



# SPURIOUS EMISSIONS

**INDIAN RIVER ARC**

MARCH, 2024

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

## CLUB MINUTES

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### HAPPENINGS

**Preparation Underway for Severe Spring Weather** The severe weather season (March through May) is fast approaching, and National Weather Service (NWS) offices across the country are getting ready. Warning Coordination Meteorologist Brandon Peloquin at the Wilmington, Ohio, NWS office said many of the NWS offices across the country meet with partner organizations in the spring to make plans for the

President Steve Luchuck called the meeting to order at 7:15 PM. Following the Pledge of Allegiance Steve called for visitors. There were three non-ham visitors that introduced themselves and a new member, Randy, W4MIF that joined the club tonight.

**President's Report:** Steve mentioned that last Saturday, March 16 was a QRP event at Tom Stratham Park. Viron, N4VEP proceeded to give a review of the activity, the radios they used, the antennas, and the contacts made. Interestingly, Steve, N4UTQ operated a 40-meter NVIS station using an antenna laying on the dock and made a clear contact with a station 15 miles away.

Next, the February meeting minutes were approved.

**Treasurer's Report:** The checking account has \$1902.25 after an increase of \$20.00 from a membership dues paid. The Equipment Fund increased to \$1988.65 after an \$85.00 donation. The Treasurer's Report was approved for audit.

**Technical Committee:** Dave, KU0R remarked his pleasant surprise that all the repeater clocks remained in sync after the time change. All the repeaters are in order and working. Dave also suggested having a show-and-tell of go-boxes in the near future, perhaps at the next Simplex weekend in April. It would be nice to

weather ahead. "Amateur radio operators and weather spotters are extremely important, and we could not do what we do without them," he said. "In fact, many of the watches and warnings issued are made because weather spotters provided critical information." Peloquin said that Doppler radar is a great tool for tracking storms, but weather spotters have a different vantage point and can see things that radar can't. Severe

compare go-boxes before the hurricane season starts.

Following the business meeting, Steve gave a very interesting presentation on Manned Space Crafts. He covered both American and Russian space vehicles, starting with the first manned space capsule, Vostok-1, that carried Yuri Gagarin into space. That was followed by the Voskhod capsule, the second flight of which had the first human space walk by Alexei Leonov. The system used an inflatable airlock.

The first American space capsule was the Mercury. Significant for this vehicle was that to escape in an emergency the astronaut had to remove the instrument panel to slide into the exit hatch.

Next came the Gemini capsule, designed to achieve a rendezvous in space. It used ejection seats for escape in case of emergency.

Zonk was a Russian capsule designed for orbiting the moon. It was half as big as the later Soyuz space craft and orbited the moon carrying test animals. It was the only Russian space vehicle to land in the water.

The Soyuz spacecraft had a toilet but the reentry module had no exit door so the cosmonauts had to be helped out by a ground crew after landing. It also used a gliding trajectory on reentry. The first manned

Soyuz flight ended in tragedy when the parachute system in the landing module failed and cosmonaut Vladimir Komarov was killed.

The Apollo capsules were roomier than the Gemini.

Next, Steve covered the American and Russian lunar modules and compared their characteristics.

The Russian Buran spacecraft copied the American Space Shuttle because the Russians did not have the computing systems to allow them an independent aeronautical design. Their first test flights were unmanned and used jet engines to get the craft to altitude to test its gliding qualities, while the Shuttle was launched from an airplane. Also, the Buran launcher used liquid fuel as compared to the solid rocket boosters of the Shuttle.

Steve then covered all the newer American projects, including the Orion capsule, the Dragon capsule, the CST-100, designed to shuttle to the Space Station, the Dream Chaser, that has no escape systems, the Starship, that will be larger than the Saturn V rocket and designed to land vertically on the moon.

Following the presentation the meeting adjourned at 8:27 PM.

