VOLUME XLIII, NUMBER 12

SPURIOUS EMISSIONS

DECEMBER, 2022

INDIAN RIVER ARC

P.O. BOX 237285, COCOA
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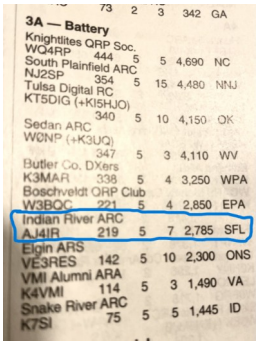
HAPPENINGS

The FEMA Emergency Management Institute (EMI) has released a new online study course and exam on Preparing the Nation for Space Weather Events. The course identifier is IS-66.

December is YOTA Month December is Youngsters On The Air month. This is an opportunity for individuals, clubs, groups and schools to run an amateur radio station with the aim of getting youngsters active on the air.

Listed in the adjacent image are the results of the club's Field Day 2022. We are listed as a club with 3 transmitters, battery operation, and QRP, with 7 operators, made 219 contacts, and a total score of 2785. the image also shows all the clubs participating in that category.



	73	2	3	342	GA
3A — Battery					
Knightlites QRP Soc. WQ4RP	444	5	5	4,690	NC
South Plainfield ARC NJ2SP	354	5	15	4,480	NNJ
Tulsa Digital RC KT5DIG (+KI5HJO)	340	5	10	4,150	OK
Sedan ARC W0NP (+K3UQ)	347	5	3	4,110	WV
Butler Co. DXers K3MAR	338	5	4	3,250	WPA
Boschveldt QRP Club W3BOC	221	5	4	2,850	EPA
Indian River ARC AJ4IR	219	5	7	2,785	SFL
Elgin ARS VE3RES	142	5	10	2,300	ONS
VMI Alumni ARA K4VMI	114	5	3	1,490	VA
Snake River ARC K7SI	75	5	5	1,445	ID

The new ARRL Southeastern Division Director for the cycle 2023-2025 will be Mickey Baker, N4MB of Palm Beach Gardens, Florida and the Vice Director, Jeff Beals, WA4AW of Loxahatchee, Florida. They were elected on November 18, 2022.

On December 1, 2022, YOTA begins a month-long, special event to celebrate young amateur radio operators

HAPPENINGS

-- YOTA Month 2022. YOTA is Youth or Youngsters on the Air. Amateur radio operators aged 25 and younger will be on all bands using all modes throughout the month to make contacts around the world. In the United States, the call signs for the event will be K8Y, K8O, K8T, and K8A. Argentina will be active as LR1YOTA, Canada as VC3YOTA and VB7YOTA, El Salvador as YS1YOTA, and Honduras as HQ2YOTA. Amateur radio operators are encouraged to listen for and contact these stations, as well as all call signs ending in the letters "YOTA" across the globe. Find more information at https://www.iaru.org/on-the-air/youth-in-amateur-radio.

A Christmas Message to the World
On Christmas Eve morning, December 24, 2022, the Alexander Grimeton Friendship Association, in southern Sweden will be on the air sending out a special Christmas message to the world.

The event will begin at 08:30 CET (07:30 UTC) with the startup and tuning of the Alexanderson alternator transmitter through Grimeton Radio Station, call sign SAQ. The transmission will begin at 09:00 CET (08:00 UTC) with the 98-year-old 200 kW Alexanderson alternator on 17.2 kHz CW.
Grimeton Radio Station, SK6SAQ, will be QRV (ready) on the following frequencies:
3.535 MHz CW
7.035 MHz CW
14.035 MHz CW
3.755 MHz SSB
7.140 MHz SSB
QSL reports can be sent to SK6SAQ via email at info@alexander.n.se.
The event will also be live streamed on the Alexander SAQ Grimeton Friendship Association YouTube Channel.
The Alexanderson alternator transmitter is the only remaining example of early pre-electronic radio transmitter technology.
The station, built in 1922 - 1924, has been preserved as a historical site. From the 1920s through the 1940s, it was used to transmit telegram traffic by Morse code to North America and throughout the world during World War II.
More information about the December 24 Christmas Eve event and the transmitter can be found at the Grimeton Radio Station website.

