



# 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.tamiamicarc.org>

December, 2019

## In this issue:

**President's Message:** ..... 1

**Meeting Notice:** .....1

**Meeting Minutes:** ..... 2

**Minutes & Hamcation Bus:** ..... 3

**DX Jack's Page:** ..... 4

**Candidates Forum:** ..... 5-6

**DX W/O Sunspots:** .. 7-8

**Party Notification:** ... 8

**Tom's Tech Tips:** ..... 9-10

**License Info:** .10

**Club Calendar:** .... 11

**Membership Application:** . 12

## President's message.....KB1HIP

**As** we finish the Thanksgiving Holiday period, I want to take this opportunity to thank all the officers, the board of directors and all our members for their support of our radio club. Membership in our club grew from 90 members at this time last year to a record high of 139 members now. Wow!



The December issue of QST magazine lists the performance of the June, 2019 Field Day. In the 3A category operating as W4AC and (+W2XYZ), we finished with 875 QSOs and a total of 3224 points. We placed 102 out of 302 entries. Great Job!

Our Annual Christmas party will be held on Tuesday, December 10 at Valenti's Ristorante located at 1200 E. Venice Avenue. Cocktail hour starts at 5:00 PM and dinner is at 6:00 PM. Please let Jim Shortill, KJ4NDO, know if you would like to attend.

A couple of activities are coming up for December and January: First, if we can put it together we are looking at the possibility of activating the Boca Grande/Gasparilla Light House (USA 910) as part of the Amateur Radio Light House Society (ARLHS) Christmas Lights program which runs from December 21 to January 3, 2020. In addition we will participate in the Winter Field Day (WFDA) event at the Coast Guard Auxiliary Station on January 25 and 26, 2020. We will discuss these two events at our December 11 monthly meeting.



As the end of the year is fast approaching, we are looking to fill the club officer and board positions for the next year. Please consider running for one of the positions. Please see San Yoder, K3SY, if you have an interest to serve.

In closing I want to wish everyone a **Merry Christmas and a Happy New Year.**

**VY 73 to All de Andy-KB1HIP**

**Next Month Party Pics & Election results**

## Next meeting December 11, 2019

Our meeting will start at **7:00 PM** on Wednesday, **11 December, 2019** at the Coast Guard Auxiliary Training Center, 1200 South Harbor Drive.

**TAMIAMI AMATEUR RADIO CLUB** *Minutes of the 11/13/19 Meeting*

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

**MINUTES:** The minutes of the October 9, 2019 meeting as published in The Communicator, were accepted by motion made, seconded and approved.

**CORRESPONDENCE:** One item was received; an advertisement from PNC Bank. The letter was forwarded to Frank for action

**TREASURER'S REPORT:** Treasurer Frank Wroblewski, W2XYZ, reported an ending balance for the month of October of \$4,029.02. The Treasurer's report was approved by the membership.

**SUNSHINE:** N/A.

**VE TESTING:** Steve Phillips, WA1ZKN now NS4P. Four candidates presented for the October test session. One (Steve, KN4YND) upgraded from Tech. to General. The remaining three took and passed the Technician exam. Their call signs are: Robert - KN4ZEN, Spencer - KN4ZEO, Hunter - KN4ZEP.

In November six candidates presented. Two sat for the Extra license. Steven, KN4YND, who upgraded to General in October, passed the test. The other candidate for Extra was not successful. We also had four candidates take and pass the Technician exam. They should be getting their call signs soon.

I want to thank the entire VE testing team for their hard work and dedication.

Reminder: starting in January the VE testing sessions will move to the William H. Jervy Public Library, located at the corner of Milan and Nokomis streets, "on the island." The schedule is the same. Sessions will be held on the second Saturday of the month at 10 AM, except for the February session which is the third Saturday, so as not to conflict with the Hamcation.

**LIAISON TO QCWA:** About 35 members, spouses and guests met in November at Denny's restaurant in Sarasota. The program was: "Energy."

**REPEATER / TECHNICAL:** Frank Wroblewski, W2XYZ, reported that both the digital and analog repeaters were working well. The frequency for the digital operations is talk group TAC 311. The club 2-meter analog repeater frequency 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. Hams can participate on this net via EchoLink using a computer, an iPhone or an Android system based phone. Click on W2XYZ-R on the EchoLink directory screen to establish EchoLink contact. The 10 meter net is on frequency 28.450 MHz, upper side band, and begins immediately after the conclusion of the 2 meter net. The 10 meter frequency was chosen so Novice/Technician licensees could participate.

About 12 to 14 members on average participate in these nets every month.

**MEMBERSHIP:** Chet Fennell, KG4IYS, reported that there are 87 regular, paid members, 44 first year free members, 0 student members, 7 life members and 1 comp. member, for a total of 139.