Respectfully submitted,

Armando Delgado, KN4JN

Weather Awareness Weeks are scheduled by each state and usually occur during March to remind and educate communities about severe weather seasonal threats and how to avoid them. The NWS SKYWARN® Storm Spotter Program is a volunteer program with almost 400,000 trained severe weather spotters. Spotter training is available at the state level and is offered several times each

year. \_\_\_\_\_  
Particularly, when operating HF it is important to be mindful of band edges. If you're operating near the upper or lower edges of the band, or of your operating privileges, be aware that your signal's bandwidth may extend beyond what the frequency display on your radio is reading. For example, when operating lower sideband

## HAPPENINGS

phone, if your radio dial reads 7.125 MHz, your signal extends outside of the phone privileges for US amateurs and into the CW portion of the 40-meter band. It may seem trivial, but those are the rules. The ARRL website has a handy, printable [US Amateur Radio Allocations Chart](#) for those who wish to have one for quick reference.

Also, Technician licensees are not permitted to operate digital modes in the HF bands, a minor detail some hams forget.

**Amateur Radio Operators Needed for Help with Solar Eclipse Project** The Case Amateur Radio Club, W8EDU, the club station at Case Western Reserve University in Cleveland, Ohio, is asking for amateur radio operators to help with a re-

search project centered around the April 8, 2024, solar eclipse. All of the participation details are on the club's website at <https://w8edu.wordpress.com/chu-eclipse-data-collection/>.

Also, for the eclipse experiments, Ham Radio Science Citizen Investigation (HamSCI) has presentations for hams interested in participating on Wednesday, March 27 at 8:00 PM (Eastern) - 5:00 PM (Pacific)\*, and that same day at 10:00 PM (Eastern) - 7:00 PM (Pacific)\*. Both 30-minute presentations will be held on Zoom and they will feature HamSCI's Festivals of Eclipse Ionospheric Science (FoEIS). The presenters will take your questions during the presentations.

Here is the [link to the presentations](#). Another link to Solar Eclipse

QSOParty: <https://hamsci.org/seqp-faqs/>

The National Conference of Volunteer Examiner Coordinators (NCVEC) Question Pool Committee (QPC) has removed one General-class license question. The QPC of the NCVEC has deleted question G1E09 from the General-class pool because they have determined the question is defective and must be withdrawn. The ARRL VEC advises the community to regularly check the NCVEC website at <http://www.ncvec.org/> for updates to the question pools, which may include errata and withdrawn questions.

There will be a Frequency Measuring Test on April 24, 2024 starting at 3:00 UTC (that will be 9:00

PM on April 23). The test will start with a 4 minutes call up followed by a 1 minute key down tone for the frequency needed to be measured.

This test is a great opportunity to measure not only the unknown frequency of transmission, but also the qualities, frequency error of your radio, and your skills in using that radio accurately.

For this test there will be two separate stations transmitting, one in Oklahoma and the other in Ohio. This will allow a greater opportunity to copy one or the other station depending on propagation.

For more details and listed frequencies of operation go to <http://fmt.arrl.org>

## ON THE AIR

Special event station IY9MM is QRV until March 31 to memorialize the experiments conducted by Guglielmo Marconi from the ship Regina Elena in the port of Augusta. QSL direct to IT9MRM.

**SINT MAARTEN, PJ7.** Tom, AA9A will be QRV as PJ7AA from March 2 to 30. Activity will be on 40 to 6 meters using CW, SSB, FT8, and FT4.

**BENIN, TY.** Operators F5NVF, F5RAV and M0NPT will be QRV as TY5C from Cotonou from March 2 to 29. Activity will be on the HF bands using CW, SSB, and FT8. This includes being active on Satellite QO-100. QSL direct to F5RAV.

**REPUBLIC OF NORTH MACEDONIA, Z3.** Al, DJ0LZ will be QRV as Z36T from Skopje from February 25 to March 25. QSL

direct to home call.

**MOROCCO, CN.** Yannick, F6FYD will be QRV as CN2YD from Marakesh from March 10 to 23. This includes being active as CN2YD/p on a short visit to Mogador Island, IOTA AF-065. QSL to home call.

**FEDERAL REPUBLIC OF GERMANY, DA.** Special event stations DL75AFUG, DL75AFUV and DP75AFUG are QRV until April 30 to commemorate the 75th anniversary of the first Amateurfunkgesetz, the German amateur radio regulations that came into force on March 23, 1949. QSL via bureau.

**DOMINICAN REPUBLIC, HI.** Special event call sign HI180RD is QRV until April 30 to celebrating the 180th anniversary since the Dominican Republic declared its independence from Haiti. Activity is on all bands and modes. QSL

via operators' instructions.