New General Question Pool Released for Ham Radio Licensing Effective July 1, 2023
The National Conference of Volunteer Examiner Coordinators' (NCVEC) Question Pool Committee (QPC) has released the 2023 - 2027 General Class FCC Element 3 Syllabus and Question Pool to the public. The new General Question Pool is effective July 1, 2023, through June 30, 2027.
The pool is available as a Microsoft Word document and PDF.
The single graphic required for the new General Question Pool is available within the documents, or separately as PDF and JPG file formats.
General class examination candidates preparing for their exams using the 9th edition of The General Class License Manual, and/or the 6th edition of ARRL's General Q & A are encouraged to test by, or before, June 30, 2023.
New editions of ARRL licensing publications will be available in May, for exams taken on, or after, July 1, 2023.

Santa is On the Air Via Ham Radio
Already in operation for the 16th consecutive year, The 3916 Nets are hosting the Santa Net on 3.916 MHz. Kids can talk to Santa Claus nightly via amateur radio at 7:00 PM CST now through Christmas Eve, December 24, 2022. The shortwave net welcomes radio amateurs to help their children and grandchildren get on the air to talk to Santa (third-party rules and regulations apply).

ON THE AIR

American Revolution - Battle of Trenton
Dec 26-Dec 31, 0000Z-2359Z, W2T, Trenton, NJ. Delaware Valley Radio Association. 14.250. Certificate & QSL. DVRA, PO Box 7024, West Trenton, NJ 08628-0024. Certificate of Commission in the Continental Army Signal Corps available. See website. www.w2zq.com

American Revolution - Battle of Princeton
Jan 1-Jan 8, 0000Z-2359Z, W2P, Trenton, NJ. Delaware Valley Radio Association. 14.250. Certificate & QSL. DVRA, PO Box 7024, West Trenton, NJ 08628-0024. Certificate of Commission in the Continental Army Signal Corps available. See website. www.w2zq.com

100th Anniversary of the Door County Amateur Radio Club
Jan 15-Jan 31, 1300Z-0300Z, W9DOR*, Sturgeon Bay, WI. Door County Amateur Radio Club. All HF bands, all modes. Certificate. Jef Fox, KC9GBX, 5073 Bluff Court Terrace, Sturgeon Bay, WI 54235. * and TM100DOR in Bertrichamps, France. kc9gbx@aol.com or www.w9dor.org

TN8K Team will be active from **Congo Republic**, 10 - 19 January 2023. Team - Petr OK1BOA, Petr OK1FCJ, Palo OK1CRM, Pavel OK1GK , Ruda OK2ZA, Ludek OK2ZC, Karel OK2ZI, David OK6DJ. They will operate on 160 - 6m, plus QO-100, CW, SSB, RTTY, FT8, PSK . QSL via OK6DJ, LOTW, ClubLog OQRS.

Hadrian's Wall 1900 Festival Jan 23-Dec 31, 0000Z-2359Z, GB1900HA, South Shields, ENGLAND. Hadrian's Wall Partnership. 14.2 7.15 145.5 21.3. QSL. LOTW, ENGLAND. There will be two special event stations GB1900HA and GB1900HW running throughout the year 2022 to commemorate 1900 years since the building of Hadrian's Wall, the Northern frontier of the mighty Roman Empire.

100 Years of Thales Nederland B.V. Jul 6-Dec 31, 1000Z-2359Z, PA100THALES, Many cities, NETHERLANDS. PA100THALES Team. all bands, all modes. QSL. Email, pa100thales@qsl.net, for information, NETHERLANDS. This is an operating event. www.qsl.net/pa100thales

WILLIS ISLAND, VK9/W. Sands, VU2WXW/VK4WXW, is working at the Meteorology Weather Station until April. He has been on 40, 20 and 15 meters and hopes to add 17, 12 and 10 meters as well. QSL via Club Log.

SENEGAL, 6W. Earl, WA3DX will sign WA3DX/6W, from December 22 to January 20, mostly on 20 meter SSB and FT8, but also on 40 to 10, 2 meters and 70 cm FM, and APRS. He will also be QRV as 6W1/WA3DX, 6W6/WA3DX, and 6W9/WA3DX. QSL direct to home call or LoTW.

