



SPURIOUS EMISSIONS

INDIAN RIVER ARC

JANUARY, 2019

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

CLUB MINUTES

OFFICERS

PRESIDENT

DAVID LERRET
KU0R

VICE-PRESIDENT

VIRON PAYNE
N4VEP

SECRETARY

STEVE LUCHUCK
N4UTQ

TREASURER

LARRY HENDERSIN
KK4WDD

DIRECTOR

DAVID SLAWSON
K4UZM

NEWSLETTER EDITOR

ARMANDO DELGADO
KN4JN

President Dave KU0R began the meeting at 7:31 PM with the Pledge of Allegiance led by Viron N4VEP. Following the Pledge, Dave called for new members and guests and we had Richard Skibo, looking to become a Technician and Dave Welbourne KG4KYR who is a member of the club but has missed a few meetings. Dave reported that he has 5 people that want to take the Technician exam.

The last meeting minutes published was of the November meeting. A motion was heard to approve the November meeting minutes. A second was heard and the meeting minutes were approved by acclamation.

The Treasurer's report showed \$1963.82 in checking and \$1777.78 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 KU0R reminded the audience that dues are still only \$18.

Tech report: Dave reported that all repeaters are up and operational. Two go-kits are assembled and there are parts for four.

Events: QRP on January 19; the Orlando Hamcation is coming up next month, February 8-10. We are

considering having a table there. Do we want a table at Hamcation? Club members would provide stuff to sell and the club could collect a small commission. Del AK4EY offered some stuff to sell as long as it did not return. MS Walk is coming up in March and we will need volunteers.

Les W9BCH, our Emergency Coordinator, was absent due to scheduled surgery and his report will be deferred until the February meeting.

New Business: The budget is overdue and we were supposed to vote on it in November. Dave presented last year's budget and we will basically use last year's budget as a template for 2019. Dave outlined the expenses. A motion to accept the budget was heard then a second was heard and the budget was approved by acclamation. It can be found in the club web site.

Next Dave approached the subject of the IRARC radio room. Its a mess and we need to fix it up, in case of a storm. We need a place for Central Net. Viron pointed out that Central Net lost a couple of shelters to the North Net. Dave explained how two operators and two dual receive radios could be needed to support an emergency. Dave pointed out that there is no grounding system in the radio room. There is one an-

tenna that has lightning protection at the base of the antenna. Our 80/40 antenna was destroyed by grounds maintenance. The inside of the radio room is not set up for two operators. There is no emergency power in the radio room and at minimum we need 200-300 Ah of battery to run Central Net. How to charge the batteries will be a down the road decision, but solar power is very attractive. Greg AB4GO offered a discussion on how an earth ground was really not needed for the radio room.

There was \$34 in the 50-50 drawing and Dan KN4KKH was found to hold the winning ticket.

Following the 50-50 drawing an interesting video showed how to use SDR Sharp with your sound card, instead of the RTL 2832 USB dongle, to receive VLF radio transmissions and that on one occasion a VLF radio signal made it on to a pop music album and could be decoded by playing the music into the microphone jack and using the SDR Sharp software.

A motion to adjourn occurred at 2030 and was moved and approved.

Respectfully Submitted

Steve N4UTQ

HAPPENINGS

"Station Computers" is the topic of the November 22 episode of the "ARRL [The Doctor is In](#)" podcast, "RF Safety" is the topic of the December 6 episode, "Ground Plane Antennas" is the topic of the next, and "Log Periodic Antennas" is the topic of the latest.

The Canadian National Parks on the Air event (CNPOTA) will get under way on January 1, 2019, and continue until year's end. All radio amateurs are invited to activate any of Park Canada's 48 national parks and 171 national historic sites, while "chasers" attempt to land a contact. Activity for activators and chasers will be tracked on a dedicated website and a real-time leader board, and opera-

tors may compete for online awards and certificates. For updates on the program's progress, visit the [CNPOTA](#) website.

Voyager 2 enters interstellar space. NASA announced that Voyager 2 has exited the sun's magnetic bubble and entered interstellar space. The 70s-era probe is now experiencing a blizzard of

galactic cosmic rays as it charts the unexplored space between the stars. Its twin, Voyager 1, crossed the same boundary in 2012, but Voyager 2's crossing is arguably more significant because it carries a working instrument that can sense interstellar plasmas, providing the first in situ sampling of matter between the stars.

