5G technology.

### Radio eBooks for download

There are a number of vintage radio and amateur radio related eBooks available for free

download on the Gutenberg site. Among them is the 1922 edition of The Radio Amateur's Handbook by A. Frederick Collins.

<http://www.gutenberg.org/ebooks/search/?query=radio>

### SD contest logging software

EI5DI has, over the past few years, developed some amateur radio software which may be of help to those seeking to carry out logging during HF Contesting. SD is excellent for fast, simple CW and SSB logging during HF contests, and is free and unrestricted. It supports IRTS contests and hundreds of others worldwide. SD runs on Windows, Linux, and on Raspberry Pi 3. It may be downloaded from [www.ei5di.com](http://www.ei5di.com).

### Beacon on 2200 m

The Caboolture Radio Club in Australia reports the start of

operation of a new beacon on the 2200 m band. The ACMA has granted permission for continuous operation of a beacon on 137.444 kHz using the call sign VK4RBC in grid QG62LW, using WSPR2 plus a CW identifier. The power is 1 W EIRP into a 500 m long wire at 40 m maximum height.

**Peanut** is an Android VOIP application that allows hams to talk on analogue and over the air gateways to Dstar, DMR, Fusion, Wiresx, etc using a cellphone or other Android device. When using it in analogue Peanut to Peanut the audio quality is excellent so it is ideal for older amateurs who are having trouble with hearing loss. You can also run it on a Windows pc using an Android emulator. See the minimum requirements [here](#). It's for hams only and you need to get

a code from pa7lim to get on <http://www.pa7lim.nl/peanut/>

**Researchers capture an image of negative capacitance in action.** For the first time ever, an international team of researchers imaged the microscopic state of negative capacitance. This novel result provides researchers with fundamental, atomistic insight into the physics of negative capacitance, which could have far-reaching consequences for energy-efficient electronics. Read more [here](#) and [here](#).

The podcast for new hams, "So Now What?" will launch on Thursday, March 7, and new episodes will be posted every other Thursday. Listeners will be able to find it on [Apple iTunes](#), [Blubrry](#), or [Stitcher](#), or wherever you get your podcasts. Episodes will also be archived on the ARRL website. More info [here](#).

## ON THE AIR

**Brunei DXpedition** will be active as V84SAA from Sera Kanangan Beach in the Tutong District, Brunei between February 7-18th, 2019. More info at <http://v84saa.ko8sca.com/>

DXpedition to **Macao**, XX9D: February 11 - 26, 2019, IOTA: AS-075 LOC: OL62SD. More info at <https://xx9d.mydx.de>

J15RPT will be active again as JD1BLY, from **Chichi Jima Island**, IOTA AS-031, Ogasawara Islands 15 - 17 February 2019. He will operate on HF bands plus 6m, CW, SSB, Digital modes.

**2019 Daytona 500** Feb 13-Feb 17, 0001Z-2359Z, N4DAB, Daytona Beach, FL. Daytona Beach CERT Amateur Radio Team. 14.260 14.076. Certificate & QSL. Steve Szabo WB4OMM, 536 Central Park Blvd, Ponce Inlet, FL 32127. [n4dab.com](http://n4dab.com)

**Ice Station W0JH** (Frozen Lake Portable) Feb 16-Feb 18, 1600Z-2300Z, W0JH, Stillwater, MN. Stillwater (MN) Amateur Radio Association - SARA. 21.360 14.260 7.260 3.860. Certificate. Shel Mann - N0DRX, W0JH is operating portable from a frozen lake in Washington County, Minnesota (Grid Square EN34). Certificates will ONLY be sent via e-mail in PDF format. (Send requests with standard QSL confirmation info to: IceStationW0JH2019@radioham.org). There is no need to send a QSL card. Info: [www.radioham.org](http://www.radioham.org)

**SES H L Hunley Commemorative Station** N4HLH Feb 17, 1400Z-2100Z, N4HLH, Charleston, SC. Trident Amateur Radio Club. 28.462 USB 14.262 USB 7.262 LSB 7.117 CW. QSL. John Satterfield KN4MBK, PO Box 60732, Charleston, SC 29416. [tridenthams.org/hunley.htm](http://tridenthams.org/hunley.htm)

**The Battleship Texas 105th Birthday** Mar 1-Mar 14, 0000Z-0000Z, W5T, Cleburne, TX. Club KC5NX. 14.225 14.045 7.225 7.045. QSL. CLUB KC5NX, 9200 Summit Court West, Cleburne, TX 76033. Club KC5NX is back on the air this year to help celebrate the 105th birthday of our Grand Lady, The Battleship Texas...really neat QSL card, special freq / time request honored, whatever... We'll be on the air !! SASE requested. 73. club.kc5nx@gmail.com <https://www.qrz.com/db/kc5nx>

**4th annual RST special event** Look for members of the North Country DX Association (NCDXA) to once again be active from different locations in **Alaska, Yukon, Northwest Territories, Nunavut and Greenland** between January 15th and February 28th (some ops may be on earlier or later). The NCDXA RST callsigns to be used are KL7RST, VY1RST,

VE8RST, VY0RST and OX7RST. Also look for N1RAC/KL7 which will be active from Fairbanks, Alaska. QSL all callsigns direct via K7ICE. For more details and a free RST certificate, see: <https://www.qrz.com/lookup/K7ICE>

The special call sign **EI19RE** will be active for the duration of 2019 to commemorate the establishment of the Dáil, the first Irish parliament. More info [here](#).

