VOLUME XLV, NUMBER 4

SPURIOUS EMISSIONS

APRIL, 2019

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CLUB MINUTES

President Dave KU0R began the meeting at 7:30 PM with the Pledge of Allegiance. Following the Pledge Dave called for visitors and Mark KI4OBT, new to the area, came by to see what we are all about.

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

The Treasurer's report showed $2430.82 in checking and $1777.96 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.

Following the Treasurer's report, Viron N4VEP recognized the folks responsible for the shack improvements and their efforts.

Dave also reported for the Technical committee and reported that the 37 machine stopped responding to remote commands and he had to make a trip to the repeater site to perform a manual reset to restore the machine to service. Need to keep an eye on the problem which has occurred twice now and may be caused by the high RF field from the AM transmitter.

Dave continued with a report from the Orlando MS walk which was a much larger event than the Viera event. On May 4th is the JDRF walk around Wickham Park.

Les our EC reported that we are planning an emergency exercised but no date is scheduled yet. Someone asked about the Echolink and the Echolink is down because of an echo on the audio that we gave up trying to fix. Need a volunteer to take over managing the Echolink node.

Dave showed some slides of the new antennas and discussed some of the problems they solved and problems that remain. The shack now has television service fed by an outside antenna, but still needs 12 volt AGM batteries with 300 amp/hour capacity for $500 to $600. A motion to purchase the batteries was made, a second was heard and a show of hands confirmed the motion.

The 50-50 drawing went to Shannon LHG.

Following the 50-50 drawing Steve N4UTQ had a presentation of a nostalgic look back at transistor radios and some of the funny shapes and objects they were marketed in.

A motion to adjourn occurred at 8:10 PM and was moved and approved.

Respectfully Submitted

Steve N4UTQ

HAPPENINGS

The ARRL Lifelong Learning Department has launched a revised and upDated *Introduction to Emergency Communications* (EC-001) course. Registration just opened for the first of four EC-001 online sessions, which will run from Monday, April 1, until Friday, May 31. Individual EC-001 sessions will serve up to 30 students, supported by an experienced mentor. Courses are free of charge. To be eligible, students must meet certain prerequisites, listed on the registration page. The registration page includes the entire 2019 schedule of EC-001 sessions.

A new ARRL podcast aimed at newcomers to Amateur Radio was launched in March. Called, "So Now What?," the podcast will focus on answering questions and providing support and encouragement for new licensees to get the most out of the hobby,

The GPS network will encounter a small millennium bug of its own in April when the network's "week number" rolls back to zero. This known issue especially could affect those who use GPS to obtain accurate Coordinated Universal Time. In the GPS network, the number of the current week is encoded into the message the GPS receives using a 10-bit field. This allows for weeks ranging from zero to 1023. The current period began on August 1, 1999. On April 6, 2019, the week number rolls over to zero and starts counting back up to 1023.

HAPPENINGS

This should not affect later-model GPS receivers that conform to IS-GPS-200 and provide UTC, but testing carried out by the US Department for Homeland Security (DHS) raised the possibility that some units may misinterpret the rollover, shifting the date back to January 6, 1980, or possibly to another incorrect date. An affected GPS not only may report the incorrect date, but time accuracy that is critical to precise location data could be compromised. A nanosecond error in GPS time can equate to 1 foot of position (ranging) error, according to DHS-published guidelines that explain the issue and suggest how to address it.

A new web site designed to help amateurs to find and correct sources of interference: https://qrm.guru/

The FCC invited comments on a proposal, designated RM-11829, asking the FCC to create a "Tyro" license class that would require a minimal online examination as well as mentoring by an Amateur Radio licensee of Technician class or higher. A "tyro" is a novice or a beginner. The petition was filed in August of 2017 by Gary A. Hampton, AD0WU, of Longmont, Colorado. Tyro licensees would earn operating privileges in 99 channels in a 70-centimeter "TyroSubBand." Applicants would have to be at least 11 years old.

"SWR Simplified" is the topic of the March 14 episode of the "ARRL The Doctor is In" podcast and "WSPR" is the topic of the March 28 episode.