MALDIVES, 8Q. Vadim, R6CA will be active as 8Q7CA from December 13 to 22. He will operate CW, SSB and FT8 on 80 to 10 meters. QSL via LoTW, Club Log OQRS or via home call.

Amateur Radio Cooperative Research by Armando Delgado, KN4JN

This past October, most specifically between October 19-28, 2022, the High-frequency Active Auroral Research Program (HAARP) conducted a series of radio propagation experiments and asked the amateur radio community around the world to assist by providing reception reports. The experiments intended to examine and analyze multiple factors in the use of radio waves. One involved bouncing a signal from the moon with the intention of determining if radio waves could be used to uncover the internal composition of near-Earth asteroids. Another experiment, a first of its kind, reflected a radio signal from Jupiter to study the Jovian ionosphere. Closer to Earth, an experiment looked to study the Strong Thermal Emission Velocity Enhancement phenomenon (STEVE) which is similar to auroras but thought to occur due to a different cause than direct solar radiation. One other and rather original test was intended to intermodulate video and sound signals by using the Luxemburg effect.

Unfortunately, at this time it is too early to know the extent of amateur signal reports and how helpful they were to the experiments results. It will probably take months for the data to be analyzed and published in the scientific literature.

Radio amateur cooperative participation with scientific agencies is not new. Actually, during the early days of radio, before the ionosphere and its role in radio propagation was discovered, amateurs participated in a large experiment conducted by the National Bureau of Standards to assess fading of radio signals. Fading has been a constant in radio transmissions, particularly in the HF radio frequencies, since the beginning of radio. In the early days of radio, particularly when the HF frequencies became available, operators tried to figure out what caused fading and how to eliminate it.

In 1920, the United States Bureau of Standards became interested in evaluating radio signal fading. At that time, the radio technology was transitioning from the spark gap transmitter system to the CW tube-controlled system of radio transmissions. The latter was more precise and provided better frequency control, yet it was still vulnerable to the fading effect.

In the summer of 1920, in a month long period between June and July, the Bureau of Standards engaged with the amateur radio community to study patterns of fading of radio signals in the eastern United States. Over 600 amateur radio stations participated in giving reception reports.

At the time, the understanding of radio signal propagation rested on the concept initially introduced of reflections from the upper atmosphere in the theory proposed by Heaviside and Kennelly in 1902 to explain the transoceanic transmission of the Marconi radio signal from England to America. In 1920 this concept was only a theory, not confirmed until 1924 with the experiments of Appelton who proved that a reflective ionospheric layer existed that we now recognize as the E layer.

After numerous amateur radio reports were analyzed by the Bureau of Standards, the theory proposed to explain radio signal fading by the Bureau was that most likely fading was caused by reflection phase-interference of the radio signals, where signals in phase would intensify and signals out of phase would cancel each other. Of course, later understanding of ionospheric propagation showed that the process is a bit different. One observation from that test that proved sound was the effect of distance between stations on reception, confirming the concept of signal skip.

During the International Geophysical Year, in 1958, scientific research again called on the amateur community to cooperate in radio propagation reports, this time in the VHF frequencies. The ARRL even formed a special department to handle the information under the leadership of Mason Southworth, W1VLH. The propagation modes of interest were trans-equatorial scatter, auroral communications above 50 MHz, and sporadic E-skip. Interestingly, the International Geophysical Year occurred during a peak solar cycle.

Over the years, many research agencies have sought amateur radio cooperation in investigating different aspects of radio propagation and radio signal reception. During the early stages of the International Space Station, NASA wanted to incorporate an amateur station in the module. To gage equipment performance, a series of transmissions were planned and amateur reports of a beacon signal were requested during several passes. Amateurs submitting radio signal reports received a QSL card from the ISS.

Amateur radio participates regularly in emergency communications support as well as many other community activities. Because of its unique cadre of operators around the world, amateur radio also can provide an invaluable resource for scientific research in radio propagation and reception in a broad range of frequencies, and it has done so since the beginnings of radio.

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, Fl 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.	K4UZM	
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 a

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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GC ELECTRONIC
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HARADA
HITACHI
HYGAIN

ICOM RADIO

JSC WIRE
JW DAVIS SOUND
JVC PARTS

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