



**INDIAN
RIVER ARC**

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

VOLUME XLI, NUMBER 7

SPURIOUS EMISSIONS

JULY, 2020

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CLUB MINUTES

The July club meeting was conducted by Viron, N4VEP, via Zoom. The meeting called to order a 7:00 PM with 8 members participating. Following the Pledge of Allegiance, Viron proceeded with the business portion of the meeting. A slide presentation of the topics to be discussed was previously sent to the membership by Steve, N4UTQ.

The Treasurer's Report presented by Viron since Larry, KK4WDD, the Treasurer was absent. It showed an Equipment Fund totaling \$1,778.50, a General Fund of \$759.39 and miscellaneous amount of \$44.00 for a grand total of \$2581.89.

The Technical Committee report, also presented by Viron showed all repeaters are up and running, including the BEARS 444.525 and 147.135 repeaters.

The President's Report fol-

lowed: Club meetings will continue on the third Tuesday of the month at 7:00 PM at the River of Life Church on Merritt Island. The next meeting being on August 18.

Viron will meet with Brevard County Sheriff Wayne Ivey on July 23 to discuss the role of amateur radio in Brevard County, pertaining to EMCOM operations.

In New Business: Coast Guard Day will be Sunday, August 2, starting at 10:00 AM. The Christmas Party is tentatively fixed for Tuesday, December 15.

Following the business meeting, Viron showed a presentation on the use of amateur radio during hurricane emergencies. The quality of the Zoom presentation left much to be desired, but the YouTube videos can be found at <http://youtu.be/6020BqgKwek> and <https://youtu.be/6jBwvOe1Ns>.

Following the presentation Viron mentioned that only 4 members submitted Field Day logs to the club. Even so, there were over 200 contacts made. He also mentioned the proposed Conex container for the club radio station and the need to consider donations to achieve this piece of equipment.

A motion to adjourn was voted at 7:35 PM.

Respectfully submitted for the Secretary

Armando, KN4JN, Newsletter Editor

HAPPENINGS

Members of the Military Auxiliary Radio System (MARS) will conduct an HF skills exercise July 20 – 24 to hone their operating skills and messaging-handling capabilities. MARS members will be reaching out to the amateur radio community via the 60-meters Channel 1 Net (5330.5 kHz dial) twice a day, the SATERN HF net (14.265 MHz), and by contacting various stations via HFLink throughout the exercise. MARS

members will be requesting assistance with collecting county status information as well as airport weather information, called METARs. MARS members will also be passing ICS 213 messages to numerous Department of Defense (DoD), federal, and amateur radio addressees.

Researchers Use 200 Years of Sunspot Observations to Create "Sun Clock." Researchers in the

UK and the US have developed a new "sun clock" that quantifies extreme space weather and pinpoints distinct on/off times of high solar activity and space weather. More details [here](#).

For the past 10 years, NASA's [Solar Dynamics Observatory](#) has been consistently taking pictures of the sun – one every three-quarters of a second – across a number of different

wavelengths. Images of the extreme ultraviolet wavelength of 17.1 nanometers reveals the sun's corona, and hourly corona pictures have been combined into a [time-lapse movie of the last decade of solar activity, condensed into about 60 minutes](#). Use the video playback controls to flip between the starting and later portions to visualize how activity has

HAPPENINGS

diminished between 2010 and now

NOAA has released a new [interactive tool](#) to explore the solar cycle. It lets you scroll back through time, comparing sunspot counts now to peaks and valleys of the past. One thing is clear. Solar Minimum is here, and it's one of the deepest in a century.

The ARRL's **ARES Connect** tool is not just for ARES anymore: It's evolved to become a robust and efficient data entry/

retrieval portal, report generator and management system for *all* Amateur Radio public service volunteers. More details [here](#). There are currently over 14,000 registered users in the system. Sign up for the section in which you reside by using the following format (substitute your section's official 2- or 3-character abbreviation for "nfl," which is the Northern Florida Section). <http://nfl.arrrl.volunteerhub.com/>

An article to supplement this month's article on satellite etiquette, titled "Getting Started on

the Amateur Radio Satellites" by Keith Baker, KB1SF/VA3KSF can be found [here](#).