The FCC has invited public comments on ARRL's 2018 Petition for Rule Making, now designated as RM-11828, which asks the

FCC to expand HF privileges for Technician licensees to include limited phone privileges on 75, 40, and 15 meters, plus RTTY and digital mode privileges on 80, 40, 15, and 10 meters. Interested parties have 30 days to comment. Those interested in posting brief comments on Petitions for Rulemaking (PRMs) to the FCC, such as the ARRL Technician Enhancement proposal (RM-11828) using the Electronic Comment Filing System (ECFS) should access FCC Electronic Comment Filing System Express. In the "Proceeding(s)" field, enter the number of the PRM, e.g. RM-11828 (using this format), complete all required fields, and enter brief comments in the box provided.

CHIRP is a free, open-source tool for programming your amateur radio. It supports a large number of manufacturers and models, as well as provides a way to

interface with multiple data sources and formats.

The US Department of Defense (DOD) plans to start making use of a provisional time slot on WWV and WWVH to announce upcoming HF military communication exercises and how the Amateur Radio community can become involved in them. The announcements will occur at 10 minutes past on WWV and at 50 minutes past on WWVH. WWV and WWVH transmit on 2.5, 5, 10, 15, and 20 MHz. More information here.

Reminder: an opportunity to experience the business end of a pile up is coming up at the end of this month.

The 2019 Florida QSO Party is being held on 1600Z April 27th through 2159Z April 28th. For more details visit https://floridaqsoparty.org/

ON THE AIR

SENEGAL, 6W. Jacques, F6HMJ will be QRV as 6W7/F6HMJ from March 19 to April 28. Activity will be on 80 to 10 meters using mostly CW with some SSB. QSL to home call.

PHILIPPINES, DU. Press, N6SS is QRV as DU6/N6SS from Panay Island, IOTA OC-129, until April 17. Activity is on 160, 80 and 40 meters using CW, SSB and FT8. This includes being an entry in the upcoming CQ World Wide WPX SSB contest. QSL to home call.

INDIA, VU. Members of the Bangalore Amateur Radio Club are QRV with special call sign U60BARC until May 13 to celebrate the club's 60th anniversary. QSL via Club Log.

Norfolk Island
A four-operator team will acti-

vate special event station VI9NI on April 1 to celebrate the 40th anniversary of the signing of the Norfolk Island Act The activation will run from April 1 until April 14. Two stations will be on the air from 160 – 17 meters, with a focus on FT8, CW, and SSB. VI9NI will use *WSJT-X* version 2.01 in Fox/Hound mode (call only above 1,000 Hz.

40th Anniversary of W6RO aboard the Queen Mary
Apr 1-May 1, 1600Z-0000Z, W6RO, Long Beach, CA. Associated Radio Amateurs of Long Beach. 14.340 14.048 7.240 7.040. QSL. W6RO - QSL, P.O. Box 7493, Long Beach, CA 90807. Times are daily. Other bands possible as conditions permit. Help us celebrate 40 years aboard the Queen Mary with this month-long special

event! See details at http://www.qrz.com/db/w6ro or www.aralb.org

Fishing for Freedom
Apr 27, 1100Z-2200Z, W4F, Powder Springs, GA. 5th District of Georgia, American Legion. 7.275. Certificate. W4F- Fishing for Freedom, American Legion Post 294, 3282 Florence Road, Powder Springs, GA 30127. Fishing for Freedom is an event sponsored by the 5th District of Georgia, American Legion. It is a day where we have camaraderie and fishing for our Wounded Veteans. georgiafishingforfreedom@gmail.com

The INDYCAR Grand Prix
May 5-May 12, 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. www.w9ims.org

THE GAMBIA, C5. A group of operators will be QRV as C5DL from April1 to 15. Activity will be on 160 to 10 meters using CW, SSB and various digital modes, with three stations active. QSL via DL7DF.

GUIEA-BISSAU, J5. Livio, IZ3BUR is QRV as J52EC from Cumura until April 15. QSL direct to home call.

LITHUANIA, LY. Special event station LY800SMG is QRV until May 27 to celebrate the first datable reference to the region Samogitia from 800 years ago. QSL via LY2NZ.