**FINLAND, OH.** Special event station OG60IPA is QRV during all of 2019 to commemorate 60 years of Finland's participation in the International Police Association. QSL via OH4MDY.

**Brunei V84SAA.** Setup is under way for the [V84SAA DXpedition](#) on February 7 and continue until February 18. Operation will concentrate on the low bands.

## Amateur Adventures by Armando Delgado, KN4JN

One of the universal characteristics of ham radio is the desire of operators to transmit from locations that lack modern conveniences. The best known activity of this nature is Field Day, which happens every year. There are other similar popular activities that occur worldwide and year round. Actually, many of these activities are so popular that organizations have formed to manage and organize them.

Of these, one of the best known is [Islands on the Air](#), or IOTA. Established in 1964 by Geoff Watts, a leading English short wave listener, it promotes radio contacts with stations located on islands around the world. It is administered by Islands On The Air, Ltd in partnership with the Radio Society of Great Britain (RSGB). To count for IOTA, islands need to meet a few simple rules relating to location. They must be located in the open sea, not lie in rivers, inland lakes or seas, narrow gulfs or largely enclosed bays. They must be a minimum distance from the mainland, and they must be shown and named either on Google Earth or on another officially recognized reference map. They must be natural, not manmade, be demonstrably above water at high tide and must have a recognized island name. There is no minimum island size requirement, but it must be separated from the mainland at low tide by a minimum 200 meters of sea measured at the narrowest point. Connection to the mainland by bridge does not invalidate an island so long as the minimum sea separation requirement is met under the bridge as well as elsewhere. The islands are organized in groups, of which there are 1200 at present with a total of 15000 individual islands. Unfortunately, under these criteria Merritt Island does not qualify for inclusion as an island. This area of Florida is listed officially as group NA-138, Brevard to Nassau County, and includes Amelia, Bird, Fort George, and Talbot islands, but not Anastasia or

Merritt Island. Another popular amateur activity involves climbing and operating from hills. An organization called [Summits on the Air](#) (SOTA) coordinates these activities.

SOTA has been carefully designed to make participation possible for all Radio Amateurs and shortwave listeners - this is not just for mountaineers! There are awards for *activators* (those who ascend to the summits) and *chasers* (who either operate from home, local hill-tops or are even activators on other summits).

SOTA is fully operational in nearly a hundred countries across the world. Each country has its own association which defines the recognized SOTA summits within that association. 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 Honor Roll for Activators and Chasers is maintained at the SOTA online database.

The program is intended for portable operation (/P) and does not accept operation from a motor vehicle. The SOTA program commenced on 2 March 2002. Each association has its own start date, being the date that it became incorporated. Summits can be claimed at any time after the start date for the responsible association but not before.

The required summit height is 150 meters, but the minimum height that can be accepted in the program is 100 meters. In the event that this requirement cannot be met, the entity or subdivision will unfortunately be unable to participate in SOTA. Prospective associations wishing to use a prominence of

less than 150 meters will need to be able to offer sound justification for why they should qualify as an association with less than the 150m standard qualification, and be able to demonstrate how the use of a lower prominence value will significantly add to the viability of a prospective association. For guidance, the Management Team will not accept a prominence value of less than 150 meters or 500 feet if summits at 150 meters are more frequent than one per 2,000 sq. km. Summits should be distinct peaks. Under these standards Florida has no qualifying summits. At 345 feet above mean sea level, Britton Hill in Lake-wood county is the state's highest natural point - and the lowest "high point" in the United States, to boot.

A very informative presentation on SOTA is found in YouTube: "[SOTA \(Summits On The Air\)](#)" by [Michael Sansom](#), [GOPOT](#)

One other popular activity, especially in the USA and Canada, is [Parks on the Air](#) (POTA) which encourages hams to operate from state and national parks. To be recognized, operators need to register with the group, which can be done in their web site. Their rules are simple and listed in their web site. A summary of the most important ones follows:

The operator and all the equipment used need to be within the perimeters of the park, and on federal, state, or provincial owned land.

Operations must be from one reference at a time. If in a park that is a sub-region of a larger park, you can use the reference of the sub-region, or you can also split your



logs as you like for each park too.

A minimum of 10 QSOs are required for the activity to count toward a POTA activation. This must be done within the same day in Zulu Time 00:00 - 23:59.

