Newsletter of the TAMIAMI AMATEUR RADIO CLUB, (TARC), Venice, Florida

THE COMMUNICATOR

Mailing Address: P. O. Box 976, Nokomis, FL 34274

W4AC Repeaters: 444.100 MHz (DMR) & 146.805 MHz (-) (PL100Analog)

Incorporated 1984 | http://www.tamiamiarc.org | November, 2018

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President's message……KB1HIP

As I mentioned in the October's president's message in "The Communicator", we strive to increase our operating activities and our exposure to our local community. I want to highlight an article written by Tom Porada, W4IEE, and published in the October 20 issue of the Venice Gondolier Sun. It's a terrific piece outlining Amateur Radio in general and TARC in particular. Good job, Tom.

In support of John Patrick, N9OU, a member and a Scoutmaster, several TARC members helped setup antennas and radios for the annual Scout Jamboree on the Air (JOTA) at the Maxine Barritt Park on October 20, 2018. Several scouts and cub scouts participated in this event.

Please save the date for our annual Christmas party which will be held on Thursday, December 13. The final details will be completed and released at the TARC monthly meeting on November 14.

We are continuing to find ways to get our members involved and to bring new members to our hobby. Since the FCC License requirements no longer require Morse code proficiency, a lot of radio operators are not being trained to copy code. So, with that in mind, we will be offering a code course in February, not only for those who want to learn the code, but also for those who want to increase their code speed. Please see Jim Shortill, KJ4NDO or any other officer if you are interested.

A new year is approaching quickly and we will be looking to fill the club officer and board positions for the next year. Please consider running for one of the positions. Your involvement will ensure that the club will continue to be an important part of the community.

I hope everyone has a great Thanksgiving and an enjoyable November.

VY 73 to all, de Andy-KB1HIP

Next meeting NOVEMBER 14, 2018

Our meeting will start at **7:00 PM** on Wednesday, **14 November, 2018** at the Coast Guard Auxiliary Training Center, 1200 South Harbor Drive.

TAMIAMI AMATEUR RADIO CLUB *Minutes of the 10/10/18 Meeting*

The meeting was called to order at 7:00 PM by President Andy Durette, KB1HIP. The pledge to the flag followed. Introductions were made by name and call sign.

MINUTES: President Durette requested a motion to accept the minutes of the September 12, 2018 meeting as published in the Communicator. Motion was made, seconded and approved.

CORRESPONDENCE: None

TREASURER'S REPORT: Treasurer Frank Wroblewski, W2XYZ, reported a beginning balance of $4017.11, income of $111.00, expenses of $38.00, and an ending balance as of September 30, 2018 of $4,090.11.

SUNSHINE: N/A

VE TESTING: 4 candidates presented for examination. The exams taken were three Technician and one amateur Extra. All passed.

LIAISON TO QCWA: QCWA meeting was held at Denny's Restaurant on Bee Ridge Road, Sarasota, FL at 11:00 AM, October 1st. There were 20 members, spouses and guests present. Al Culbert, K0AL, gave a presentation titled: "Observations of Germany", based upon his recent trip to Germany.

REPEATER / TECHNICAL: Frank Wroblewski, W2XYZ, reported that the digital repeater 444.10 MHz was working satisfactorily; the net frequency used being TAC 311. The Club 2 Meter analog repeater is 146.805 MHz (-) PL 100. The digital net opens Tuesday at 7:30 PM. The 2 Meter net opens Thursday at 7:30 PM. A new 10 meter net on frequency 28.450 MHz, upper side band, begins immediately upon the conclusion of the 2 Meter net.

MEMBERSHIP: There are 57 regular members, 14 first year free, 5 life and 1 comp, for a total of 77. In addition, 5 individuals have submitted paperwork to join the club, with two submissions made during the meeting. Other hams have indicated that they will be submitting their paperwork soon. As accurate numbers are in flux, total will be published next month.

PUBLICITY: Due to the efforts of Tom Porada, W4IEE, Club meeting information is beginning to regularly appear in the local newspapers. Please contact Tom if you have an idea for an article or someone asks for Club information.

OLD BUSINESS: 1. Christmas Party: Places under consideration; Boca Royal Country Club, Valente and Allegro restaurants. Jim Shortill, KJ4NDO, will research the Boca Royal, Tom Porada, W4IEE, will research the Valente and Allegro restaurants. Reports to be discussed initially with President Durette.