**OLD BUSINESS:** 1. Status of Technician and General licensing courses: Paul Nienaber, KN4BAR. Ongoing class schedules may be found on the club website. Go to [tamiamiarc.org](http://tamiamiarc.org). See: "Home Page. Paul advised that a General license preparatory study group would be formed in the sometime in the spring. Refer to the home page after the end of December for further details.

2. The net control operators for our weekly nets (San, K3SY and Steve, NS4P) offered to help new Technician licensees to become good net control operators. Our net control operators said that they had a training script and that new Technicians would have a trainer at their elbow throughout the net. Other Hams noted that running a net was the best way to gain experience. "We all started this way," they said.

If you want to volunteer for net control please contact Steve. He developed the sample script and will train new net control operators. Contact Steve at: [sphilips3@gmail.com](mailto:sphilips3@gmail.com) if you want to join this happy, informal band of radio operators.

**NEW BUSINESS:** 1.) Christmas Party. The Club Christmas party will be held at Valenti's Restorante, 1200 East Venice Avenue, Venice, FL. on December 10, 2019. Happy hour is 5:00 PM to 6:00 PM. Dinner will

**Continued >>>**

## Minutes, con't

begin at 6:00 PM with the placement of dinner orders. Please see the November Communicator for meal choices. If you have not done so, please contact Jim Shortill, [jmnshortill@netscape.net](mailto:jmnshortill@netscape.net), and let him know that you will be attending, and what your meal choice is.

2.) Winter Field Day, January 25, 26, 2020. Location will be the USCG Auxiliary station, 1200 Harbor Drive, Venice, FL. During the Summer Field Day, participants reported some interference in HF operations caused by FT8. Members are currently formulating a test protocol to resolve this issue. Winter Field Day has grown into a technically challenging, enjoyable, member driven event. Clear your calendars and get ready for fun field event.

3.) Hiring a Bus to take members to Hamcation in Orlando. This initiative was discussed favorably during the meeting. There was discussion about a full size bus or a 15 passenger van. If you are interested in either the bus or the van as transportation to the Hamcation, please contact Paul Nienaber, KN4BAR, at: [paul9aber@gmail.com](mailto:paul9aber@gmail.com), and tell him your choice

4.) Election of officers for 2020. The election of officers will take place at the December meeting. If you are interested in one of the four positions, please contact San Yoder, (K3SY) at: [k3sy.73@verizon.net](mailto:k3sy.73@verizon.net).

A Repeat Notice for all members: Late risers of the world unite: Members who would like to attend a TARC fellowship breakfast beginning during the daylight hours, now have the option to attend a TARC breakfast at 8:30 AM Wednesdays, at the I Hop restaurant, 4369 Tamiami Trail South, Venice, FL. Ph: (941) 445-5494. Hope to see you there.

**ADJOURNMENT:** The meeting adjourned at 7:45 PM. There were 48 members and visitors present. The 50-50 winner was Mel Walter (KD9EIN), who won \$44.00.

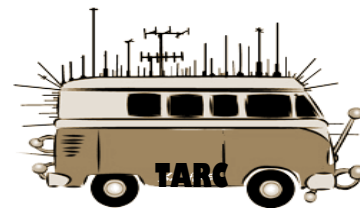
Program: "ELI the ICE man", by Al Culbert

## HAMCATION, Here we come by bus

Hamcation, the Orlando Hamfest is reported to be the second-largest in the country. The 2020 Hamcation will be held Feb 7-9 at the Central Florida Fairgrounds and Expo Park in Orlando. The sponsors say there will be over 150 commercial booths, 200+ swap table, and a massive tailgate area. People come from far and wide to attend this major event.

We're fortunate enough to live in the same State it is held. What's not so fortunate is, it's more than a 2-hour drive each way. The average car will burn about \$30 worth of fuel making the round trip. If you feel 4-5 hours of driving in one day is too much, you might stay overnight in a local hotel for about \$100.

There is an alternative this year. Our club will charter a luxury tour bus for Saturday, Feb 8, that will pick us up at 6:30 am, at the Coast Guard station in Venice, and deliver us to the front gate of Hamcation. The bus will remain on site all day so you could store your newly acquired 'treasures' on-board, rather than lugging them around all day. At 5 pm, the end of the day, the bus will ferry us back to Venice and drop us off at the Coast Guard station where we parked our cars in the morning. Naturally, the bus is air-conditioned, has comfortable seats and even has a bathroom.