There are 417 National Parks in the United States and its territories, including parks in Puerto Rico, the Virgin Islands, American Samoa, and Guam, plus 6624 state parks. Of these, 175 parks are in Florida. Parks in Brevard County include the Canaveral National Seashore K-0660), Merritt Island National Wildlife Refuge K-0249), St. Johns National Wildlife Refuge (K-0255), St. Sebastian River Preserve K-3659), Archie Carr National Wildlife Refuge (K-0231), Pelican Island National Wildlife Refuge K-0252), and Sebastian Inlet State Park (K-1914). All POTA approved parks have a designation number.

### Editor's Note:

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

[olardelga@aol.com](mailto:olardelga@aol.com).

ACTIVE REPEATERS AND SIMPLEX FREQUENCIES (FM ANALOG)

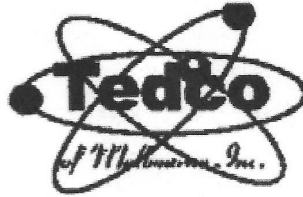
REV 5/25/2018

OUTPUT FREQ.	OFFSET	TO NE	CALL	LOCATION	OWNER
145.130	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ
145.350	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC
145.370	-600	156.7	W2SDC	COCOA	IRARC
145.470	-600	107.2	K4HRS	MELBOURNE	HIRAC
145.490	-600	100	WN3DHI	TITUSVILLE	NORTH NET
146.610	-600	None	W4MLB	MELBOURNE	PCARS
146.775	-600	100	K4KSC	MIMS	TARC
146.850	-600	107.2	W4MLB	PALM BAY	PCARS
146.880	-600	107.2	W4NLX	ROCKLEDGE	IRARC
146.895	-600	107.2/107.2	K4EOC	PALM BAY	EOC
146.910	-600	107.2	K4KSC	TITUSVILLE	TARC
146.940	-600	None	K4GCC	ROCKLEDGE	LISATS
146.970	-600	107.2	K4KSC	TITUSVILLE	TARC
147.075	+600	107.2/107.2	K4EOC	TITUSVILLE	EOC
147.135	+600	107.2/107.2	K4EOC	ROCKLEDGE	EOC
147.240	+600	123	KV4EOC	VOLUSIA	VARES
147.255	+600	107.2	K4DCS	PALM BAY	DCS
147.330	+600	107.2	K4NBR	TITUSVILLE	NBARC
147.360	+600	107.2	N4TDX	TITUSVILLE	NBARC
444.325	+5000	107.2	K4DCS	PALM BAY	DCS
444.375	+5000	107.2		SEBASTIAN	SARNET
444.425	+5000	107.2	W4MLB	Melbourne	PCARS
444.525	+5000	103.5/103.5	K4EOC	ROCKLEDGE	EOC
444.650	+5000	107.2	W4NLX	COCOA	IRARC
444.925	+5000	131.8	N1KSC	KENNEDY SP. CTR.	KSCARC
442.850	+5000	107.2/107.2	N4TDX	TITUSVILLE	NBARC
444.750	+5000	107.2/107.2	N4TDX	TITUSVILLE	NBARC
224.520	-1.600	107.2	N4TDX	Titusville	NBARC
PACKET STATIONS:					
145.010	WINLINK		W2PH-10	PALM BAY	DCS
145.090	PCARS		W4MLB-2	MELBOURNE	PCARS
145.770	SEDAN		K4EOC-7	PALM BAY	N2DB
145.770	SEDAN		KD4MWO-4	TITUSVILLE	N2DB
146.550	SIMPLEX		K4DCS	SOUTH REGION	DCS
147.540	SIMPLEX		K4EOC	RACES Bay	EOC
146.520	SIMPLEX			GENERAL CALL	
146.580	SIMPLEX		W4MLB	MELBOURNE	PCARS
146.480	SIMPLEX		W4NLX	CENTRAL REG	IRARC
146.595	SIMPLEX		K4KSC	NORTH REGION	TARC
146.560	SIMPLEX		NBARC	NBARC General Simplex	NBARC

Repeater in bold are owned by Brevard Emergency Management and are maintained by the county. Truste



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BUD

C.B.RADIO  
CALRAD  
CORNELL DUBILIER  
CELLPHONE AMPS  
CHICAGO MINIATURE  
CINCH JONES  
CLOVER  
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JW DAVIS SOUND  
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MACOM  
MAXON  
MIDLAND  
MOTOROLA

NTE TRANSISTORS  
NELLO TOWERS  
NTE ELECTRONICS  
NORMAN LAMPS

PANASONIC  
PANAVISE  
PHILIPS ECG (SEE NTE)  
PHILMORE  
PIONEER  
POMONA  
POWERSONIC  
PRB  
PROAM ANTENNAS

QUAM  
QUEST

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TRIPPLITE  
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UNIDILLA  
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VECTOR  
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W2AU BALUNS  
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YAESU

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