2. Technician Licensing Course**:** Paul Nienaber, KN4BAR, Primary Instructor, advises that the course will be given the 1st., 2nd., and 3rd. Saturdays in December at the Jacaranda Library. Seventeen students have signed up so far. Contact Paul for class information flyers.

3. Get Your Park On: This State and National Park centered operating event will take place October 14 - 20, in celebration of Earth Science Week. It is open to Amateur Radio operators around the world. The event is sponsored by affiliates of World Wide Flora and Fauna (WWFF). The event encourages radio operators to operate outdoors in protected nature parks. See: http://www.arrl.org/news/get-your-park-on-operating-event

NEW BUSINESS: Boy Scout Jamboree On the Air, October 20, 2018.

The purpose of the Jamboree is to get Scouts transmitting to other Scouts worldwide via short wave radio. Scout Master John Patrick, N9OU, will begin putting up a radio station at 8:00 AM at the Maxine Barrett Park. Six members of the Club agreed to co-locate and set up another station and antenna in support of Scout operations.

January Auction: The Auction is scheduled for January 9, 2019, after the regularly scheduled Club meeting. A list of auction items will be published in the December Communicator**.** Start saving greenbacks now as there will be a lot to bid on.

SECOND TENT: Experience gained at the Shark Tooth Festival and at Field Day clearly shows the need for another tent. Tom Porada will present tent details/costs, etc. at the next Club meeting. **>>>>>>>>>**

Minutes, con't

ELECTION OF CLUB OFFICERS: The election will be held in December. The Board of Directors recommended that the Club form a Nominating Committee to propose candidates to the membership. Volunteers for the Nominating Committee please notify President Durette.

SPACE FOR CLUB EQUIPMENT AND YEARLY AUCTION ITEMS:

The storage issue is slowly becoming a challenge and the Club needs to get ahead of it. Currently, members volunteer garage space to store Club equipment. After discussion, Paul Nienaber. KN4BAR, volunteered to contact storage companies to see if they would donate storage space to the club.

The 50-50 drawing of $15.00 was won by Dexter Atkinson, KB1FY.

The meeting was adjourned at 7:35 PM

There were 17 members and visitors present.

Frank Wroblewski, W2XYZ presented a short film about the adventures of putting up an aerial, starring Laurel and Hardy.

Random dits & dahs

Tom Porada, W4IEE, TARC's public information officer proudly displays the front page of the "Our Town" section of The Venice Gondolier Sun. Thanks to Tom's efforts, TARC is benefitting from an increasing amount of publicity promoting the club and it's events.

Tom W4IEE

Tom's article, (written by Tom as a "guest writer"), included four photos, and text covering nearly a full page. Hats off to Tom!

How many TARCnicians does it take to dismantle two vertical antennas? Fourteen, judging by the table at the DAV as the group met for lunch prior to decommissioning Bob, N1RA's antenna farm. Bob moved to a condo in Sarasota, and needed to remove his low-band and VHF antennas from his former residence.

Someone said the magic words "free lunch", and help was on the way! Bob thanks all who gave of their time to help out.


Let's eat!