Here are the details: We know how much the bus costs, but we don't know how many people will use it. The bus holds 47 passengers. If we fill the bus, the cost comes to about \$35 per person. If we only get a handful of people, we'd probably have to cancel the trip. So what I'd like to do is get a \$10 commitment per person from members (and guests) that want to go. The \$10 deposit will reserve your seat on the bus. In the unlikely event, the trip is canceled, you will receive your deposit back. Reservations are first-come, first-served. The availability of the bus will also be announced to other local clubs in the area, a short time after our members have a chance to sign up.

To reserve your seat, get \$10 to me as soon as possible. Either give me cash in person, send a check in the mail, pay by credit card, or via email with PayPal. Please make the amount \$10.50 if you plan to use a credit card or PayPal. The extra .50 is to cover the fee the club is charged for processing. If using email to send the \$10.50 via PayPal, our PayPal address is: [treasurer@tamiamiarc.org](mailto:treasurer@tamiamiarc.org)

**73, Frank Wroblewski, W2XYZ, TARC Treasurer**





*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 BEST OPENING TIMES (UTC)							
			80	40	30	20	17	15	12	10
Tonga – A35JP by JA0RQV, CW/SB/FT8	Now – Nov 2020	253	0900	05-13	04-14	13-14	19-21	18-23	19-23	2100
Zambia – 9J2MYT by IK1MYT, SSB	Now - May 2020	95	NIL	23-04	--	19-23	--	16-22	--	1400
Thailand – HS0ZME by SM6NT, **	Now - Apr 2020	<u>355/175</u>	--	NO	1200	NO	NO	NO	<u>1400</u>	NO
Gambia – C5YK by ON7YK, FT8/SSB/CW	Now – Mar 2020	88	22-08	21-10	20-23	17-21	12-19	13-18	NIL	NO
Ghana – 9G5GS by IZ4YGS, mainly FT8 F/H	Now to 28 Dec	88	23-05	21-05	20-00	18-00	16-22	12-21	--	--
Madagascar – 5R8VX & 5R8KU, CW/SB/Dg	Now to 30 Dec	90	NIL	23-02	22-00	20-23	18-22	16-21	14-19	NO
Gabon – TR8CR by F8EN, **	Now to 15 Dec	88	01-03	22-06	21-01	18-23	12-22	12-21	14-18	NO
Gambia – C56PIS by SA6PIS	Now to 13 Dec	88	22-08	21-10	20-23	17-21	12-19	13-18	NIL	NO
Malawi – 7Q7W by DK2WV, SB/FT8/CW	Now to 18 Dec	90	--	23-03	22-01	20-23	18-22	16-21	13-19	1400
Sri Lanka – 4S7DLG by DK7TF, SSB/FT8	Now to ????	<u>28/208</u>	NO	NO	NO	NO	13-14	<u>1400</u>	<u>1400</u>	NO
Rotuma Is – 3D2AG/P, 3 – 4 weeks	Mid December	263	NIL	06-13	05-13	NIL	20-00	19-20	NO	NO
Micronesia – V6K by JA1XGI, ** low bands	02 to 09 Dec	293	NIL	07-13	07-14	1400	2000	20-23	21-22	NIL
Burkina Faso – XT2AW by DF2WO, FT8 +	02 to 20 Dec	83	00-06	21-08	20-00	18-23	14-21	13-20	13-18	NIL
West Malaysia – 9M2MRS by PA0RRS	03 Dec – 27 Feb	<u>352/172</u>	NO	NO	NO	1400	1400	<u>1300</u>	<u>1400</u>	NO
Somalia – 6O100 by EP3CQ	04 to 19 Dec	66	NO	23-03	22-01	19-22	16-21	14-20	14-17	NO
St. Martin – TO9W by 6-op team, **, FT8	04 to 13 Dec	113	21-12	19-14	00-24	10-00	12-23	13-22	13-21	14-16
Maldives – 8Q7XY by DF3XY, FT8, SSB	10 to 23 Dec	41	--	23-00	21-23	21-22	--	14-15	--	NO
Senegal – 6V1A by 9-op team, CW, SSB	13 to 15 Dec	87	22-08	21-09	20-23	17-20	13-19	13-18	NIL	NO
Thailand – HS0ZNR by VK2BY, SSB, FT8	14 Dec – 08 Jan	<u>355/175</u>	NO	NO	1200	NO	NO	NO	<u>1400</u>	NO
Liechtenstein – HB0/DL2SBY, SB/CW/Digi	21 to 28 Dec	46	22-07	20-10	08-11	12-16	13-15	1400	NO	NO

Prepared 28 November based on 25 November *The Weekly DX*, <https://dx-world.net/> and <http://www.ng3k.com>

**Notes:** Times shown are for S-5 or better signals and 60% or better opening probability; ??? = Call Sign not yet known; ++ = Mostly SSB; \*\* = Mostly CW; NO = No Opening forecast, NIL = band is open but weak signals below S-5 threshold. Long Path bearings and opening times are underlined. Propagation forecasts are calculated using VOACAP <http://www.voacap.com/hf/>.

