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SPURIOUS EMISSIONS

MARCH, 2026

INDIAN RIVER ARC

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N4VEP

CLUB MINUTES

President Steve Luchuk, N4UTQ called the meeting to order at 7:15 PM
Following the Pledge of Allegiance, Steve proceeded to the President's Report. He reported that the Saturday morning tests continue to review different digital modes that are useful for EMCOM. Last week the group operated mostly NBEMS but had problems with the program detecting and decrypting signals. Winlink is still the preferred mode for the FEMA and ARRL emergency groups and we will continue to experiment with that mode and others. Steve also suggested that members who have 1.24 GHz capability try to make contact with each other to explore the potential of that band for local communications.
Vice-President Report: Sam KJ4VGR mentioned that his GAP antenna was damaged during a sudden wind storm last Monday. He was unprepared and had not lowered his antenna. The lower shaft of the antenna bent 45 degrees and fell on a tree, sparing his house roof. Sam is still determining how to proceed, whether attempting a repair or just getting a new antenna.
Treasurer Report: Steve showed the checking account holds $1776.38 and the Equipment Fund has $2037.65, both unchanged from last month. The Treasurer Report was approved for audit.
Next, the minutes of the February meeting were approved.
Past President Report: Viron, N4VEP said that next Saturday, March 21, starting at 9:00 AM, the QRP group will meet at F. Burton Smith Regional Park, 7575 W. King St. in Cocoa. The park is on SR 520 west of I-95 and east of Lone Cabbage Fish Camp. The park has picnic tables, multiple pavilions, restrooms, and many trees available for antenna placement.
Following the business meeting Steve gave a summary presentation on Winlink, detailing the multiple official forms available for communications during emergencies with multiple agencies. The preferred amateur form is the IC-213.
Winlink can connect through the internet using the Telnet mode and through radio using several modes with VARA HF being a popular one. There are 26 different types of sessions possible in Winlink to establish contacts with peer-to-peer (P2P) modes being generally preferred.
Winlink is a very flexible system, but also rather complex, and there is a steep learning curve that we must cross to become proficient with the system.
After the presentation, during a question-and-answer period, Greg, AB4GO queried Steve on the Olivia mode. Steve said that Olivia is one of the modes used by NBEMS. It has several variations with the preferred one by hams who use it being Olivia 8-500. This mode is used by the Transcontinental Net that has regular training operations that Steve has been able to contact on various occasions.
Greg also mentioned that each Friday at 7:00 PM K4DX from Titusville runs a net on 6 meters. It operates on 50.250 MHz using SSB. Steve mentioned that 6 meters being limited by long distance propagation is a good band for local practice training.
Following the discussions, the meeting adjourned at 8:15 PM.
Respectfully submitted,
Armando Delgado, KN4JN,
Secretary.

HAPPENINGS

FCC Requires That FRN Contact Information Be Updated Within Ten Days of a Change
ARRL reports that the Federal Communications Commission (FCC) adopted changes to its rules to require that every holder of an FCC Registration Number (FRN) update their contact information in the CORES system (email and postal addresses) within ten business days of a change.

If your FRN information is current and has not changed, no immediate action is required, but you must adhere to the 10-day rule for future changes. It is recommended to periodically check both the CORES and License Manager Systems to ensure contact information is accurate, even if no changes have occurred.
See the following resources for updating FRN and license information.

FCC Tutorial on updating FRN information:
https://apps.fcc.gov/cores/html/Update_FRN_Information.htm
ARRL information on how to update license information:
https://www.arrl.org/call-sign-renewals-or-changes
For assistance, call the FCC FRN Help Desk: (877) 480-3201 (available 8 AM to 6 PM ET).

POTA SOTA BOTA
You have probably heard about POTA - Parks on the Air®, and SOTA - Summits on the Air. Well, now there's BOTA, Bunkers on the Air!!
Officially known as WWBOTA — Worldwide Bunkers on the Air — it is an amateur radio activity open to amateur radio operators and shortwave listeners everywhere. Similar to its counterparts, radio amateurs

HAPPENINGS

'activate' historic bunker locations around the world with portable and mobile operations. Bunkers are fortified shelters, usually underground, used for protection against attacks and for storage of military goods. Hunters and chasers can have QSOs with those activating stations and can collect special 'bunker reference' numbers.
Most bunker operations center on 40- and 20-meter SSB, but other bands are increasingly popular, including the higher HF bands, VHF, and above. CW, FT8 and other modes are also popular, including SSB, FT4, RTTY, PSK, and SSTV.
For more information, visit WWBOTA – Worldwide Bunkers on the Air.