HAPPENINGS

Interesting web site about electronic technobabble:

“Electronics Technobabble Buzzword Jargon Generator Have you ever heard people using technobabble or electronics engineering speak with phrases that sound impressive but mean nothing - you too can have some fun with our technobabble jargon generator.”

www.electronics-notes.com/articles/becoming-an-engineer/phrase-gobbledegook-jargon/electronics-technobabble-generator.php

The third annual **AM Rally** is on the near horizon — just a few weeks away — getting under way at 0000 UTC on February 2 and continuing until 0700 UTC on February 4. The event aims to encourage the use of AM on 160, 80, 40, 20, 15, 10, and 6 meters while highlighting the

various types of AM equipment in use today. The event is open to any and all radio amateurs running AM using any type of radio equipment — modern, vintage, tube, solid-state, software-defined, military, boat anchor, broadcast, homebrew, or commercial. The event website has complete AM Rally details, contact information, award categories, logging, and tips on how to get the most out of your station equipment in AM mode.

Interesting video about portable power supplies: DIY Solar Generator For Emergency Field Communications

<https://forums.qrz.com/index.php?threads/diy-solar-generator-for-emergency-field-communications.638998/>

ON THE AIR

13th Annual Straight Key CW Event

Jan 2-Jan 31, 0000Z-2359Z, K3Y, Various Cities. SKCC - Straight Key Century Club. 21.050 14.050 7.055 3.550. QSL. SKCC c/o Jeremy Downard - KD8VSQ, 511 W. Pottawatamie St., Tecumseh, MI 49286. K3Y/O thru 9 plus KH6, KL7, KP4 and DX member stations in six WAC areas operating straight key, bug and cootie keys. QSL card confirms one QSO per area, up to 19 for all-area sweep. See URL for sched, map, stats, etc. www.skccgroup.com/k3y

4th Annual "RST" Special Event-

Jan 15-Feb 28, 0000Z-2359Z, VE8RST, various, AK. North Country DX Association. All bands, all modes. Certificate & QSL. For QSL: John Reisenauer, 2573 Old Georgetown Rd W, Kershaw, SC 29067. For QSL,

US please send \$1 and SASE, foreign send \$3 and SAE. See website for information on receiving a certificate, and for more information on this event. Participating calls: KL7RST, VE8RST, OX7RST, VY1RST, VY0RST, N1RAC, and K7ICE. www.qrz.com/db/k7ice

SM4KYN will be active again as PJ2/SM4KYN from **Curacao Island**, IOTA SA - 099, 10 December 2018 - 14 January 2019. He is working on 80 - 6m.

Look for special event stations **DF13DEJU, DF13BLN, DF13BUD, DF13MUC, DF13PAR and DF13STO** to be active between January 1st and June 30th, 2019. Activity is to celebrate the 100th anniversary of the maiden flight of the Junkers F-13, the mother of all commercial aircraft. All QSOs

The Swiss national radio society *Union Schweizerischer Kurzwellen Amateure* (USKA) will celebrate its 90th anniversary in 2019. Throughout the whole year, HB9-stations may use the prefix HB90, together with their suffix; and HB3-stations likewise the prefix HB30. More info at

<https://www.uska.ch/>

Normally, the stratosphere is free of clouds—completely transparent. That's because the stratosphere is very dry with a wide separation between sparse molecules of water. When the temperature drops to around -85°C, however, those sparse molecules begin to reluctantly gather, forming crystals of ice that become polar stratospheric clouds. Once thought to be mere curiosities, some PSCs are now known to be associated with the destruction of ozone. One also

wonders if they might affect radio propagation. Images at <http://www.atoptics.co.uk/highsky/nacr1.htm>

China has built a giant experimental radio antenna on a piece of land almost five times the size of New York City (it occupies some 3,700 sq km or 1,400 square miles), according to researchers involved in the highly controversial project. The Wireless Electromagnetic Method (WEM) project took 13 years to build but researchers said that it was finally ready to emit extremely low frequency radio waves, also known as ELF waves. Although the project has civilian applications – officially it will be used for earthquake and mineral detection and forms part of China's 11th five-year plan – it could also play a crucial role in military communications.

will be automatically confirmed after July 15th, 2019, with a QSL card via Bureau.