The club is considering resuming training classes for new hams. Also, under consideration is offering upgrade classes for General and Amateur Extra licenses. These classes would be virtual events using Zoom. All interested contact Viron, N4VEP or this newsletter editor, Armando, KN4JN.

W1AW Qualifying Runs For July
Local (Eastern)

Date	Time	Day
July 21, 2020	9 AM	Tuesday
10 - 35 WPM		
July 22, 2020	10 PM	Wednesday
35 - 10 WPM		
July 23, 2020	7 PM	Thursday
10 - 35 WPM		
July 24, 2020	4 PM	Friday
10 - 40 WPM		

ON THE AIR

FEDERAL REPUBLIC OF GERMANY, DA. Special event station DLOSOP will be QRV from July 1 to 31 to commemorate the 62nd edition of the Sea Of Peace Award. QSL direct to DL4SVA.

UK Various. Members of the Royal Signals Amateur Radio Society will be QRV with special event call GB100RS from June 28 to the end of October to mark the society's 100th anniversary. QSL via bureau.

DENMARK, OZ. Carsten,

OZ4CG will be QRV as OZ4SOP from Bornholm Island, IOTA EU-030, from July 1 to 31 for the Sea Of Peace Award. Activity will be on the HF bands using only CW. QSL via LoTW.

ANTARCTICA. Alexander, RX3ABI is QRV as RI1ANM from the Mirny Antarctica Base Station, IOTA AN-016, and is here until early 2021. Activity is limited to his spare time on various HF bands, most likely on 40 and 20 meters using FT8 between 0200 to 1530z.

INDIA, VU. Operator VU2TU0 is

QRV with special call AT2ARA until September 23 during the COVID-19 pandemic. QSL via operator's instructions.

SWITZERLAND, HB. Special event station HB15SOTA is QRV until May 8, 2021 to mark the 15th anniversary of SOTA activities in Switzerland. QSL via operators' instructions.

JAPAN, JA. Special event station 8N1ABIKO is QRV until the end of 2020 in celebration of the founding of Abiko-City,

IOTA AS-007. QSL via bureau.

US Coast Guard 230th Birthday
Aug 4-Aug 5, 1400Z-0400Z, K1CG, Port Angeles, WA. CG CW Operators Association. 21.052 14.052 7.052 3.552. QSL. CG CW Operators Association, Fred Goodwin, 424 N. Bagley Creek Rd, Port Angeles, WA 98362. www.qrz.com/db/k1cg

International Lighthouse Lightship Weekend - ILLW 00.01UTC 22 August 2020 to 2400UTC 23 August 2020 (48 hours)

5 Tips on Etiquette and Good Manners on the FM Ham Radio Satellites by Sam Kutzko, KX9X

Manners are a good thing. They help us make a good impression and build our reputation at work, school, or any social gathering. We generally like hanging out with positive people and not the grumpy, negative ones. Amateur Radio is no different. Hams want to make radio contacts without interfering with others trying to do the same thing. We all share our little corner of the radio spectrum—and a little courtesy can go a long way.

Satellite operating comes with several challenges, not the least of

which is it is one of the ultimate shared resources in the hobby. While there are now several satellites to choose from, a given satellite is only above the horizon for a maximum of 15 minutes or so. Lots of people trying to access a satellite during a short window of opportunity can create problems, and that can bring out some undesirable behavior. There's a natural sense of urgency that develops if a pass is close to ending and you still haven't gotten

through to a station you want to contact. In other cases, new operators—still actively learning how to hear and make it into a satellite—may not have been introduced to some of the finer techniques.

There are a few simple rules and operating tips that can make satellite passes more enjoyable and less frustrating for everybody. Some are common courtesy, some are technical in nature, and some are protocols that have developed

over the years that new satellite operators simply don't know yet. These tips will help make your satellite time more enjoyable and help you be a good team player on satellite passes. I wrote these tips primarily with the single-channel FM satellites in mind, but they could easily apply to the linear satellites as well. If you're brand new to satellite operating, check out some of my earlier [blogs](#) to help you get started.



