



**INDIAN
RIVER ARC**

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

VOLUME XLV, NUMBER 6

SPURIOUS EMISSIONS

JUNE, 2019

CLUB MINUTES

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ARMANDO DELGADO
KN4JN

President Dave KU0R began the meeting at 7:32 PM with the Pledge of Allegiance. Following the Pledge, Dave called for visitors and guests and Danny Burdick KE4OZD was recognized as an old member. Danny KN4KKH was recognized as a new General licensee as of this evening. Dave reminded the group of the passing of Bob Kisko, N4VO. Greg Oneil AB4GO announced that Bob will have a memorial service June 10 at 2:30 PM at the Cape Canaveral National Cemetery.

The May meeting minutes were published in the May newsletter. A motion was heard to approve the May meeting minutes. A second was heard and the May meeting minutes were approved by acclamation.

The Treasurer's report showed \$2576.82 in checking and \$1778.01 in the Equipment Fund. A motion to approve the Treasurer's report was heard, a second was heard and the Treasurer's report was approved by acclamation.

Vice President Viron N4VEP reported that they have done a lot of work on the club station and recognized those who helped and that he is donating a couple of solar panels.

Emergency Coordinator Les W9BCH reported that central net area is being split so we are now responsible for only two shelters.

Dave reported for the Technical Committee: the 88 repeater is down due to it jamming itself. During troubleshooting it was discovered that the antenna looked bad and it looks like the antenna has been hit by lightning. Another antenna has been ordered. Jim Grossman will replace the antenna when he becomes available. Go- Kits Status: Two ready and two waiting to be assembled.

Field Day: Dave showed a giant filter for use with the 600 watt amplifiers.

At the Red Cross, the off center dipole had to be taken down following troubleshooting due to construction taking place in

the Red Cross' back yard. Thirty foot masts are now holding up the HF antenna, which is a long wire antenna that is tuning well on most bands, except 40m.

Also installed is a Wi-Fi antenna to receive internet from a nearby Spectrum hotspot.

Since the next meeting will be on July 4th, the July meeting will be skipped.

The winning 50-50 ticket was found to be in the hands of Dave KU0R.

Les W9BCH reminded the group that there is a special need shelters training at the EOC at 9am Friday, June 7 and on Saturday, June 8 is the IC-700 training 9am to 1:00 PM, also at the EOC.

Danny KN4KKH demonstrated a World War 2 handie-talkie which transmits on 3.8 MHz AM.

A motion to adjourn occurred at 8:05 PM and was moved and approved.

Respectfully Submitted

Steve N4UTQ

HAPPENINGS

The **free** *Contest Super Simulator* by Wayne, W5XD, can increase operator contesting skills regardless of mode. It can handle RTTY, CW, and SSB training scenarios, including SO2R. It faithfully recreates challenging situations such as bad operator behaviors, multiple callers, repeats, off-frequency calling and responds to operator radio skills such as tuning, bandwidth ad-

justments, and the like. Use it to present operating challenges that are uncomfortable, but that can be conquered over time. Read more at their [web site](#).

The 'DXCC Most Wanted' entities list has been updated on ClubLog as of May 5th. The list contains 340 entities.

The following are the top 10 entities:

1. P5 DPRK (North Korea)
2. 3Y/B Bouvet Island
3. FT5/W Crozet Island
4. BS7H Scarborough Reef
5. CEOX San Felix Islands
6. BV9P Pratas Island
7. KH7K Kure Island
8. KH3 Johnston Island
9. FT5/X Kerguelen Island
10. 3Y/P Peter 1 Island

"It's About Time!" is the topic of the May 9 episode of the "[ARRL The Doctor is In](#)" podcast. "Do Dipoles Have to be Straight?" is the topic of the May 23 episode.

ARRL Field Day is June 22 - 23. [The Field Day site locator](#) is now up and running, and so far more than 430 sites already are in the database. To find a

HAPPENINGS

Field Day site near you, enter your town and state in the "Location or Call Sign" box at the upper left. Listings also are available by state or Canadian province.

ARRL Invites Applications for Volunteer Monitor Positions.