ANTARCTICA. Felix, DL5XL is QRV as DP1POL from station Neumayer III, IOTA AN-016, until the end of February 2019. Activity is on the HF bands using mostly CW and various digital modes. QSL via DL1ZB0. He will be active also as DP0POL, DP0POL/MM.

NEW CALEDONIA, FK. Phil, F60BD will be QRV as FK/F60BD from December 18 to February 10, 2019. Activity will be holiday style on the HF bands using various digital modes. QSL to home call.

Heli, DDOVR, (along with XYL Bigi, DE3BWR) will be active as C6A/DDOVR from **Bahamas** between January 21st and February 2nd, 2019.

Jean Pierre, F6ITD will be active from **Desirade Island**, IOTA NA - 102, 14 January - 13 March 2019, as FG/F6ITD. He will operate on 160 - 6m SSB, CW, Digital modes.

Mike, OE6MBG will be active as S79AA from **Mahe Island**, IOTA AF - 024, **Seychelles**, 5 January - 2 February 2019. He will operate two weeks from Baie Lazare and two weeks from Anse Boileau.

The first all-metal built airplane, the **Junkers F13**, was introduced to civil aviation 100 years ago. The following special event calls will be commemorating this event between Jan. 1 and June 30: DF13DEJU, DF13BLN, DF13BUD, DF13MUC, DF13PAR, and DF13STO. <http://juf13.de/>

Winter Field Day, sponsored by the Winter Field Day Association (**WFDA**), will take place over the January 26-27 weekend.

Everything you know about dipole (calculators) is wrong ...by Onno VK6FLAB

The other day I did an experiment. I searched for "dipole calculator" and using the first 20 results I calculated the length of a dipole suitable for 7.130 MHz. I chose the frequency for no other reason than there is a 7130 DX net every Monday, Wednesday and Friday and for the longest time I've been unable to participate due to the lack of a HF antenna in my new shack.

So here's some things I learnt from doing this experiment.

Depending on which calculator I use, the length of my dipole can vary by over a meter from longest to shortest result.

Depending on my desire to use metric or imperial measurements, my dipole will be a different length, because of course electrons move at a different speed if you're not using the metric system.

In case you're wondering, 1 inch is defined as being exactly 2.54 cm, so there's plenty of opportunity to vary that.

Speaking of standards, we all agree that the speed of light is a constant, right? Turns out that for some calculators, you can change the speed of light.

I'll skip over the notion that none of the calculators actually show what they're using as the speed of light and move on to other interesting discoveries.

Apparently you can determine the length of a dipole down to the sub-atomic length, with one calculator going down to the size of an electron to indicate how much wire you should cut from a spool.

There are forms that make doing the calculation really easy, single box to type in the frequency, so the answer must be right.

There are some that use random standard numbers, even a text book example that uses some number, but no indication where it comes from. For example, the number 486 features regularly, but so does 150 and 5905.

There are forms that provide you with several boxes, but no indication which box needs what value, so your answer may or may not indicate the number of eggs per

chicken per parsec.

One dipole calculator result is actually for a vertical, so your search engine helping you might not actually give you the calculator you expect.

There are percentage correction factors. 5% seems to be a favourite number, but no indication as to what the origin of that number is.

There's a calculator that allows you to specify the feed point impedance, not sure how that works, but it's a nice feature to have when you're calculating the length of your dipole. Not. One regular instruction is to cut long, that is, measure your wire and cut it longer than the calculator states. How much longer is left as an exercise to the reader. Should it be 1 mm longer, 1 cm longer, or should it be 1 m longer and how much should that change if the frequency changes?

Let's move on. The word ground features heavily in these calculators. The phrase "average ground" does too. No indication as to what makes an average ground, or how to go about determining what changes if your ground isn't average.

We all agree that the dipole should be half a wave-length above the ground, right?

How much is that?