**-- NOVEMBER SOLAR ACTIVITY --**

Through 28 November, the 10.7 cm Solar Flux had a mean value of 70.2. The  $A_p$  index was  $\geq 7$  on six days. Small insignificant sunspots appeared 01 - 02 Nov. and disappeared.

**-- DECEMBER SOLAR FORECAST --**

Solar activity is expected to be at very low levels throughout the month.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to high levels. High levels are expected on 20-21 Dec. Moderate levels are expected on 01-17 Dec. All enhancements to electron flux are anticipated in response to multiple CH HSSs.

Geomagnetic field activity is expected to range from quiet to unsettled. Unsettled conditions are expected on 08 Dec, and 18-25 Dec in response to multiple CH HSSs. The remainder of the month is expected to be at quiet levels.

The 10.7 cm December Solar Flux is forecast to range from 69 to 70 and average 69.5.

(From NOAA Weekly Highlights and Forecasts, 25 November 2019, NOAA 27-day Space Weather Outlook Table, 25 November 2019, and 45 Day AP Forecast, USAF, 25 November 2019)

**Working DX is a Contact Sport!**

And you can make contact thousands of times and enjoy the thrill of making your own goals.

**-- GHANA – 9G5GS --**



Matt-IZ4GYS is now active as 9G5GS from Sanzule, Ellembele District of Ghana until 28 December. QRV on 15m to 160m, using mostly FT8 Fox/Hound and SSB.



After years of silence, 4U1UN was on 40m SSB for an hour on 27 November. The station is being slowly reassembled following its relocation. See <https://dx-world.net/news-4u1un/>

# CANDIDATES FORUM

***These candidates have been nominated to serve as officers of the Tamiami Amateur Radio Club for the year 2020. This information is provided to inform club members prior to the December 11th elections.***

## **For president - Jim Shortill, KJ4NDO**

A native of Maine, I received my education in New England and Canada. I entered the Army and served an initial stint as a tank operator. Subsequently, I became a helicopter pilot, serving one year in Viet Nam, after which I became an airborne instructor.

Upon leaving the military, I enrolled in law school and became clerk-of-court in New Hampshire. Service in the reserves during that time involved four months in Iceland, and a year during Desert Storm.

My experience with weaponry and my interest in guns prompted a career change which saw me working for

Glock for fifteen years.

Upon retirement I moved to Venice. I had observed MARS operations, and was impressed. That led me to look into ham radio. I first obtained my technician license about 2009, followed by upgrades to general and extra.

I have held the position of secretary of the TARC club for four years, and would like to continue to serve as president.

**73, Jim Shortill, KJ4NDO**



## **For treasurer - Frank Wroblewski, W2XYZ**

Hi, I'm Frank Wroblewski, W2XYZ and I'm running for treasurer of TARC for 2020. To tell you a bit about myself, I hail from the (not so) great state of New Jersey. Currently, I live in the Patios sub-division of Chestnut Creek in Venice. I first moved to Venice as a snowbird in 2013 and became a full-time, year-round resident in 2016.

DXing, QRP operation, and contesting are my favorite parts of the ham radio hobby. My community is HOA governed and as with other HOA communities, antennas are frowned upon. Fortunately, the rules here don't prohibit antennas, provided they are not obtrusive looking. To keep peace in the neighborhood, I didn't erect a 120' tower with stacked monobanders. Instead I use a OCF 40m inverted vee and feed it with ladder-line and coax. The apex is about 35' up on a slash pine growing behind my house. So although my antenna accommodations are not ideal for DXing, QRP operation, and contesting, I make do with what I've got.

Other radio interests are the digital modes. It truly amazes me what can be accomplished with using FT8. Signals far below the noise level print out in

perfect copy. A simple antenna and a modest station is all one needs with FT8 to contact Europe, Asia, and anywhere in the US. Above the HF bands, I find the digital mode of DMR fascinating. Our club has a terrific UHF DMR repeater, which connects via the internet to Brandmeister, where there are about 2000 different talk groups available. With the push of a button on a hand-held radio, it's possible to talk to virtually any location in the US, or any country in the world. No static, no noise, no signal fade, just clear "arm-chair" copy of the distant station.

Amateur radio is really all about technology. So if any new technical gadget comes along, you can be sure it will pique the interest of many hams. 3D printing got my attention, and now I'm 3D printing all sorts of cabinets for electronic projects, or antenna parts, or dozens of other things. If anyone would like help with getting started with HF radio, DMR radio, or 3D printing, I'd be glad to help them along.