ARRL is now accepting applications from individuals interested in becoming part of the new Volunteer Monitor program, a joint undertaking of ARRL and the FCC. The program seeks volunteers who — working under the direction of ARRL — will monitor and survey the Amateur Radio bands both to detect improper activity and to recognize exemplary on-the-air behavior. More information at <http://www.arrl.org/news/arrl-invites-applications-for-volunteer-monitor-positions>

Contest certificates. For those who do contesting and send in their logs, the ARRL has a web site that allows to view and print a certificate for the respective contests. Find at <http://contests.arrl.org/certificates.php>

The Radio Society of Great Britain (RSGB) has announced a Cricket World Cup Amateur Radio Marathon, from May 30 until July 14. A total of 31 special call signs will be on the air in the UK, with GB19CWC representing the 2019 Cricket World Cup Headquarters in England. Listen for other "GB19" prefix call signs. Teams will field special event stations as well.

Details, including the rules for awards and a list of international

call signs, are on the RSGB website. [Follow your progress](#) on the Ham Log website. **Email** for more information on the marathon.

SpaceX's [Starlink satellites](#) are flaring, creating flashes of light in the night sky that can rival the brightest stars. SpaceX launched 60 satellites on May 23rd—the first installment of a Starlink "mega-constellation" that could number 12,000 by the time the project is complete. To see the Starlink satellites with your own eyes [Visit Heavens-Above.com](#) and click on "[Starlink \(leader\)](#)" for local flyby predictions. [A dynamic display](#) of the satellites' current location is also available.

An interesting and informative slide presentation from the Day-

ton Hamvention can be found at "[Everything You Need to Know About USB and Serial Interfaces.](#)"

The **SARL Youth Sprint** will be on the air from 12:00 to 14:00 UTC on Saturday 15 June while the IARU Region 1 is promoting **Kids Day** as a day-long activity on 80 to 10 meters.

The **WSJT-X Development Group** has released yet another new beta version of the FT4 protocol now available for testing in **WSJT-X 2.1.0-rc7**. The FT4 included in this "release candidate 7" version is *not* compatible with any previous release. [Downloadable installation packages](#) for **WSJT-X 2.1.0-rc7** under Windows, Linux, and macOS are available on the **WSJT-X** web page. More info [here](#)

ON THE AIR

W8DXCC DX Convention Jun 15-Jun 16, 0000Z-2359Z, K8S, Owensville, OH. SouthWest OH DX Association. 14.245 14.074 7.245 3.535. Certificate & QSL. AJ8B - Bill, 8275 Cierra Way, Waynesville, OH 45068. This is the inaugural year for this DX Convention. We are using these call signs: K8S, K8W, K8O, K8H. A QSL for each and/or certificate for working all four. www.w8dxcc.com

13 Colonies Special Event: Jul 1-Jul 8, 1300Z-0400Z, K2M, New Kensington, PA. 13 Colonies Special Event. 14.260. Certificate. Skyview Radio Society, 2335 Turkey Ridge Rd., New Kensington, PA 15068. <http://13colonies.net>

T88PB will be active again from **Koror Island**, IOTA OC - 009, Palau, 15 - 23 June 2019. He will operate on HF Bands.

Guadeloupe Gildas, F6HMQ will be active as TO1T from Guadeloupe, IOTA NA - 102, 14 - 25 June 2019.

Bear Island Erling, LB2PG will be active as JW/LB2PG from Bear Island, IOTA EU - 027, starting June 2019 and planning to stay there until November 2019.

Curacao Island Paul, VA3ZC will be active as PJ2/VA3ZC from Curacao Island, IOTA SA - 006, 9 - 16 June 2019.

Upolu Island Samoa 5WOH Team will be active from Upolu Island, Samoa, IOTA OC - 097, 1 - 10 June 2019.

Hon Tre Island, Vietnam. XV9DF Team will be active from Hon Tre Island, IOTA AS - 157, Vietnam, 2 - 15 June 2019. They will operate on HF Bands, CW, SSB, FT8.

V63PSK will be active again from **Moen Weno Island, Chuuk Islands**, IOTA OC - 011, 19 - 22 June 2019. He will operate on 80 - 6m, FT8, FT4, JT65.

CYPRUS, 5B. Special event call 5B19CWC is QRV until July 14 during the Cricket World Cup Radio Marathon 2019. QSL via operators' instructions.

PAKISTAN, AP. Special event call AP19CWC is QRV until July 14 during the Cricket World Cup Radio Marathon 2019. QSL via operators' instructions.

LUXEMBOURG, LX. Members of the Radioamateurs du Luxembourg group are QRV with special event call LX19CWC until July 14 during the Cricket World Cup Radio Marathon 2019. QSL via operators' instructions.