The same wave length as the length of the dipole we've just calculated, or a different one? How does the length of the dipole vary if the height varies? While we're looking at variation, how much variation is there depending on how thick the wire you're using is and what about insulation? None of those things are even mentioned in any of these calculators.

Dipole calculators, wonderful invention, shame about the implementation.

I'm Onno VK6FLAB

Note:

This article is borrowed from QRZ.com.

The original can be found at

<https://forums.qrz.com/index.php?threads/everything-you-know-about-dipole-calculators-is-wrong.630800/>



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, 50.350,
147.555

W1AW QUALIFYING RUN

January 4, 2019 10 PM
Friday 10 - 35 WPM

January 17, 2019 9 AM
Thursday 35 - 10 WPM

W1AW Qualifying Runs are sent on the same frequencies as the Morse code transmissions. Underline one minute of the highest speed you copied, certify that your copy was made without aid, and send it to ARRL for grading. Please include your name, call sign (if any) and complete mailing address. The initial certificate is available for a \$10 fee. Subsequent endorsement stickers are available for a \$7.50 fee.



Editor's Note:

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

olardelga@aol.com.

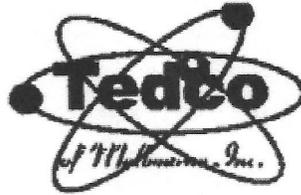
ACTIVE REPEATERS AND SIMPLEX FREQUENCIES (FM ANALOG)

REV 5/25/2018

OUTPUT FREQ.	OFFSET	ZONE	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

437 S. BABCOCK ST.
MELBOURNE, FL 32901
Ph) 321-727-2311
Fax) 321-727-2312



DISCOUNT ELECTRONICS

HAM&CB EQUIPMENT
SECURITY SYSTEMS
BATTERIES(ALL TYPES)
REPAIRS(ALL TYPES)
ANTENNAS - TOWERS
2-WAY RADIO EQUIPMENT

"SALES AND SERVICE"
TELEPHONE SERVICE
COMPUTER REPAIR
STEREOEQUIPMENT
POWER SUPPLIES
TUBE EQUIPMENT

2013 LINE LISTINGS ** THE ONLY REAL PARTS STORE LEFT IN SOUTH BREVARD **

AIM
ALINCO
ANTENNACRAFT
ANTENNA SPECIALISTS
ARRL
ASTATIC
ASTI

BEARCAT
BECKMAN (WAVETEK)
BUSSMAN FUSES
BUD

C.B.RADIO
CALRAD
CORNELL DUBILIER
CELLPHONE AMPS
CHICAGO MINIATURE
CINCH JONES
CLOVER
COBRA
CUSHCRAFT

DALBANI
DECIBEL PRODUCTS
DENNISON
DURACELL
DANTONA IND.

ECG (SEE NTE)
ELECTRONIC RESOURCES
ELECTROVOICE
EVEREADY

FANON-INTERCOMS
FLUKE (WAVETEK)

GC ELECTRONIC
GALAXY
GOLDLINE

HAM RADIO
HARADA
HITACHI
HYGAIN

ICOM RADIO

JSC WIRE
JW DAVIS SOUND
JVC PARTS

KENWOOD RADIO
KOSS
KESTER

LITTELFUSE
LOWELL

M & G
MALLORY
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

RANGER RADIO
RAYOVAC BATTERIES

RUSSELL IND.

SR COMPONENTS
SANYO BATTERIES
SHURE BROTHERS
SONY PARTS

SPECO
SWITCHCRAFT

TEI
TNR BATTERIES
TELEX - HYGAIN
TRIPPLITE
TUBES - ALL TYPES
TV ANTENNA'S

UNIDEN
UNIDILLA
UNION CARBIDE

VARCO
VALOR
VECTOR
VIDEO EQUIPMENT

W2AU BALUNS
WALDOM - MOLEX
WAHL-CLIPPER
WAVETEK (BECKMAN)
WILSON ANTENNAS
WILSON ELECTRONICS

YAESU

WEB PAGE:
www.tedcoelectronics.com

EMAIL:
tedco@bellsouth.net

Hours:
MON - FRI 9 AM - 5 PM
SATURDAY 9AM-3PM

TED - W4LR - GENERAL MGR.

DOTTIE - OFFICE MANAGER