



**INDIAN
RIVER ARC**

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

VOLUME XLI, NUMBER 4

SPURIOUS EMISSIONS

APRIL, 2020

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CLUB MINUTES

The club meeting scheduled for April 21 has been canceled due to the corona virus restrictions on public gatherings.

The May meeting should be on May 19, if all is well.

Monitor the Wednesday ARES net on 145.37 MHz at 7:15 PM for further information about club activities.

REMINDER

The club meeting date and location have changed.

The club will now meet on the **third Tuesday** of each month at **7:00PM** in the **River of Life Assembly of God Church** at **1890 N. Courtenay Pkwy** on Merritt Island.

HAPPENINGS

Starting on March 9, a group of German radio amateurs will attempt to determine how long it takes to complete DXCC using only FT8 protocol. "Today, more than 80% of the QSOs are made by FT8 operators," the group said. "Our goal is to get the DXCC in the shortest possible time." Using the call sign DR4K, the operators have set several conditions. They will not use any spotting assistance, will limit transmitter output

to 50 W, will only call CQ, and will not use FT8 fox/hound mode. DR4K will operate on 80, 40, 30, 27, 15, and 12 meters as much as possible. "As soon as we have reached our goal, the experiment is over," the DR4K team said. "After that, you probably will never work DR4K in FT8 again." "All contacts will be confirmed with a special event QSL card. Logs will be uploaded to Logbook of The World (LoTW) and Club

Log. (Addendum: the group announced later date that they will start their experiment at some later date without any announcements).

Official QO-100 International Emergency Frequency

In order to coordinate potential emergency communications, a frequency has been assigned as the international emergency frequency on the QO-100 geo-

stationary satellite narrow band transponder
QO-100 International Emergency Frequency
Downlink: 10489.860 MHz
Uplink: 2400.360 MHz
SSB channel: max. 2.7kHz bandwidth
All users on QO-100 are encouraged to monitor this frequency, but keep it clear for emergency traffic!
QO-100 Information: at:

HAPPENINGS

<https://amsat-uk.org/satellites/geo/eshail-2/>

Use of Special Call Sign Suffixes in the US During COVID-19 Pandemic

Some countries have authorized selected radio amateurs or organizations to identify with longer-than-normal suffixes that relate to the COVID-19 pandemic, such as "STAYHOME." FCC Part 97 Amateur Radio Service rules do not provide for amateur call sign suffixes longer than three characters, but a potential workaround exists. As §97.119 (c) of the FCC's Amateur Radio Service rules states: "One or more indicators may be included with the call sign. Each indicator must be separated from the call sign by the slant mark (/) or by any suitable word that denotes the slant

mark. If an indicator is self-assigned, it must be included before, after, or both before and after, the call sign. No self-assigned indicator may conflict with any other indicator specified by the FCC Rules or with any prefix assigned to another country." While ARRL has no plans to sponsor or support an effort as an ARRL contest-based activity, licensees desiring to do this as a one-off stay-at-home event are welcome to do so.

Annual Armed Forces Day Crossband Test Postponed Due to the ongoing COVID-19 response and mitigation actions, the 2020 Armed Forces Day (AFD) Crossband Test scheduled for Saturday, May 9, has been postponed. Armed Forces Day Crossband Test planners are considering scheduling a November event in honor of Veteran's Day, depending on

COVID-19 mitigation actions. During the AFD Crossband Test, military stations in various locations transmit on selected military frequencies and announce the specific ham frequencies they are monitoring to work radio amateurs.

New Volunteer Monitor Program is Up and Running

After kicking off on January 1, the new Volunteer Monitor Program has ramped up to operational status. A "soft rollout" of the program began on February 1, designed to familiarize Volunteer Monitors (VMs) with issues on the bands and to put into practice what to report — and what to ignore, based on their training. The VMs not only will be looking for operating discrepancies, but for examples of good operating. Details [here](#).