The wrecking crew


Steve in position one


Mission accomplished

DX Jack's page…. …….. *By Jack Sproat, W4JS*

MAJOR CURRENT/UPCOMING DX ACTIVITY & PROPAGATION HIGHLIGHTS

CURRENT and/or SCHEDULED DX ACTIVITY

COUNTRY – CALL SIGN	ACTIVITY PERIOD	BEAR-ING	HF BANDS and OPENING TIMES (UTC)							
			80	40	30	20	17	15	12	10
Ducie Is – VP6D by 15-op team, all modes	Now to 03 Nov	222	03-08	02-10	01-09	**21-03**	**14-02**	14-01	20-01	21-01
Vanuatu – YJ0GC by 3-op team, all modes	Now to 04 Nov	262	06-12	07-12	09-12	13-15	13-15	18-01	19-01	20-01
Zimbabwe – Z23MD by 8-op team, all modes	Now to 06 Nov	97	NIL	01-04	23-05	21-01	18-23	12-23	12-22	17-20
Mayotte – FH/DJ7RJ, CW/SSB, 600w	Now to 06 Nov	85	NIL	01-03	00-04	18-01	19-23	12-23	13-22	13-22
Kenya – 5Z/WA5A, fan dipole at 110 ft.	Now to 07 Nov	76	--	01-03	--	21-01	19-00	--	--	--
Palestine – E44WE by SP9FIH, ++, 100w	Now to 11 Nov	49	NIL	00-06	--	18-23	12-19	12-19	14-16	NO
Tanzania – 5H3MB by IK2GZU, spare time	Now to 28 Nov	83	NIL	01-03	00-05	22-01	19-00	12-00	14-23	17-22
Sri Lanka – 4S7KKG by DC0KK, **	01 Nov – 01 Apr	28	NO	NO	2200	0100	13-15	13-15	NO	NO
Christmas Is – VK9XQ by DF8AN, CW/Digi	03 to 06 Nov	334	NO	NO	09-12	1300	14-17	15-17	NIL	NO
Madagascar – 5R8UP by 2-op team, CW/SB	03 to 13 Nov	90	NO	NIL	00-04	21-00	19-22	15-22	13-21	15-19
Liberia – EL2EL/4 by 3-op team, ++, CW	05 to 09 Nov	92	--	00-09	22-06	20-00	11-00	--	--	--
Madagascar – 5R8IC by F6ICX, **, 100w	05 Nov – Feb '19	90	NO	NIL	00-04	21-00	19-22	15-22	13-21	15-19
Cocos Keeling – VK9CH by DF8AN, CW/Dg	06 to 09 Nov	3	NO	NO	1100	23-01	13-20	15-18	NIL	NO
Christmas Is – VK9XQ by DF8AN, CW/Digi	09 to 17 Nov	334	NO	NO	09-12	1300	14-17	15-17	NIL	NO
Minami Torishima – JG8NQJ/JD1, CW/RTY	15 Nov – Feb '19	308	NO	NIL	07-09	19-21	20-01	2100	NO	NO
Tonga – A35EU by 4-op team, all modes	16 to 27 Nov	253	NIL	05-11	05-14	13-14	17-01	17-01	18-01	19-00
Iran – EP6RRC by 8-op team, CW/SSB/FT8	17 to 23 Nov	37	NO	01-02	23-05	22-23	12-17	13-16	1400	NO
Vietnam – XV2D by RM9D	18 Nov – 02 Dec	346	--	NO	NIL	1400	2300	NIL	NO	NO
Micronesia – V63PSK by JA1FMN, FT8/JT65	19 to 25 Nov	291	--	NIL	7-11	13-15	19-21	20-00	--	--
Micronesia – V63DX by JA7HMZ	19 to 26 Nov	291	NO	NIL	7-11	13-15	19-21	20-00	20-23	2000
Ogasawara – JD1BPH & JI1CRM/JD1, all md	22 Nov – 07 Dec	318	NO	NIL	07-09	19-21	20-01	2100	NO	NO
East Timor – 4W/DS3EXX	25 Nov – 02 Dec	300	NO	NIL	09-11	13-14	14-16	21-01	21-23	NIL
East Tmor – 4W/HL1AHS, SSB/CW/FT8	26 Nov – 03 Dec	300	NO	NIL	09-11	13-14	14-16	21-01	21-23	NIL

Updated 29 October based on 29 October *The Weekly DX*, *https://dx-world.net/* and http://www.ng3k.com
***Notes*: Time in bold** = Bands with 75-100% opening; ??? = Call Sign not yet known; ++ = Mostly SSB; ** = Mostly CW; NO = No Opening forecast. Long Path bearings and opening times are underlined. All forecasts calculated using *W6ELProp* propagation software and, where possible, VOACAP predictions based on current or recent operations.

-- OCTOBER SOLAR ACTIVITY --

Through 29 October, the 10.7 cm Solar Flux ranged from 67 to 72, with a mean value of 69.0 (vs. 76.1 for October 2017 and 86.1 for October 2016). The A_p index was ≥ 7 on 10 days. The Sun was spotless on 19 days thru 29 October.

-- NOVEMBER FORECAST –

Solar activity is expected to be at very low levels for the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 04-09 Nov and again on 12-16 Nov due to recurrent coronal hole high speed stream (CH HSS) influence.

Geomagnetic field activity is expected to be at unsettled to active levels on 03-07 Nov, 09-11 Nov, and 25-27 Nov with G1 (Minor) geomagnetic storm levels likely on 03 and 20 Nov due to recurrent CH HSS effects.