**73, Frank Wroblewski, W2XYZ >>>**





## For vice president - Steven E. Phillips , NS4P

I picked up my interest in ham radio from my dad Tom – N1CBD (Ex WA2JHM, Ex WA1ZWR) who had a regular sked with my Uncle Pete (K1BXE, SK) using an old homebrew AM transmitter in the basement of our house in Upstate New York. In 1976, While attending the University of Connecticut, I passed the Technician exam and was assigned the station call of WA1ZKN

In 1978 I moved to Pittsburgh, PA to take a position as mechanical engineer at a US Government Research Laboratory. I advanced through several positions, and eventually was diverted to information technology, where I finished my career as a principal engineer in telecommunications systems. While working full time, I went back to school and earned a Master of Science in Telecommunications from the University of Pittsburgh.

After 38 years as a government contractor, I retired and moved with my YL Patti (N4IGI, ex N3IGI) to the West Villages where we currently reside full time. While listening on local repeaters, I found some TARC members on the air and joined the club. With advice and guidance from the TARC members, I've been able to put together a nice station, even with HOA restrictions. In paying it forward, I have assisted several other club members in getting their stations up and running, specializing in installation of the nearly famous "Drunken Snake Long Wire" rooftop antenna. In 2017, I took and passed the amateur extra exam. I am a lifetime member of both ARRL and QCWA.

Since moving to the Venice area, I've learned a lot about modern ham radio including the digital modes like FT8 and DMR. I've also picked up the DXing bug and have man-

aged to confirm over 200 countries and earn WAS on 7 bands. I am also active on VHF and UHF, participating in the weekly nets as well as Shark Tooth 10K. On the HF bands I am usually on FT8 and SSB, but I am trying out RTTY and CW (wow, am I rusty). I am currently serving as the TARC Volunteer Examiner Team Liaison, a position I intend to continue with if I am elected to VP. When I am not on the air, I spend time tinkering on my 1980 MGB Roadster (Electronics by Lucas, the Prince of Darkness) or working as a certified SCUBA diving instructor (NAUI and SDI Instructor ratings). I am also a certified Commercial Pilot, (Single, Multi, Instrument Airplane, Glider, Hot Air Balloon).

I want to be vice president of the Tamiami Amateur Radio Club because I feel I have the desire, time and energy to help move the club forward. I want to help make this club what you, the members, want it to be. While serving as VP, my main task will be to assist you, the members, the other officers, and the board of directors in developing and implementing a vision for the club. I especially want to help engage with our newly licensed amateurs to help get them to take those critical first steps in getting on the air. As VP, I will also lead the effort to continue the TARC tradition of excellence in technical presentations and programs at our monthly meetings and other events.

**73, Steve Phillips, NS4P**



## For secretary - Patti Phillips, D.Sc., PMP, CTP (N4IGI)

My name is Patti Phillips and I am running for the position of TARC recording secretary.

I have been involved with amateur radio since 1990 when I earned my Technician Plus license (N3IGI). Yes, back then I was able to do 5 wpm CW! I became interested in ham radio mainly due to my husband Steve (NS4P) and his family. I have always been intrigued by technology.

I worked in the information technology field for over 35 years in Pittsburgh, PA. I started my career as a software developer and later went into management. I earned multiple degrees including a doctorate in Information Systems and Communications, an MBA, and a Master of Science in Information Systems and Communications. I hold a Project Management Professional credential from the Project Management Institute. I attained a certification as a Certified Treas-

ury Professional from the Association of Financial Professionals. I also taught graduate and doctorate level courses for over 15 years. Last year I retired so I would have more time to enjoy my hobbies.

In 2017, I earned my General license and selected the call sign N4IGI. In 2018 I upgraded my license to Extra and became a Volunteer Examiner. I enjoy participating in community events like Shark Tooth and Battle of the Bridges. I am a regular attendee at TARC club meetings, and I enjoy the technical discussions after the meetings. I am a very organized person and detail oriented making me a perfect candidate for recording secretary.