The Importance of Time

If you're operating any of the so-called "WSJT modes," which include FT8, JT65, JT9, and WSPR, you know that accurate time is critical. Your computer clock must be in sync with the computer clocks at the stations you hope to contact. Synchronization doesn't have to be perfect, but the margin of error is slim. In some instances, a time deviation of 2 seconds is enough to make it impossible to decode signals.

The problem with most computer clocks is that they tend to drift. Modern versions of Windows, which most hams use, communicate with online time servers using Network Time Protocol, or NTP, to keep computer clocks in sync. This works well for ordinary use, but when you're talking about a need for accuracy measured in fractions of a second, that approach can have shortcomings.

Counting the Seconds

Windows doesn't query the NTP servers constantly, and if there are disruptions in communication (or disruptions in software processes), it will result in lax synchronization. Windows will synchronize the time eventually, but not necessarily according to your operating schedule. At my station, I would occasionally notice that my computer clock had drifted by more than a second.

How could I tell?

I'd look at the "DT" column in my WSJT-X software (see Figure 1). The numbers in the DT column indicate the discrepancies — in seconds or fractions of seconds — between your computer's clock and the clocks at the other stations whose signals
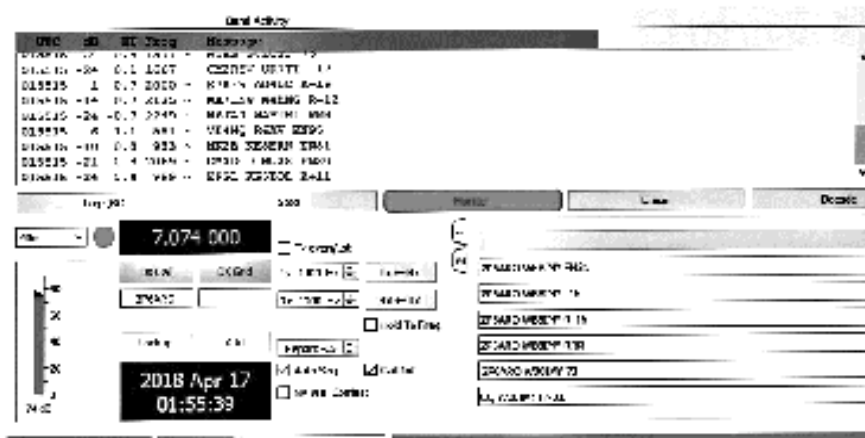

Figure 1 — In the WSJT-X Band Activity window, you'll find the DT column (third from the left) The numbers in this column indicate time discrepancies between your computer's clock and the computer clocks at the other stations.

you've decoded. It is normal to see a few DTs of 1 second or so, but if you notice that nearly every decoded signal is showing such deviations, that's a hint that the problem is at your end. Of course, another strong indicator of a time problem is when you're not decoding signals at all.

Getting in Sync

One fix is to simply force Windows to resynchronize. In Windows 10, open the SETTINGS menu, and then click on TIME & LANGUAGE. A new menu will appear, and you will see a switch labeled SET TIME AUTOMATICALLY. In all likelihood, it will be in the ON position. Slide the switch to OFF, wait a few seconds, and then slide it back to ON. This will force Windows to resynchronize its clock.

The problem with this approach is that you must remember to do it each time you sit down to operate. A more elegant solution is to install a software client that is more vigilant at maintaining the proper time.

Dimension 4 (www.thinkman.com/dimension4/) has been a popular free application for many years, but some find it complicated to configure. My favorite software solution is Network Time Protocol (NTP), available at www.meinbergglobal.com/english/sw/ntp.htm. This open-source client installs quickly and then sits in the background doing its thing. You'll hardly know it's there, but you will see the effects in the WSJT-X DT column right away.

Some amateurs who desire even more precise computer time will use GPS receivers, along with software that taps into the receiver's ultra-accurate time signals. However, this level of precision isn't necessary for WSJT-X operating.

ACTIVE REPEATERS AND SIMPLEX FREQUENCIES (FM ANALOG)

REV 5/25/2018

OUTPUT FREQ.	OFFSET	TONE	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 Emegency Management and are maintaned by the county. Truste

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