The 3YØK team to **Bouvet Island** departed Cape Town 21 February, 2026 aboard the Danish registered vessel Argus from Icetugs, beginning the 1,500-nautical-mile transit to Bouvet Island. Despite encountering rough seas during the first day at sea, preparations continue onboard as they expect to arrive at Bouvet on February 26th at approximately 08:00 local time. Further updates regarding their band plans and DQRM strategy will be shared as they approach the island.
For more information visit their website: https://3y0k.com/

Request for Information Strips
Some time ago, the Radio Relay International EmComm Committee began investigating possible methods for collecting weather data, situational awareness reports, and operational readiness reports during major disaster events. The result has been the implementation of "Request for Information Strips."
The process consists of two strips, one of which is the request for information strip and the other of which is the reply strip. Using a simple HTML software program, one can parse the RI strip to create a simple query table, which is essentially a list of questions or data fields to be completed. Once the data is entered, the mouse parses the data and creates the response strip. The response strip can then be transmitted to one or more target stations. The target stations collect the response strips and use them to populate a spreadsheet for delivery to one or more served agencies.
The radiogram or radiogram-ICS213 message format is an ideal transport mechanism for the RI transmission process. The RI strip provides the needed data while the network management information in the radiogram header can be used to define network topology for message routing or for reply or service messages seeking clarification or confirmation.
RRI will be conducting training programs on this process in the coming months. More information, including the RRI training schedule, can be found under the "Publications" heading on the Radio Relay International website at www.radiorelay.org.

February 22, 2026 was the first day without any sunspots since 2022 when there was only one spotless day. The absence of sunspots continued for the next two days providing a total of three consecutive days without sunspots and a good indication that the peak of solar cycle 25 is behind us. However, we still have a few years of increased solar flux without as many pesky solar flares and CMEs as occurred in the past few years.

In Branson, Missouri, SKYWARN Youth, a group of young amateur radio operators dedicated to weather spotting, emergency communication, and community education, will operate special event station NØA for the next two weeks to promote severe weather awareness. NØA will operate March 15 – 29, 2026, at various times — day, and night — as time permits, using SSB & FT8/FT4 on 80, 40, 20, 17, 15, 12, and 10 meters, as well as FT8 on 160 and 30 meters All amateur radio operators are encouraged to spread the word and participate in this effort to strengthen weather safety networks worldwide. More information is available at www.skywarnyouth.net.

ON THE AIR

ENGLAND, G. Special event station GB50PUNK is QRV during 2026 to celebrate the birth of Punk Music 50 years ago.

CENTRAL AFRICAN REPUBLIC, TL. Joao, CR7BNW, is QRV as TL8BNW until June 2026. Activity is on 40, 20, 15, and 10 meters using SSB and FT8. This may also include 160 meters. QSL via LoTW.

FEDERAL REPUBLIC OF GERMANY, DA. Special event station DD2026WPG will be QRV during March and April for the 2026 Winter Paralympic Games being held in Italy. QSL via bureau.

NAMIBIA, V5. Gunter, DK2WH is QRV as V51WH near Omaruru until March 24. Activity is on 160 to 6 meters, including 60 meters. QSL to home call.

First LORAN Experimental Stations Mar 21, 1330Z-2100Z, K3S, Port of Baltimore. Nuclear Ship Savannah ARC. 7,14,18,21,28 MHz. QSL. Ulis Fleming, 980 Patuxent Rd, Odenton, MD 21113. qrz.com/db/k3s

Solivita Car Show
Mar 21, 1300Z-1900Z, N4SRC, Kissimmee, FL. Solivita Radio Club. 18.124 24.980 14.074 21.074. QSL. Solivita Radio Club, 117 Auburn Dr., Kissimmee, FL 34759. https://solivitaradioclub.weebly.com

The Titanic Memorial
Apr 10-Apr 15, 0000Z-2359Z, EG1912T, Vigo, SPAIN. Union Radiafeccionados de Vigo-Val Miñor. 14025 10105 7025 5355. QSL. Carlos Reboreda, Avenida das Caldas 53, 5-E, Ourense 32001, SPAIN. seccion.vigo@ure.es

Sun & Fun Aerospace Exposition Apr 14-Apr 19, 0817Z-0817Z, W4S, Lakeland, FL. Lakeland Amateur Radio Club. 14.40 7.40 18.93 28.40. QSL. Lakeland Amateur Radio Club, P.O. Box 90853, Lakeland, FL 33804. info@lakelandarc.com

Wilbur Wright 159th Birthday Event Apr 16, 0900Z-1600Z, W9W, New Castle, IN. Henry County (Indiana) Amateur Radio Club. 14.340. QSL. Dave Peters, 3517 Hampton Ct, New Castle, IN 47362. Please send an SASE if you would like a commemorative QSL card. QSL requests should be sent to W3DKP. The address is good in QRZ. W9OB@yahoo.com or https://w9ob.org

MAURITIUS, 3B8. Suvarna, VU3OPT, is QRV as 3B8G until March 30. Activity is on 20, 15, and 10 meters using CW. QSL to home call.