Amateur radio operators affiliated with the American Red Cross will conduct a nationwide communication drill on May 30. The drill will simulate the types of message traffic that are typical of a national disaster response, such as a hurricane or wildfire. Hams will utilize digital modes to move a variety of Red Cross data, with special focus given to methods that do not require infrastructure, such as a repeater or the internet. The drill features a local option where ARES organizations can work with local Red Cross chapters to drill local and regional functionality

ON THE AIR

Franklin County VA Moonshine Heritage Month

Apr 15-Apr 30, 0500Z-0000Z, W4M, Glade Hill, VA. Whiskey 4 Moonshine - W4M. All standard digital frequencies; Phone: 28.400 21.300 14.250 7.215 3.850 1.900; CW 28.100 21.105 14.050 7.050 3.550. QSL. Bryant Johnson, P.O. Box 103, Glade Hill, VA 24092. Franklin County VA is considered by many to be the Moonshine capital of the world. In celebration of the 100th anniversary of the passage of Prohibition we will commemorate the heritage of the moonshiners with a special event station that will operate for the period of 4-15-2020 until 4-30-2020 on 10 meters thru 160 meters. More info [here](#).

International Marconi Day Apr 25, 0000Z-2359Z, W4S, Fernandina Beach, FL. Cornish Radio Amateur Club. 7.200. Certificate & QSL. Brian Page,

1717 Tidewell Trace, Lawrenceville, GA 30043. W4S will operate from Fernandina Beach, Florida, site of the 1911 Marconi Company station MSF, an official Marconi Station. QSL from W4S for single contact. A certificate from the Cornish Radio Amateur Club is offered for operators establishing contact with 15 official IMD stations. Details are on the [web site](#).

The INDYCAR Grand Prix May 3-May 9, 0400Z-0400Z, W9IMS, Indianapolis, IN. The Indianapolis Motor Speedway Amateur Radio Club. 18.140 14.245 7.245 3.840. Certificate & QSL. Indianapolis Motor Speedway Amateur Radio Club, P.O. Box 30954, Indianapolis, IN 46230. See website for all [details](#).

World War 1 Armistice Commemoration May 9, 1400Z-2200Z, WW1USA, Kansas City, MO. National World War I Museum and Memorial. SSB 14.225

7.250 CW 14.060 7.060. Certificate. WW1USA Amateur Radio Station, 2 Memorial Drive, Kansas City, MO 64108. We are commemorating the 101st anniversary of the signing of the peace treaties ending World War 1. Our operations will be on the south lawn of the Museum. All local and visiting hams are invited to come visit.

Old Timers Day May 1-May 3, 0001Z-2359Z, W4T, Dickson, TN. Dickson County Amateur Radio Club. 14.280 7.245 3.980 146.520. QSL. Vollie Miller, 1755 E. Piney Rd., Dickson, TN 37055-3835. [www.wc4dc.org](#)

75th Anniversary of the Victory in Europe May 8-May 23, 1800Z-2359Z, W2V, Ansonia, CT. VOA Radio Club. 14.345 21.345 7.245 3.845. QSL. Dave Arruzza, 32 Benz Street,

Ansonia, CT 06401. w2v.se@yahoo.com or www.qrz.com/db/w2v

Armed Forces Day Observance May 16, 1630Z-2130Z, W5KID, Baton Rouge, LA. Baton Rouge Amateur Radio Club. 14.250 14.035 7.225 7.035. QSL. USS KIDD Amateur Radio Club, 305 S. River Road, Baton Rouge, LA 70802. Operation aboard the USS KIDD (DD-661), WW II Fletcher Class destroyer. www.qrz.com/db/w5kid

Memorial Day May 18-May 25, 0000Z-0000Z, K1A, Cleburne, TX. Club KC5NX. 14.250 14.045 7.233 7.045. QSL. Club KC5NX, 9200 Summit Court West, Cleburne, TX 76033-8212. K1A will be on the air the week May 18th till the 26th to honor the many lives lost in the service of the United State Military. Sponsored by Club KC5NX deep in the Heart of Texas! www.qrz.com/db/kc5nx

The 160 Meter Band by Armando Delgado, KN4JN

The 160 meter band is the oldest amateur radio band. When radio was in its infancy at the turn of the last century, common knowledge determined that the best bands for transmission were in the range of 500-300 meters wavelength. At that time transmitters did not have dials or frequency controls and the transmitting frequency was determined by the antenna size. There were no government regulations either on radio operations. Anyone could set up a transmitter and get on the air, and many did. By 1912 there were so many people on the airwaves that interference between commercial, military, and amateur operators was a major problem and the U.S. Congress took action to resolve these conflicts. In 1912 Congress passed a law to regulate radio transmissions. Congress determined that amateurs had to be licensed and that they had to operate in bands shorter than 200 meters wavelength. This ruling was a compromise to please the opponents of amateur radio who wanted to ban amateurs from the airwaves altogether. The scientific consensus at the time believed that the shorter wavelengths were useless for distance communications and by limiting hams to operate in those frequencies, in time, amateur radio would disappear.