CANADA, VE. Members of the Winnipeg Amateur Radio Club will be QRV as VX4WARC during June to celebrates the club's centennial anniversary. QSL via bureau.

HONG KONG, VR. Special event call VR2019CWC is QRV until July 14 during the Cricket World Cup Radio Marathon 2019. QSL via operators' instructions

SOUTH AFRICA, ZS. Special event call ZS19CWC is QRV until July 14 during the Cricket World Cup Radio Marathon 2019. QSL via operators' instructions.

Ireland, EI. The Galway Radio Experimenters Club (EI4GRC) will be active as EI100ABC for the Alcock & Brown Centenary Festival to be held in Clifden, Co. Galway on 11 to 16 June.

France, F. Commemorating the 75th anniversary of D-Day ("Jour J" in French), the Radio-Club de Caen (F6KCZ) will be active as TM6J on 4 to 10 June from the Merville Gun Battery's historic site, near the 1944 landing area codenamed Sword. Look for activity on 80 to 6 metres CW and SSB. QSL via F6KCZ.

France, F. Commemorating the 75th anniversary of D-Day, the Association des Radioamateurs de l'Orne will operate special event station TM75DD from Sainte-Mere-Eglise on 8 and 9 June. They will operate CW and SSB on 40, 30 and 20 m.

The First Walkie -Talkie by Armando Delgado KN4JN

Ever since radio was first invented, the military showed deep interest in the potential of this technology in the battlefield. Unfortunately, the first radios were very fragile, bulky, heavy and required huge antennas making them impractical for field operations. After the invention of the vacuum tube and the superheterodyne receiver, the radios became more compact and portable, but those early tubes were still too fragile and the radios too large for field use.

By the late 1930's, tube technology advanced significantly and tube manufacturers made smaller and sturdier tubes that allowed for portable radios that could withstand the rigors of a battlefield. With the start of WWII, the Army began to actively search for a manufacturer to produce a unit that could be carried into combat.

In 1940, the Army approached the Galvin Company, the precursor of Motorola, with a request for a radio design. At that time, this company employed an engineer named Daniel Noble who believed that FM modulation would be more practical for battlefield radios due to less interference noted in this mode. Noble gathered a group of company engineers and started work on a radio design. By 1942, they produced an FM transceiver designated BC-1000-A that when coupled with a battery pack, BA-70, became known as the SCR-300-A radio (Figure 1).

After testing the radio, the Army immediately chose it and it went into production right away. The SCR-300 first went into battle in the invasion of Italy in 1943, and later saw action in all of the major theaters of the war.

The BC-1000-A transceiver has 18 tubes

- 3A4 (2)
- 1T4 (6)
- 1L4 (5)
- 1R5 (1)

- 1A3 (1)
- 1S5 (3)
- (Figure 2).

and operates in the frequency range 40.0-48.0 MHz divided into 40 channels each 200 KHz wide, a scheme that makes it very practical for the mayhem of the battlefield. It has a power output of 0.3 watts and a range of 3 miles. When coupled with the dry cell battery, BA-70, the unit weighs 38.23 pounds. A smaller battery pack available dropped the weight to 32.23 pounds.

There were two antennas available for this radio. The standard one, designated AN-130-A, was a 33 inch, or $\lambda/8$, flexible whip. The other was a 10ft 8 inch, or $\lambda/2$ flexible whip designated AN-131-A.

Two different batteries were available for this radio. The BA-70 weighed 6.8 kg (15 lb) and had an operational life of 20-25 hours. Later on, the light-weight BA-80 was introduced; this only weighed 4 kg (9 lb) but had a battery life of only 12-15 hours. Both batteries provided the following voltages:

- Filaments: 4.5 volts
- Receiver plate: 90 volts
- Transmitter plate: 60 volts (added to receiver plate voltage).

Although a relatively large backpack-carried radio rather than a handheld model, the SCR-300-A was described in War Department Technical Manual TM-11-242 as "primarily intended as a walkie-talkie for foot combat troops", and so the term "walkie-talkie" first came into use.