**73, Patti Phillips, N4IGI**

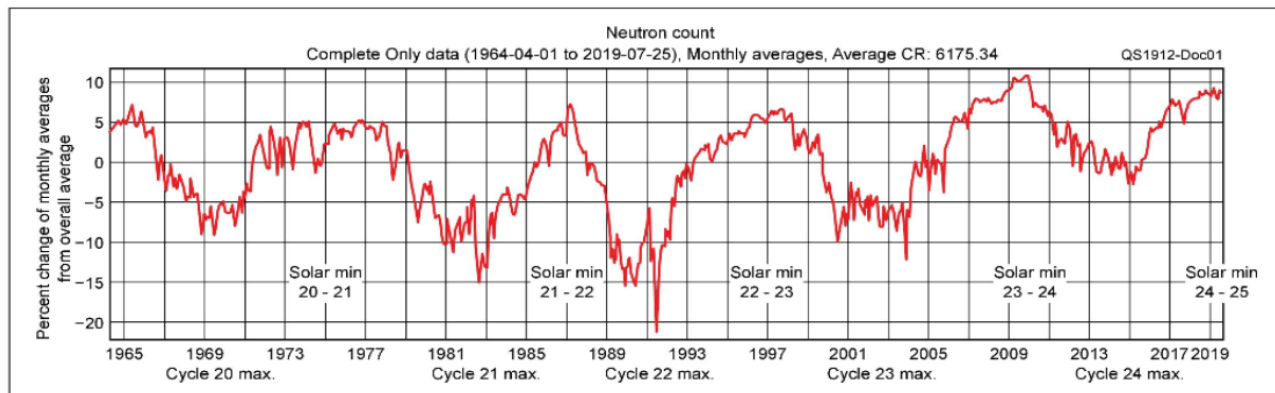


# D Xing without sunspots

*By Jack, W4JS*

Perhaps you will find the following of interest with regard to DX propagation during the lull in sunspot activity between the solar cycles—such as at the present time. As sunspots are necessary to strengthen the ionosphere such that it will reflect radio signals and we can work DX stations, what physical factor supports this capability without sunspots?

This question was implied in the December QST “The Doctor is In” and responded to by Carl Leutzelschwab-K9LA with words and graphs. Galactic cosmic rays, which are high-energy protons get down into our atmosphere and cause increased ionization of the D region via collisions with atmospheric constituents. Figure 1 from the article shows how the neutron count increases between sunspot cycles and diminishes as these cycles rise to their peaks.

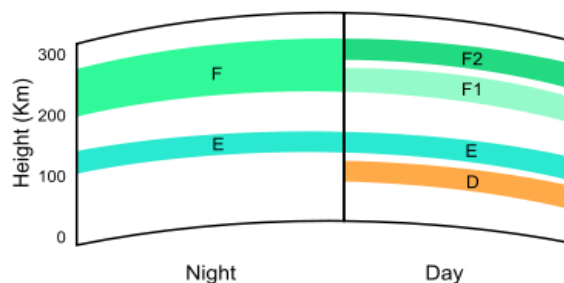


**Figure 1** — A summary of the neutron count from 1965 to the present. The number of galactic cosmic rays correlates to the number of neutrons.

Note the peak during 2009—a year during which I worked 244 countries on SSB, including BX, DU, ET, FW, H4, H40, HL, VQ9, YI, etc. So those cosmic rays did a great job as far as I’m concerned.

So, what is the “D region” mentioned in the referenced article? In short, it is the lowest of the regions, or layers, that make up the ionosphere. <https://en.wikipedia.org/wiki/Ionosphere> gives a very good analysis of the ionosphere, but here’s a brief overview with regard to propagation.

The ionosphere is the ionized part of Earth's upper atmosphere, from about 60 km (37 mi) to 1,000 km (620 mi) altitude, and it is ionized by solar radiation. It plays an important role in atmospheric electricity and it has practical importance because, among other functions, it influences radio propagation to distant places on the Earth. Sometimes the layers of the ionosphere are described as being like the outer skin of an onion—one layer on top of the other. Note their arrangement and the changes in the layers from daylight and



darkness.


**Con't >>**

## **DX sans sunspots, con't**

At night the F layer is the only layer of significant ionization present, while the ionization in the E and D layers is extremely low. During the day, when there are sunspots to strengthen the ionosphere, the D and E layers become much more heavily ionized, as does the F layer, which develops an additional, weaker region of ionisation known as the F<sub>1</sub> layer. The F<sub>2</sub> layer persists by day and night and is the main region responsible for the refraction and reflection of radio waves.

As we are now concerned with DX propagation without sunspots, the D layer is of prime importance. The D layer is the innermost layer, 60 km (37 mi) to 90 km (56 mi) above the surface of the Earth. Ionization here is due to Lyman series-alpha hydrogen radiation ionizing nitric oxide (NO). Medium frequency (MF) and lower high frequency (HF) radio waves are significantly attenuated within the D layer, as the passing radio waves cause electrons to move, which then collide with the neutral molecules, giving up their energy. Lower frequencies experience greater absorption because they move the electrons farther, leading to greater chance of collisions. This is the main reason for absorption of HF radio waves, particularly at 10 MHz and below, with progressively less absorption at higher frequencies. This effect peaks around noon and is reduced at night due to a decrease in the D layer's thickness; only a small part remains due to cosmic rays.