For the next decade amateurs continued to operate in the band just below 200 meters, but also continued to experiment with shorter wavelengths. In 1921, hams made contact with Europe using those shorter wavelengths and proved that this portion of the spectrum was not only useful but much better for long distance communications, thus changing radio transmitting forever.

In 1927 Congress revised the Radio Act of 1912 to deal primarily with commercial broadcast stations that, unregulated, were interfering with each other. At this time, they assigned frequencies to different services. The amateurs got segments in the 160m, 80m, 40m, 20m, 10m, 6m and 70 cm bands.

In the 160 meter band they got frequencies from 1716- 2000 KHz. In 80 meters the range, as of today, 3500-4000 KHz, but shared with government services. On 40 meters also the frequencies were the same as today, 7000-7300 KHz. On 20 meters the assignment was 14005-14350 KHz. There was no 15 meters assignment at this time. On 10 meters the spectrum was the same as today from 28000-30000 KHz. On 6 meters the assignment was 56000-60000 KHz. And on 70 cm it was 400-401 MHz.

In spite of the new band assignments, most hams continued to operate in the 160 meters band for many years. This was the band they first learned and used, and they were familiar with it. At that time knowledge of radio propagation was mostly empirical, learned through trial and error. Hams knew that they could depend on the 160 meter band any night of the year. However, as radio equipment improved they began to appreciate the advantage of the higher frequencies for DX contacts and of the smaller antenna sizes required.

Although reliable, the 160 meters band suffers a number of significant drawbacks. It is a noisy band, particularly in the summer time and it requires large antennas. A dipole for 160 meters would be 240 feet long, a size most hams don't have enough real estate to install. Not only that, but at the heights most hams can afford for their antennas, such a dipole would be a NVIS antenna useless for DX work. So as time went by most hams began to favor the higher frequencies, particularly for dx contacts.

Over time, amateurs developed techniques to succeed in dx transmissions on 160 meters. These primarily consisted of building short vertical antennas. The most popular design

was the inverted-L antenna that consists of a vertical wire segment with a horizontal top section that serves as a capacitive hat. The antenna is fed through an induction coil and has a set of ground radials. Invariably, these antennas work well and solve the DX problem, but still occupy a fair amount of real estate, although like everything "amateur" compromises can be had.

In 1942 the US developed the Loran system of radio navigation that operated on two frequency bands, at 1.85 and 1.95 MHz. These same frequencies were used by radio amateurs in the amateur radio 160-meter band, and amateur operators were under strict rules to operate at reduced power levels to avoid interference; depending on their location and distance to the shore, U.S. operators were limited to maximums of 200 to 500 watts during the day and 50 to 200 watts at night. Of course, during World War II amateurs could not operate at all, but after the war, once the amateur restrictions were lifted, the Loran rules greatly limited amateur operations in the 160 meter band.

With the advent of satellite navigation systems, the government cancelled the Loran system in 1980 and the amateur restrictions on the band were lifted soon after. Thereafter, the 160 meter band began to gain in popularity again. Today, with the low solar cycle in full swing, 160 meters is extremely popular, especially after sunset, since it provides reliable long distance communications, and in spite of its limitations provides challenges that amateurs cannot ignore.



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



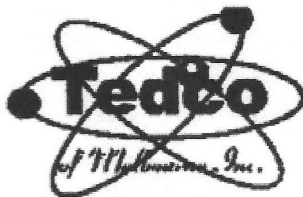
Editor's Note:

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

olardelga@aol.com.

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
WBFM							
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	W4NXL	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	W4NXL	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	
DMR							
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
ATV							
427.250	250CO4			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPUT 439.25 See www.lisats.org
PACKET STATIONS:							
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
BREVARD RACES/ARES SIMPLEX							
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
SIMPLEX							
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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