T32EU Team will be active from **Kiritimati Atoll**, IOTA OC - 024, Kiribati, 13 - 27 March 2024. Team - DF4GV, DL4SVA, DK2AMM, DJ7TO, DL1KWK, DL2AWG. They will operate on 160 - 6m, CW, SSB, RTTY and probably FT8. QSL via DL2AWG, LOTW, ClubLog.

TY5C Team will be active from **Benin**, 1 - 30 March 2024. Team - F5RAV, F5NVF, 7X2TT. They will be active on HF Bands, CW, SSB, FT8 and also via satellites. QSL via F5RAV direct.

A80K Team will be active from **Liberia**, 5 - 19 April 2024. Team - Petr OK1BOA, Petr OK1FCJ, Palo OK1CRM, Pavel OK1GK, Ruda OK2ZA, Ludek OK2ZC, Karel OK2ZI, David

OK6DJ.

They will operate on 160 - 6m, SSB, CW, RTTY, FT8, FT4, PSK and also QO-100, RS44, IO-117. QSL via OK6DJ, ClubLog OQRS, LOTW. A52P op SP9FIH and A52CI op SP6CIK will be active from **Bhutan**, 19 April - 4 May 2024. They will operate on HF Bands. QSL via ClubLog OQRS, LOTW.

**The 2024 Baker to Vegas (B2V) race is set to run on March 23 and 24.** The B2V race features 120 miles of pavement, 20 stages, and more than 10,000 runners. Special event station N6A will be on the air during the race on March 23 - 24, from 1600Z to 0000Z on 7.225 and 14.225 MHz. For those who work the station, a QSL card will be available by contacting Glenn Arrant, N6JAI, at 14723 Puma Trail in Valley Center, California, 92082.

## WW2 Radios of the German Infantry by Armando Delgado, KN4JN

During WW2 the German military used a wide array of radio equipment, covering the HF, VHF, and UHF portions of the radio spectrum. The radios were classified under the term *Funkgerät* which translates as "radio devise". The term generally was shortened to *FuG* along with a numerical designation for each model, such as FuG1, FuG2, etc. The most used portable model for the infantry was the Torn.Fu.d2. The term being a shortening of *tornister-funkgerät* that translates as "backpack radio devise".

The Torn.Fu.d2 was a lower VHF transceiver that operated in the 33.8MHz to 38 MHz range of frequencies in AM and CW. It was introduced to the Wehrmacht in 1937 and was in use throughout the war until 1945. The radio unit consisted of two separate components: the radio and a battery pack connected by a cable, and required two men to carry and operate (Figure 1). The two units were connected by a cable long enough to allow the two soldiers to walk together. The man carrying the battery pack also carried the headphones, the microphone, and a CW key and was the operator as well. Each unit weighed 18 Kg.

The radio had a 6 ft whip antenna, but it could also use a separate antenna with a 12 ft transmission line that permitted it to be placed at a higher location to increase the radio range or to let the men sit in a tent while operating. The power output was 0.4 watts in AM with a range of about 4 Km and 1 watt in CW with a range of about 10 Km.

The transmitter used three tubes, two pentodes, RV2P800 and a triode, RL2T2 for power output. It had a separate frequency dial from the receiver, calibrated in 42 KHz increments covering 100 channels. The receiver, a superheterodyne, used six pentodes, RV2P800, and had an IF of 2.1 MHz and a sensitivity of 3 $\mu$ V input to 1 V output. The power to the tubes from the battery pack consisted of 2 V for the filament and

90 V for the plate, provided by two 90 V cells. With regular use, the batteries lasted 25 hours.(Figure 2). The receiver also had a connection that permitted hooking a telephone transponder that had a landline range of 2 Km.

Towards the end of the war, in October, 1944, the Germans introduced a smaller field radio that could be carried by a single soldier and that used a belt battery pack. It was called *Kleinfunksprecher d - "Dorette"*. This radio operated AM only in the frequency range of 32 MHz to 38 MHz and was meant to replace the Torn-Fu-d2; however, production was limited due to the German industrial damage from the war.