The 10.7 cm Solar Flux should range from 68 to 70, and average 68.8 during November.

(From *NOAA Weekly Highlights and Forecasts*, 29 Oct 2018, *NOAA 27-day Space Weather Outlook Table*, 29 Oct 2018, and *45 Day AP Forecast, USAF*, 29 Oct 2018.)

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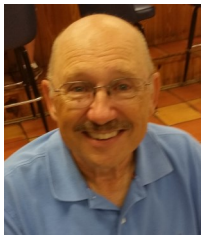
-- TIMOR LESTE/EAST TIMOR --

Tae-su, DS3EXX and Kun, HL1AHS will be active from Caimeo Beach Resort, Liquica, Timor-Leste as **4W/DS3EXX** and **4W/HL1AHS** 26 Nov to 03 Dec. TNX https://dx-world.net

-- ZIMBABWE ON THE AIR --

The Mediterraneo DX Club fired up Z23MD from Harare 27 Oct and they're filling the bands.

The ABCs of QSLs by XYZ



Someone smart and famous once said, "The final courtesy of a QSO is a QSL card." I'm not sure who coined that phrase, it might have been Winston Churchill since he said a lot of really smart things. Then again it might have been Ben Franklin, since he also said a lot of smart things and I believe he flew a 160 meter end-fed antenna with a kite during a thunderstorm, so it was probably him. The thing is we sometimes like to document a QSO because it was very memorable, or maybe it occurred with a rare DX station. As all Hams and even many non-Hams know, we swap post-cards, that we call QSL cards.

Basically, a QSL card is written verification that communication took place between one or two stations. One or two stations??? Sure, shortwave listeners would send a letter to a broadcast station that they heard at a particular time and place. The station generally responds to the listener by sending him a decorative post-card with the station call letters and other pertinent information.

Hams do essentially the same thing but they are verifying a two-way exchange of information (QSO). Plagiarizing from Wikipedia, the earliest record of QSL cards took place in 1916 when 8VX in Buffalo, New York sent a card to 3TQ in Philadelphia, Pennsylvania (notice how ITU prefixes were not used in the early days of radio).

A lot has changed in the past century, but some things stay the same. Hams still exchange QSL cards to verify a contact, or sometimes just as a thank you for a pleasant chat with a newly made friend. What has changed is the way we exchange QSLs. We now have electronic QSLing, QSL Bureaus, and specialty clubs such as those for QRPers to exchange cards.

Many Hams still use the time tested method of sending a card through the postal service. While this is a reliable and somewhat quick way of exchanging cards, it's also expensive. Particularly expensive if you are sending cards overseas.

To our rescue from abject poverty due to QSLing comes the ARRL. The ARRL has an outgoing QSL Bureau. This service will gather and sort cards sent to the ARRL. Once a quarter they send them to the appropriate QSL distribution center for each country. Detailed procedures for using the ARRL Outgoing QSL Bureau can be found at: ***http://www.arrl.org/files/file/QSL/OUTGOING%20QSL%20SERVICE%20September%202016.pdf***

The service costs $7.00 plus $1.15 per ounce of cards. About 8-9 cards make up an ounce (your mileage may vary). Suppose you have 50 cards you want to send (only DX cards, US cards not allowed). You arrange them by alphabetical order based on the country's primary call sign prefix. Include proof of your membership, such as a mailing label from QST, and a check made out to ARRL Outgoing QSL Bureau (for $13.90 in this particular case). Also include a slip of paper that has your name, call sign, email address, and the weight of the cards. Mail this bundle to:

ARRL Outgoing QSL Service

225 Main St.

Newington, CT 06111-1494

That's it. You're done. Now think about how long it would have taken you to look up the mailing address for each card, address each envelop and put international postage on each. International postage is currently $1.15, so sending the cards through the postal service would cost 50 X $1.15 = $57.50 Wow, what you save by sending one batch of 50 cards through the ARRL bureau is roughly equivalent to a year of free ARRL membership.

Next month I'll talk about how to receive your cards from your DX contacts. Here's a hint, the ARRL will **NOT** send them to you. See you next month.

73 de Frank Wroblewski, W2XYZ

Parks On The Air....kind of

by Paul, KN4BAR

I started out on October 14th to try to activate the Oscar Scherer State Park for the World Wide Flora and Fauna (WWFF) second annual "Get your park on" event. I saw it promoted in one of the ARRL weekly email newsletters and thought it would be a good excuse to take my station portable. I also knew that Chet (KG4IYS) had two brand-spanking new portable antennas that he might loan me.