During solar proton events, such as we now experience, ionization can reach unusually high levels in the D-region over high and polar latitudes. Such very rare events are known as Polar Cap Absorption (or PCA) events, because the increased ionization significantly enhances the absorption of radio signals passing through the region. In fact, absorption levels can increase by many tens of dB during intense events, which is enough to absorb most (if not all) transpolar HF radio signal transmissions. Such events typically last less than 24 to 48 hours. Obviously, this absorption can close down polar propagation on an intermittent basis.

A vital point of importance is the fact that the D layer is so low, which requires that the take-off angle from an antenna must also be very low. A high take-off angle will be reflected much too soon for long haul DX. For example, if your take-off angle is 10° your signal will go out about 425 km before being reflected by the D layer up some 75 km. A 20° angle signal would only go out about 200 km before being reflected. As multiple hop propagation is mandatory, with signal strength being lost with each hop, minimizing the antenna's take-off angle is quite important for long haul DX until sunspots return to activate the F<sub>2</sub> layer. 

**Final Notice!! If you wish to attend the TARC Christmas Party, time is running out - we need your registration ASAP!**

The TARC Christmas party will be held on December 10th at Valenti's Ristorante, 1200 East Venice Ave., Venice FL. **Happy hour is 5:00 PM - 6:00 PM.** Dinner begins at about 6:00 PM.

### **Menu:**

- A.) Valenti's Specialty Pizza, 10 inch, \$15.00 per pizza.
- B.) Chicken Parmigiana, \$19.00.
- C.) Lasagna, \$16.00.
- D.) Eggplant Parmigiana, served over linguine, \$16.00.
- E.) Shrimp Scampi Linguine, \$19.00.
- F.) Veal Marsala, \$23.00.

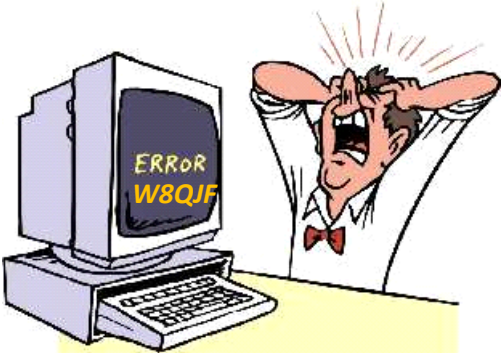
**Salads, desserts, wine or beer are extra.**

Members/families pay for their own food and drink.

**PLEASE E-MAIL Jim, KJ4NDO - (PARTY CENTRAL) ([jnmnshortill@netscape.net](mailto:jnmnshortill@netscape.net)) AND LET HIM KNOW IF YOU WISH TO ATTEND, HOW MANY WILL BE IN YOUR PARTY, and YOUR MEAL CHOICE(S).**