At the beginning of WW2 the Germans moved large numbers of troops during their blitzkrieg attacks across Europe. To succeed, those attacks, involving ground and air forces, required fine and complex coordination. The varied radios used by the Germans greatly contributed to their early victories in that war.



Figure 1. Illustration of German soldiers carrying a Torn.fu.d2 unit.



Figure 2. Torn.fu.d2 radio and battery pack.

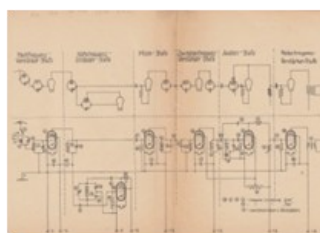


Figure 3. Partial schematic diagram of Torn.fu.d2.



### 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, 50.350, 147.555



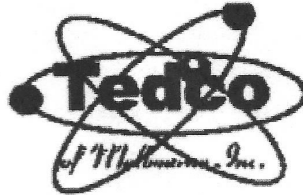
### Editor's Note:

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 INCLUDING DMR, PACKET & SIMPLEX							RACESBRE0008 REV B
Repeaters & Packet are open for all licensed amateur radio operators to use.							
OUTPUT FREQ.	STD. NAME	OFFSET	TONE/CC	CALL	LOCATION	OWNER	NOTES
<b>WBFM</b>							
145.130	130 VB	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ	
145.350	350 SC	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC	Radio Science Club, FI Club
145.370	370 CO	-600	156.7	W2SDB	COCOA-BROADCAST CT.	IRARC	Yaesu Repeater replaced with Bridgecom FM
145.470	470 ME	-600	107.2	K4HRS	MELBOURNE- RIALTO PL.	HIRAC	
145.490	490 TI	-600	100.0	WN3DHI	TITUSVILLE SR405 & Fox lk rd.	WN3DHI	
146.610	610 ME	-600	None/107.2	W4MLB	MELBOURNE- HOLMES HOSP	PCARS	Tone Downlink only
146.625	625 MM	-600	100.0	KE4NUZ	NW of MIMS NEAR HARRISON RD.	KE4NUZ	Limited coverage
146.775	775 MM	-600	100.0	K4KSC	NW of MIMS Hog Valley , W of I95	K4KSC	
146.850	850 ME	-600	None/107.2	W4MLB	PALM BAY- Port Malabar Rd.	PCARS	Tone Downlink Only
146.880	880 RO	-600	107.2	W4NLX	ROCKLEDGE- WUESTHOFF HOSP.	IRARC	FUSION Repeater replaced with Bridgecom F
146.895	895 PB	-600	107.2/107.2	K4EOC	PALM BAY- DeGroot Library	EOC	TSQL as of 5/2018
146.910	910 TI	-600	107.2	K4KSC	TITUSVILLE Water Tower on south st.	TARC	
146.940	940 RO	-600	None	K4GCC	ROCKLEDGE Carver Rd.WLRQ Tower	LISATS	
146.970	970 TI	-600	107.2	K4KSC	TITUSVILLE-T'VILLE TOWERS	TARC	
147.075	075 SC	+600	107.2/107.2	K4EOC	SCOTTSMOOR Near US1-Aurantia Rd	EOC	TSQL as of 5/2018 Relocated 4/2019
147.135	135 RO	+600	107.2/107.2	K4EOC	ROCKLEDGE-EOC	EOC	TSql as of 5/2018
147.240	240 DE	+600	123.0	KV4EOC	DELAND	VARES	
147.255	255 PB	+600	107.2	K4DCS	Near Babcock & Palm City S City limi	PBARC	
147.330	330 TI	+600	107.2	K4NBR	TITUSVILLE-PARRISH HOSP.	NBARC	
147.360	360 TI	+600	107.2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	DSTAR Gateway in work
442.850	850TI4	+5000	107.2/107.2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	TSql;FUSION/WBFM/WIRES-X
444.325	325ME4	+5000	107.2	K4DCS	MELBOURNE-TRINITY TWRS-E	PBARC	
444.375	CNLBRE	+5000	107.2		I95 FDT Twr 1/2 Mile N of County Lin	SARNET	"SARNet Sebastian Repeater"
444.425	425ME4	+5000	107.2	W4MLB	MELBOURNE- RIALTO PL.	PCARS	
444.525	525RO4	+5000	103.5/103.5	K4EOC	ROCKLEDGE-EOC	EOC	TSql; VOICE/NBEMS
444.650	CNMBRE	+5000	107.2	W4NLX	COCOA-FHP SR520	IRARC	"SARNet Cocoa Repeater"
444.750	750TI4	+5000	156.7/156.7	N4TDX	TITUSVILLE- TGO WATERTOER 230 ft.	NBARC	TSql