Figure 1. SCR-300-A

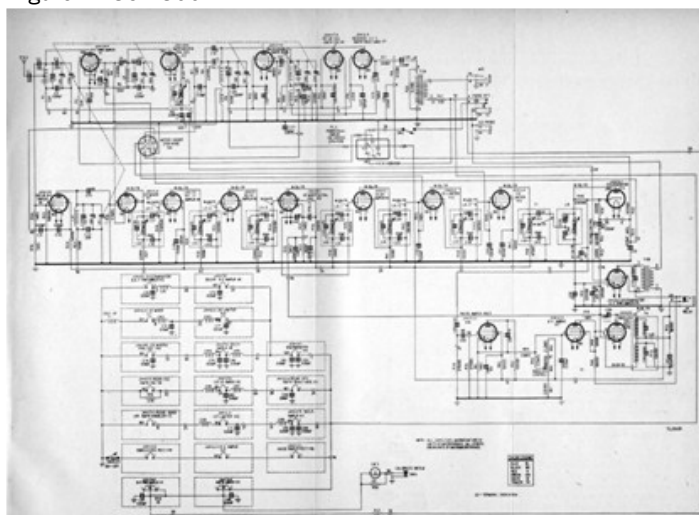


Figure 2. BC-1000-A Circuit diagram.

W1AW CODE PRACTICE

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.

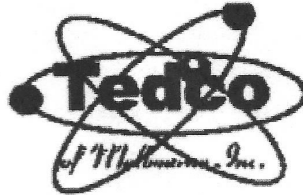
ACTIVE REPEATERS AND SIMPLEX FREQUENCIES (FM ANALOG)

REV 5/25/2018

OUTPUT FREQ.	OFFSET	ZONE	CALL	LOCATION	OWNER
145.130	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ
145.350	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC
145.370	-600	156.7	W2SDC	COCOA	IRARC
145.470	-600	107.2	K4HRS	MELBOURNE	HIRAC
145.490	-600	100	WN3DHI	TITUSVILLE	NORTH NET
146.610	-600	None	W4MLB	MELBOURNE	PCARS
146.775	-600	100	K4KSC	MIMS	TARC
146.850	-600	107.2	W4MLB	PALM BAY	PCARS
146.880	-600	107.2	W4NLX	ROCKLEDGE	IRARC
146.895	-600	107.2/107.2	K4EOC	PALM BAY	EOC
146.910	-600	107.2	K4KSC	TITUSVILLE	TARC
146.940	-600	None	K4GCC	ROCKLEDGE	LISATS
146.970	-600	107.2	K4KSC	TITUSVILLE	TARC
147.075	+600	107.2/107.2	K4EOC	TITUSVILLE	EOC
147.135	+600	107.2/107.2	K4EOC	ROCKLEDGE	EOC
147.240	+600	123	KV4EOC	VOLUSIA	VARES
147.255	+600	107.2	K4DCS	PALM BAY	DCS
147.330	+600	107.2	K4NBR	TITUSVILLE	NBARC
147.360	+600	107.2	N4TDX	TITUSVILLE	NBARC
444.325	+5000	107.2	K4DCS	PALM BAY	DCS
444.375	+5000	107.2		SEBASTIAN	SARNET
444.425	+5000	107.2	W4MLB	Melbourne	PCARS
444.525	+5000	103.5/103.5	K4EOC	ROCKLEDGE	EOC
444.650	+5000	107.2	W4NLX	COCOA	IRARC
444.925	+5000	131.8	N1KSC	KENNEDY SP. CTR.	KSCARC
442.850	+5000	107.2/107.2	N4TDX	TITUSVILLE	NBARC
444.750	+5000	107.2/107.2	N4TDX	TITUSVILLE	NBARC
224.520	-1.600	107.2	N4TDX	Titusville	NBARC
PACKET STATIONS:					
145.010	WINLINK		W2PH-10	PALM BAY	DCS
145.090	PCARS		W4MLB-2	MELBOURNE	PCARS
145.770	SEDAN		K4EOC-7	PALM BAY	N2DB
145.770	SEDAN		KD4MWO-4	TITUSVILLE	N2DB
146.550	SIMPLEX		K4DCS	SOUTH REGION	DCS
147.540	SIMPLEX		K4EOC	RACES Bay	EOC
146.520	SIMPLEX			GENERAL CALL	
146.580	SIMPLEX		W4MLB	MELBOURNE	PCARS
146.480	SIMPLEX		W4NLX	CENTRAL REG	IRARC
146.595	SIMPLEX		K4KSC	NORTH REGION	TARC
146.560	SIMPLEX		NBARC	NBARC General Simplex	NBARC

Repeater in bold are owned by Brevard Emergency Management and are maintained by the county. Truste

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