I showed up at the park bright and early at around 8:15 am on October 14th. It took about 2 hours to get my sun shade tent and two portable antennas setup. I used the BuddiPole, at first configured as a horizontal dipole, and quickly switched to the vertical dipole configuration, in a side-by-side comparison with the Military Alpha vertical dipole. Both antennas had a 50 -foot LMR-400 feed line to an A/B coax switch at my station. Neither antenna requires ground radials.

I never did activate the park (44 QSOs were required) but I did make a lot of contacts. I operated exclusively on 20 meters, USB, phone on both October 14th and 20th. On the 14th there was the Scandinavian Activity Contest as well as state QSO parties for PA, SD, AZ, and NV. Needless to say, the band was very crowded with the PA stations loud and numerous. I was able to make at least one contact in each state, getting my first ever logged contacts for AZ, SD, and NV. Yeah!

Also had DX contacts with Italy, St. Lucias, and Barbados, but no joy with any Scandinavian stations even though I heard Finland, Norway, and Sweden stations calling CQ. The BuddiPole outperformed the Military A in Rx by about a full S unit. In Tx there were some stations I could contact with the BuddiPole, but not with the Military Alpha.

Being a real glutton for punishment, I went back out to the park on October 20th. Again it took about 2 hours to setup and this time I did a side-by-side comparison of the BuddiPole with a borrowed portable vertical dipole from Bob (W5GJ). He's had this antenna for decades, used it extensively, and loves it. He says it is the precursor of the DX Engineering TransWorld portable antenna. They do kind of look the same - a little.

I managed to work a few JOTA scout stations, one ND SEV station, and quite a few NY QSO party stations. There was also a "Worked all Germany" contest going on and I made 6 solid, 59, DX contacts - with Germany (4), Canary Islands, and Belgium. This time both portable antennas performed almost equally. I still give a slight edge to contact quality using the BuddiPole; but nothing measurable...just my perception.

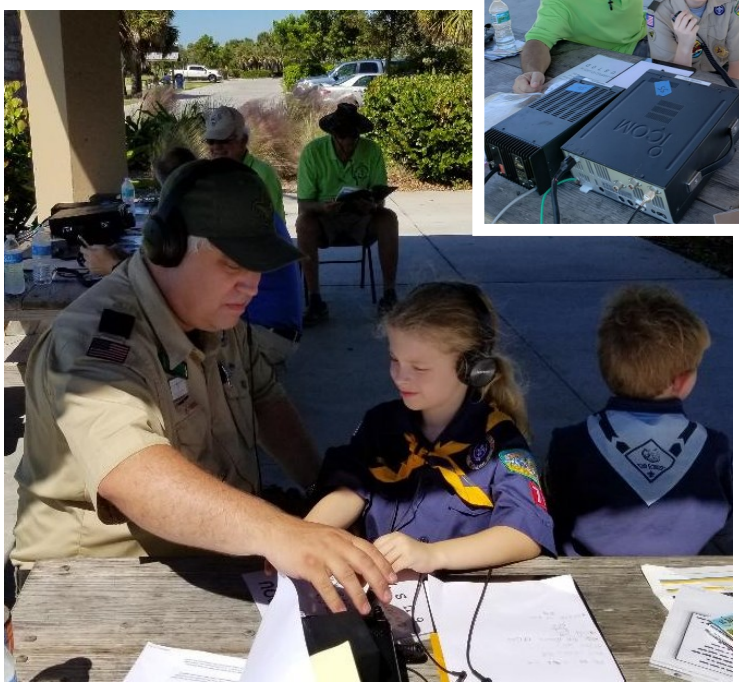
I'm thinking very hard about going portable again for the Winter Field Day event, ***https://www.winterfieldday.com/,*** on the weekend of January 26 and 27. Maybe I'll try the North Jetty park as a location. Anyone interested in participating give me a call.

73, Paul, KN4BAR

Jamboree On The Air

Maxine Barritt Park was the site of the Jamboree On The Air (JOTA) the weekend of October 19 - 21, 2018. Scoutmaster and TARC member John Patrick, N9OU is the driving force behind the Venice operation. John provided the base station, with TARC members assisting with a second station at the park.