444.875	875MI4	+5000	107.2	KC2UFO	MERRITT IS. COURTNEY SPRS.	K4UJZM	
444.925	925KS4	+5000	131.8/131.8	N1KSC	KENNEDY SP. CTR.-VAB	KSCARC	FM Tsql ; P25 capable
224.120	120CO2	-1600	123.0	AA4CD	COCOA Broadcast Ct.	AA4CD	
<b>DMR</b>							
444.150	150TI4	+5000	CC1	K2JO	TITUSVILLE-PARRISH HOSP.	KC2CWT	DMR FL
444.575	575CO4	+5000	CC3	K4DJN	COCOA BROADCAST CT.	AA4CD	DMR Brandmeister
444.675	675TI4	+5000	CC3	K4DJN	TITUSVILLE-T'VILLE TOWERS	AA4CD	DMR Brandmeister
<b>ATV</b>							
427.250	250CO4			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPUT 439.25 See www.lisats.org
<b>PACKET STATIONS:</b>							
145.090	WL2KPB	WINLINK		W2PH-10	PALM BAY-W2PH QTH	PBARC	WINLINK GATEWAY
145.090	090 ME	PCARS		W4MLB-2	MELBOURNE-TRINITY TWRS-EAST	PCARS-K1YON	BBS W4MLB-4 EASTNET
145.770	770 PB	SEDAN		K4EOC-7	PALM BAY	N2DB	http://www.fla-sedan.com
145.770	770 TI	SEDAN		KD4MWO-4	TITUSVILLE	N2DB	INACTIVE NODE
<b>BREVARD RACES/ARES SIMPLEX</b>							
146.480	CENTX	SIMPLEX		N/A	CENTRAL REG	IRARC	CENTRAL NET SIMPLEX BACKUP
146.550	SOUTHX	SIMPLEX		N/A	SOUTH REGION	PBARC	SOUTH NET SIMPLEX BACKUP
146.580	MLBX	SIMPLEX		N/A	MELBOURNE REGION	PCARS	MELBOURNE REGION NET SIMPLEX BACKUP
146.595	NORTHX	SIMPLEX		N/A	NORTH REGION	TARC	NORTH NET SIMPLEX BACKUP
147.540	EOCROX	SIMPLEX		N/A	RACES Bay	EOC	EOC VOICE/NBEMS
<b>SIMPLEX</b>							
146.520	CALL52	SIMPLEX		N/A	Station to station, anywhere		VHF national simplex calling freq
146.490	TAC A	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
146.560	NBRX	SIMPLEX		N/A	NBARC -Club/Parrish Hosptial Activities		
146.580	TAC B	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	TAC C	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	IRARCX	SIMPLEX		N/A	IRARC "FUN NET" and CLUB ACTIVIES		
147.450	TAC D	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.570	TAC E	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.000	CALL46	SIMPLEX		N/A	Station to station, anywhere		UHF national simplex calling freq
446.500	TAC A4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.600	TAC B4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.700	TAC C4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
2 Meter & 70 cm WBFM repeaters use CTCSS; if one frequency is listed it is for uplink (user Tx) , if two are listed the repeater is set for uplink and downlink (user Tx and user Rx)							
Repeater Call Signs in bold are owned by Brevard Emergency Management and are maintained by the county. Repeater Trustee: Ron K2RJ							
NOT ON AIR							
Standard Names in Bold are recommended for Emergency Radio in Brevard *							
PBARC= Palm Bay Amateur Radio Club (Replaces DCS for South Brevard) See Ed W2PH for more info							

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C.B.RADIO  
CALRAD  
CORNELL DUBILIER  
CELLPHONE AMPS  
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COBRA  
CUSHCRAFT

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GOLDLINE

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HARADA  
HITACHI  
HYGAIN

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