AUSTRAL ISLANDS, FO. A group of operators is QRV as TX5EU from Raivavae Island, IOTA OC-114, until March 25. Activity is on 80 through 6 meters using CW, SSB, RTTY, FT8, and FT4 with three stations. QSL via DL2AWG.

Learning CW by Armando Delgado, KN4JN

During the initial years of radio, the only mode that could be used for transmission was the Morse code. People who wanted to hear what was on the air or participate in the new discovery had to learn the code. In those early days there was a natural selection that determined who learned the code. Only folks determined to participate found the motivation to learn that new language.

As time went by and radio technology improved allowing transmissions that reached beyond national borders, nations realized that the only way to prevent chaos in the airwaves was to have international agreements regulating radio transmissions. In 1925 the International Amateur Radio Union (IARU) was founded to regulate the operations of amateurs around the world, or at least those amateurs in the nations that signed the agreement. An important part of the agreement was that all licensed amateurs had to be able to copy and send Morse code at no less than 5 words per minute.

The code requirement remained in effect for many decades. With the advent of new modes in the phone and digital realms, a large number of amateurs around the world felt that the code requirement was antiquated and deterred many people from obtaining a radio license. By the early 1990's many commercial and military systems began to phase out their use of Morse code, replacing it with digital and satellite modes, adding to the belief that the code was obsolete.

Under pressure from American hams, the FCC in 1990 introduced a No-code Technician license. To waive the IARU requirement for the code, they argued that Technicians were limited to phone operations in the frequencies above VHF, which are mostly line of sight transmissions.

The international pressure to eliminate the code requirement at the IARU continued, although many people were reluctant to do away with it. Then during the World Amateur Radio Council (WARC) meeting of 2003, the IARU agreed to make the code an elective option by the licensing countries, thus freeing nations from the mandatory requirement.

In 2007, after much debate, the FCC eliminated the CW requirement for all American amateur radio licenses. At the time, it was a common belief that the code would eventually disappear from the airwaves as older amateurs who acquired proficiency in the code died. Yet, that prediction did not come to pass. Many new amateurs recognized the value of CW, particularly getting through in poor propagation conditions and its efficiency in increasingly popular radio contests where CW exchanges are faster than phone, allowing for more contacts and higher scores. Many hams that obtained their licenses without the code began to learn CW. Actually, there is a return to the natural selection in people wanting to learn CW. Motivation is and always will be the secret.

Anyone can learn Morse code. Just like in music, there are folks who are tone deaf and cannot carry a tune while others with perfect pitch can play a musical composition in an instrument after hearing it. In learning the code, the same factors come into play: it is easier for some people than for others.

One factor that many do not appreciate about CW is that it is a language, just like English or French. Each language has unique sounds for their letters and words that a prospective student must learn to master it. Formal languages are harder to learn than CW because they have thousands of words, while CW consists only of the letters of the alphabet, ten numbers, and a few punctuation marks. Still, each character has unique sounds that must be learned and practiced until they become perceived without hesitation, and that takes time and repetition. The first step is to learn the correct sound for each character and then repeat it until recognition is automatic. One interesting aside is that anyone proficient in CW can copy text in any language that uses the Latin alphabet. They may not understand what they copied, but they can faithfully copy every word.

Early in the learning process there is a temptation to try to copy in the head, but at slow speeds that is practically impossible because the characters come so slowly that past words are forgotten before new ones begin to appear. Copying in the head for most people is not feasible until speeds of 25 wpm or higher are used. The beginner is better served by printing the characters at the slower speeds, which brings another common error.

Frequently, while copying, a character may not register immediately. The natural tendency is to pause to reconsider, which leads to missing incoming characters. It is important to train mentally to ignore uncertain characters and to concentrate on the next incoming one. If a text is what is being copied, the missing characters can be filled in at the end of the transmission.

Fortunately for modern students, the internet abounds with apps and transmissions, like those from W1AW (www.arrl.org/code-practice-files) , that facilitate the learning process, but it takes patience, dedication, and repetition. With daily practice of 15-30 minutes most people can copy 5 wpm in 30 days or less. Hams with HF equipment capability should try to get on the air as soon as possible. Remember, Technician licensees have CW privileges in 80m, 40m, 15m, and 10m. A band plan chart will show the frequencies for those privileges. There are also many groups that operate regularly at slow speeds, such as K1USN (http://www.k1usn.com) and CWops (http://cwops.org) encouraging beginners to use CW. To find schedules of their activities, plus many other radio operations go to http://www.contestcalendar.com. Copying CW can be very satisfying, and it is a tool accessible to anyone, including non-licensed individuals. For those with an amateur license, operating CW will open a new world of possibilities.

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, 18.0775, 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 Fl
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