The photos below highlight the participation of scouts and hams. JOTA provided an opportunity for the scouts to fulfill requirements for a radio merit badge, and perhaps pique their interest in obtaining a ham license down the road.



What's the Frequency, Kenneth??

By Steve - WA1ZKN

Or....Do we really know what time it is?

Time to get on the air! Fire up our rig, plug in the appropriate crystal, tune the grid and plate and start transmitting. We trust that whatever is stamped on the crystal case is where we are. On the receiver, we tune around until we find our signal, put a mark on the dial and call it close enough – as long as we don't get too close to the edge of the band. As things warm up and our frequency drifts, we chase our signal and the guys we are talking to, retuning as we go. Sound familiar?

These days things are a bit easier. Our rigs are based on a reference oscillator that feeds a Phased Locked Loop (PLL), adjusted by a Voltage Controlled Oscillator (VCO) that allows us to effortlessly tune anywhere we want. A 10-digit digital display shows us our frequency to a level of precision undreamt of 50 years ago. In digital modes, we are adjusting our little chunk to spectrum down to the level of 1 Hertz!

But, how well do we really know what frequency we are on? Just because the display on the rig says 28,495,050,101 Hz is that really where we are? The accuracy and stability of our station depends totally on the accuracy and stability of the Reference Oscillator in the rig. If the Reference Oscillator is off, or it drifts, then the transmit and receive frequency of the rig will also drift. The rigs are calibrated at the factory and, in many cases the Reference Oscillator rests snugly in a tiny oven to keep it at constant temperature (if the rig is powered on). But without comparing to an independent frequency standard, we don't know how close to "on frequency" we are operating.
What can we do?

We could use a stand-alone frequency counter, oscilloscope, spectrum analyzer or any of several other measuring gadgets to compare our rig against. The problem is, the measuring gadgets are subject to the exact same problems of accuracy and stability that our rigs are. Unless the measuring gadget (or the rig) is sent off periodically for calibration against a standard traceable to the National Institute of Standards and Technology (NIST), we are no better off than using the rig.

Some rigs provide a mechanism to adjust the reference oscillator to "zero beat" against a carrier. If the carrier is on a known frequency (WWV in Colorado for example) then we can compare and adjust the rig to match WWV. This is good for that instant in time, but this adjustment does need to be repeated periodically to keep up with age-related changes (the rig, not the operator) and is subject to temperature changes. This method is good, but not really what we are looking for. By the way, I have found that commercial AM broadcast stations are not a great frequency reference. I have found some here in the Sarasota area that are almost 10 Hz off frequency.

A solution! Mid to high-end rigs frequently have a "Reference Input" where you can apply a known (usually 10 MHz) sine wave reference signal. If the Reference Oscillator is better than the oscillator in the rig, then you can get better accuracy and stability. But as with external measuring gadgets you need to know how stable and accurate the Reference Oscillator is. Again, this means sending it out for calibration periodically, unless you want to buy an actual "atomic" clock for your house.

What we need is a way to reference the rig to a frequency standard that is controlled to a high degree of accuracy and stability in real time. That way, we know that what is shown on the display is where we are operating. Fortunately, the US Government provides us this service at no cost – all we need to do is obtain the equipment to take advantage of it. Where does this magical frequency reference come from? It Comes From Outer Space. Specifically, it is part of the Global Positioning System (GPS) operated by the United States Air Force.

The GPS system consists of 31 (as of this time) specialized satellites in Medium Earth Orbit (about 12,000 miles altitude). Each satellite contains four high-accuracy "atomic" clocks which gain or lose about 1 second every 32,000 years. The satellites compare their clocks to each other and to ground stations to maintain this accuracy. This accuracy is necessary because GPS receivers (like the one in your car) use the time information broadcast by the GPS satellites to compute location. By comparing the time signals received from each satellite in view of the receiver, it is possible to work out the Time of Flight (TOF) for the signal from each satellite to the receiver. Since the position of each satellite can be determined from a database and using the TOF from each satellite, it is possible to compute ("triangulate" if you will) your exact position on or above the surface of the earth.

What does this have to do with my rig, you ask? As we know from our Novice training, time and frequency are closely related. Frequency (cycles per second) measurement is really time measurement. We can count cycles easily, but knowing exactly what "one second" is, now that's the tricky bit. If we have a very accurate time signal from the GPS, then we can generate or measure a signal at a very accurate frequency. But! you say, that sounds expensive! You would need an entire rack of equipment to do this! It turns out it's much easier and cheaper than you might think.