Michael, HB9WDF, operated satellites from the island of Bonaire in the Caribbean as PJ4/HB9WDF in late January/early February 2020. While Bonaire is common on HF, it's quite rare on satellite. Expeditions like Michael's helps satellite operators achieve DXCC. (Michael Lipp, HB9WDF, photo)

The Big One

For most of us, our Ham Radio mentors hammered into our heads this simple tip: *Listen, listen, listen!* For FM satellite operating, this definitely applies, but there's an important corollary: *Don't transmit if you can't hear the satellite first.*

There are numerous passes where you can hear a whistler or somebody saying something along the lines of, "Helllllloooooo," "Check one two," or simply giving their call over and over. It becomes clear very quickly that they are trying to hear themselves through the satellite, an understandable goal. The problem is that they could actually be making it into the satellite when transmitting, disrupting the pass for other users. In most cases, you will hear other people on the satellite right when it comes up over your horizon.

If you don't hear other activity, you're probably not going to hear yourself, either. Blindly calling or whistling may cause unintentional interference to other stations that can properly hear the satellite.

Wait Your Turn

Just as you wouldn't interrupt a conversation in person or step on a QSO in progress on HF, it's bad form to call a station while they are trying to complete a contact on satellite or attempt to initiate a new contact before another QSO is

finished. Given the rapid nature of satellite contacts, you shouldn't have to wait very long for your chance during a pass.

Use Phonetics at All Times

It's easy in the heat of a pass to simply say your call as fast as possible when making a contact. However, even on FM satellites, certain letters sound the same. B, C, D, G, P, T, V, and Z are strikingly similar. Please always use standard international phonetics when giving your call over the air. Phonetics help ensure your call is copied correctly the first time and can save a lot of precious moments during a short pass.

Minimize Repeat QSOs

It is understandable to want to say hello to a friend during a satellite pass. But keep in mind the scarcity of time available during a pass; each contact you make with a person you've already had several contacts with prevents another person from making a contact. That person may be new to satellite operating or trying to work a rare station. If a pass is particularly busy, consider whether you really need to make another contact with a station you've already worked several times.



Paul Stoetzer, N8HM, is a veteran satellite operator and grid activator. Here he is operating from the grid line between EN84 and EN85 in northern Michigan back in 2014. (Paul Stoetzer, N8HM, photo)
Let Rare Stations Have More Time

Most satellite ops are chasing various operating awards, such as the ARRL's VUCC for working over 100 different grid squares, Worked All States, or even DXCC. As on HF, satellite operators will go to significant trouble and expense to transmit from some rare locations. In other cases, genuine DX stations can be heard in the U.S. on satellite, especially from the Caribbean and Central and South America.

It is true that you have the right to be on any satellite pass you can access and can try to work stations at a pace and in a manner you choose. It is also true that satellites are available to all, regardless of where you are or how rare your operating location is. However, try and have some consideration for a station that is operating portable or in a rare location; they may only be at that location for the day, or even a single satellite pass.

It may be best to let the rare station have the pass and try to work as many stations as they can. In some cases, the rare station may only be audible for a portion of the pass you're on, with the station moving out of the satellite's footprint before it moves out of range for you. That would leave you with some portion of the pass to try and work stations. If you're operating from home, there will always be another pass or another satellite you can work.

How do you know if there will be a rare station on during your pass? Check the [AMSAT Upcoming Satellite Operations](#) page for the latest news. In addition, many active grid rovers use Twitter to post real-time updates on operation schedules. Search for #AMSAT to find posts from active satellite operators, and follow @AMSAT as well. Of course, listening before transmitting is still the best way to tell who's on a pass.

Satellite activity is at an all-time high, with new sats being launched on a regular basis and more operators discovering how much fun there is to be had. By being mindful of others trying to make contacts and thinking of others on the pass, we can all contribute to a better satellite environment for everyone.

Have a question about satellite etiquette? **Drop me a line!** [kx9x@yahoo.com]

*The preceding article was taken from the amateur radio blog **On All Bands** by Dx Engineering.*

<https://www.onallbands.com/ham-radio-satellite-operating-etiquette/>



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 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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ASTI

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BUSSMAN FUSES
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C.B.RADIO
CALRAD
CORNELL DUBILIER
CELLPHONE AMPS
CHICAGO MINIATURE
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FLUKE (WAVETEK)

GC ELECTRONIC
GALAXY
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JSC WIRE
JW DAVIS SOUND
JVC PARTS

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LOWELL

M & G
MALLORY
MACOM
MAXON
MIDLAND
MOTOROLA

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NELLO TOWERS
NTE ELECTRONICS
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