Introducing the GPSDO – Global Positioning System Disciplined Oscillator – that's sure a mouthful, what does it mean? Let's start with the oscillator part. Any frequency standard needs an oscillator to generate the signal. A GPSDO has a 10 MHz oven-controlled PLL oscillator as it's beating heart. Plug the unit in and the oscillator fires up, just like the one in your rig. A little oven keeps the .>>>>

fre·quen·cy | \ˈfrē-kwən(t)-sē \

crystal nice and warm so it doesn't drift very much. All pretty standard - but by itself, no better than our rig or our frequency counter. If we add a GPS receiver to the unit, we can decode the timing signals from the GPS satellites – we decode 8 or more satellites to cancel out doppler shift due to the satellite movement. By using this timing information, the GPSDO measures the output of the oscillator and then adjusts or "disciplines" the oscillator so that it generates a 10 MHz signal to within approximately 0.0001Hz at 10 MHz (mean). Instantaneous accuracy is claimed to be within 0.03 Hz at 10 MHz. That's really, really good! But, you ask, what about the cost?

If you look around the web, you can find a number of 10 MHz GPSDO units offered for sale. Many are built around surplus Trimble GPS modules removed from cellular radio sites, but these are somewhat clunky and seem to be expensive for what you get. Others are built for research laboratories and really are much more complex (and expensive!) than we need.

Tom Porada – W4IEE has been using a LC-XO-Plus Kit from Jackson Labs (www.jacksonlabs.com) for several years. This unit cost Tom about $600. It has a USB port, FCC compliance data and real technical support. But, $600 is a lot of money - can we do better (or, at least cheaper)?

I was able to find a unit from the "RF-Experts" EBay store for $89.95 – that is not a typo - $90!! So what do you get for $90? The GPSDO unit, an antenna with 15 foot cable and a power supply. That's it – no manual, no software, no FCC compliance data, no technical support. The RF-Experts unit supplies a 10 MHz sine wave output, 1 Pulse per Second (PPS) timing output and NEMA data via a 1/8" stereo jack and a couple of status LEDs. Nothing else. Delivery time was about 2 months from Hong Kong.

To use the GPSDO, I referred to the manual for my Icom transceiver. Connecting the unit was as simple as putting the GPS antenna where it had a good view of the sky, connecting the 10 MHz output of the GPSDO to the Reference input on the rig (I needed some BNC attenuators to get the level down where the rig wants it), and setting the rig to use the external reference instead of the internal oscillator. The GPSDO immediately provides a 10 MHz signal on startup, but the real magic takes about 10 minutes before the status lights indicate that the GPS receiver has taken control. In my testing using WSJT-X (the FT8 software) for frequency calibration, I am showing I am accurate to about .05 Hz on 20 Meters. Tom has used his GPSDO and FLDIGI software to get an Honorable Mention in the ARRL Frequency Measuring Test. These things work!

Now, do you really "need" this level of accuracy? Does it help me get that rare DX? Perhaps (probably) not. But I love a cool gadget as much as the next guy and this is a fun little toy. I have been told that it is possible to use the NEMA output to set up a Stratum 1 time reference for my computer. That's the next project!

Jackson Labs GPSDO 1

Jackson Labs GPSDO 2

RF-Experts GPSDO 1

Above are some photographs of GPSDO units. The Jackson Labs is shown in the top two photographs, and the $89 RF-Experts unit is on the left of the last photo. On the right of the last photo is a brand new (fancier) GPSDO from RF-Experts that I just got – you'll be hearing about that soon.

73, Steve, WA1ZKN

My favorite rig, and why I like it!

Frank, W2XYZ

My favorite rig is a Yaesu FT-817. It's my favorite not because it is the best performing or newest, it's my favorite because the two of us have been through a lot together. For those not familiar with this model, it's a 5 watt 160 m through 70 cm transceiver. Primarily designed for portable operation and that is how I mainly used it.

I used to be a volunteer with the American Red Cross and took it with me to various disaster responses across the country. Whenever I'd have a chance, I'd make a couple of CW contacts or maybe check with the locals on the repeaters. It always was a great source of entertainment for clients with nothing to do while being stuck in a shelter. I have no idea of how many people became Hams because of this, their introduction to Amateur Radio while being housed by the Red Cross, but I know I answered hundreds of questions about the hobby.

Chet, KG4IYS

My favorite rig at present is the Flex-6600M. It's a substantial improvement over my Yaesu FT-991A, which is also quite capable. The Flex-6600M has greater receiver sensitivity, far more filter controls programmed in DSPs; it allows me to drive up to eight separate receiver slices and two transmission slices with two antennas all in parallel. It is truly a modern SDR controlled radio with substantial remote and local operational control; and it has knobs. Using FT-8 digital protocol, I was able with this radio to achieve the ARRL coveted Worked All States and DXCC awards using only electronic QSLs for certification on LotW in about four months time in spite of the horrible band propagation conditions and the HOA restrictions on antennas.

Paul, KN4BAR

My favorite rig is the Yaesu FT-450D. Not because its the best; but because it was/is my first rig. So far its done everything I've asked of it, or had the proper antenna for it to work with. I think most of us might say that our first rig was our best rig. Its the one with which we first learned how to be a ham.

Steve, WA1ZKN

I have to say my favorite rig was the Heathkit SB-102 that I built when I was a new ham. I was licensed in 1976 just as these radios were going out of production. I got a kit new and built it in my bedroom. It was thrill to put it all together and have it actually work! After aligning the IF, calibrating the VFO and making sure the finals worked properly (loved those 6146's) I was an actual Ham on the low bands, working DX on SSB and CW. Modern solid-state rigs have come and gone through the shack since then, but I still have fond memories of operating my old Heathkit.

Tom, W4IEE

Flex Radio 6500. No knobs, no buttons! Everything is done in software and the interface is the mouse, keyboard and monitor. The actual radio has an on/off switch and sits quietly out of sight during operating.

Using this radio is like a playing a video game. I can 'see' multiple bands and/or band segments simultaneously on the panadaptor-waterfall. Knobs and dials are so 1950s! Go Flex. Go SDR!

San, K3SY

After tuning and fiddling for every band change with my first real rig - a Kenwood TS-520, I decided I wanted a rig with which I could change bands easily, so I moved to an Icom IC-736.

With the urge to get on FT-8, and not wanting to mortgage my house to buy a new rig, I opted for the Icom IC-7300. This has become my favorite rig. Even though it falls in the SDR category, It still has the feel of a regular radio.

Geezer that I am, I am still a sucker for all those dials and knobs which are so 1950's, Tom.

November, 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
+ 10 meter net follows the 2 meter net at 28.450 mhz				1 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	2 *Breakfast @ Peaches **	3
4 	5 *QCWA 11:30 AM Denny's Bee Ridge Road*	6 *Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1*	7	8 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	9 *Breakfast @ Peaches **	10 ***TARC VE Session** @ Jacaranda Public Library **10:00 AM***
11	12  *DARN Emergency net @ 11AM Starts on NI4CE/RPT 145.43 pl100*	13 *Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1*	14 ***TARC meeting** @ Coast Guard Training Center 7:00 PM.*	15 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	16 *Breakfast @ Peaches **	17
18	19	20 *Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1*	21	22  *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10 M net*	23 *Breakfast @ Peaches ** 	24
25	26	27 *Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1*	28	29 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10 M net*	30 *Breakfast @ Peaches **	** Peaches opens at 6:00 AM, orders taken at 7:00.*

****The W4AC 146.805 Repeater is now ANALOG, PL100. [If the 2-m repeater is down, please QSY to 146.58 simplex]**

TAMIAMI AMATEUR RADIO CLUB, INC.
MEMBERSHIP APPLICATION

Name _____Call sign_____ Class_____ ARRL, (Y/N) ___

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Application Date_____ Amount enclosed _____

Please check items of interest:

[ ] A - ATV/SSTV	**[ ] L - Echo Link**	**[ ] S - Special Events**
[ ] C - Contests	**[ ] N - Net Control**	**[ ] T - Training**
[ ] D - Digital (DMR, PSK, etc.)	**[ ] O - Computers**	**[ ] U - VHF/UHF**
[ ] E - Emergency Comm.	**[ ] P - Packet**	**[ ] V - VE Testing**
[ ] F - Field Day	**[ ] Q - Publicity**	**[ ] X - DX**
[ ] I - RFI/TVI	**[ ] R - Repeater**	**[ ] Y - RTTY**
[ ] Other (Specify) _____		**[ ] Z - QRP**

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