# TOM'S TECH TIPS: SCANNING DOCUMENTS ANYWHERE

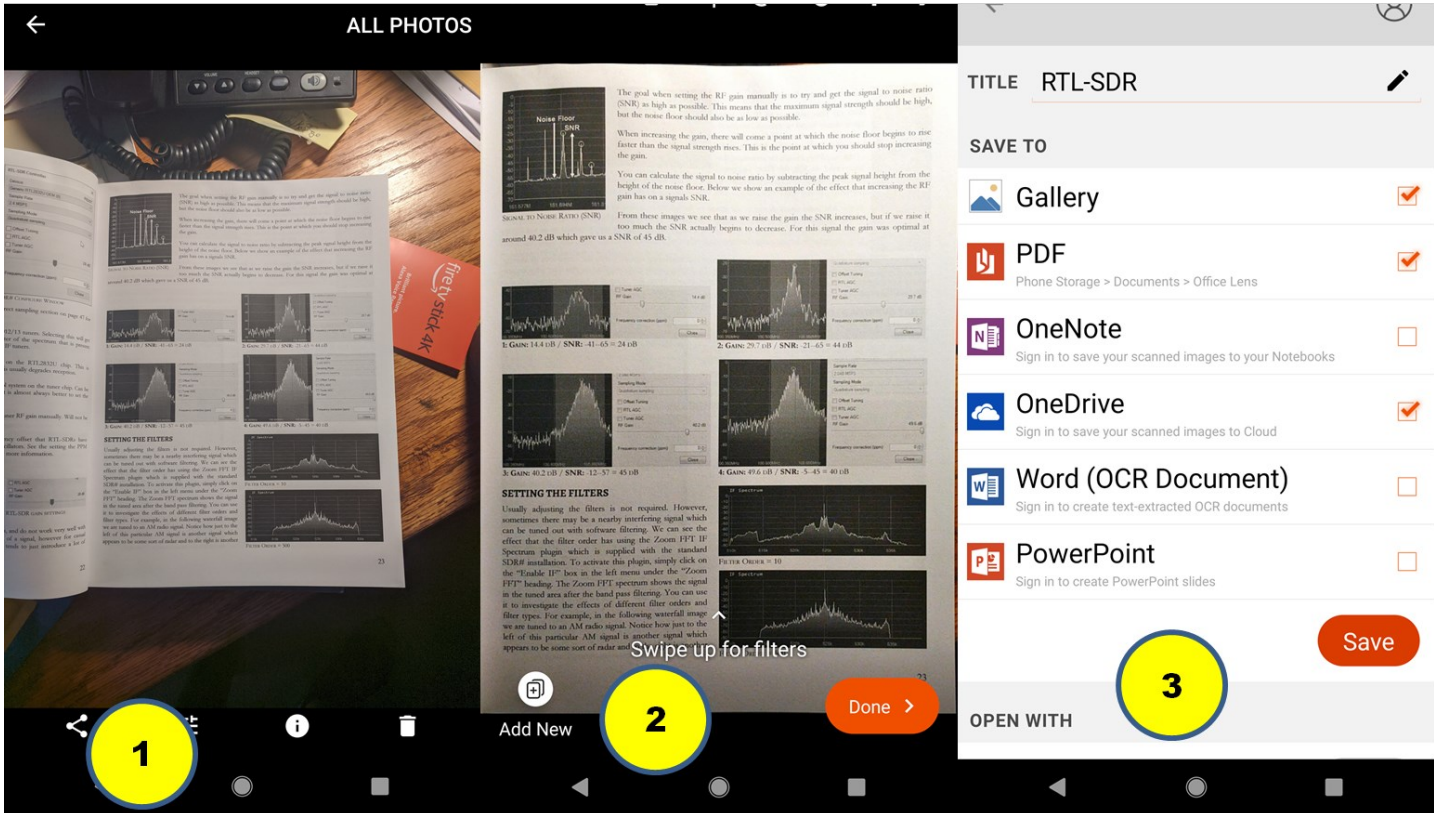


A lot of us have decided that scanning documents and saving them on a computer beats saving stacks of paper. That's fine if you're in the office with a scanner, but you may not have a scanner in your pocket.

What is a scanner, after all, but a camera that's designed to take a picture of a piece of paper. A smart phone camera can take a picture of a piece of paper, so all you need is a way to process the captured image so that it can be transferred to your computer.

**Microsoft's Office Lens** application does exactly that. This isn't exactly a new concept, but Office Lens makes the process quick and easy. The free application is available for both IOS and Android devices. Images you scan can be saved as a PDF document, added to One Note, uploaded to OneDrive, stored as a PowerPoint slide, saved as a Gallery image, or be processed by an optical character recognition application and saved as a Word document.

When I said easy ... well, let's take a look:



(1) I had a document from *The Hobbyist's Guide to the RTL-SDR*, so I put it on the desk and held the phone over it. Office Lens determined that it was a document. The other options are white-board, business card, and photo. The initial scan area was the entire page, but I moved the phone in a bit so that it would capture only the table.

Con't >>>>>

## TOM'S TECH TIPS

(2) Even though I didn't hold the camera exactly square to the paper, the application did a good job of adjusting it.

(3) The next step is to specify how to save the image. I selected Gallery, PDF AND OneDrive so that it would be transferred to my (free) cloud-based OneDrive account. From there it would be downloaded to my computer. That's it!

The ability to scan a receipt in a restaurant, a schematic, a research document in a library, a white-board presentation at a conference, or any other document saves time and effort. Although Office Lens is intended to be used with Microsoft Office, much of its functionality still exists even if you don't use the connections to the Office suite.

Install Office Lens on an Android device by visiting the Play Store, or on an IOS device at the Apple Store.

**73, TOM, W8QJF**

## Attention: Technician and General Class Licensees

**Don't be intimidated** about getting on HF! It's a whole new world from your experience with 2m and 70cm FM voice. There are dozens of regularly scheduled phone nets that you can participate in. A very complete HF net directory list that has been compiled, and is still maintained regularly, by Rod Scott, N1YZF, provides a great resource to help you get started. Making use of these various nets is a great way to build up your Worked All States contacts. Take advantage of them if you are seeking this award. The link to the N1YZ HF Net List on Google Docs is:

<https://docs.google.com/spreadsheets/d/1cpalUPJOG9Kdb0Xo-hyzhcVKcyvOr37vrGIF1mIETHs/edit#gid=906307814>.

**ARRL just announced** that **New versions of the Technician and General Class question pools have been created**, sorted by the page number, where each question is discussed in the text of the ARRL License Manuals. The re-ordered question pools are particularly useful to students who are seeking a review and study resource that follows the page order of the License Manuals. Below are links to the PDFs.

<http://www.arrl.org/files/file/Education/Tech-PPT/Technician-Study-Guide-4thEd.pdf>

[http://www.arrl.org/files/file/Education/GeneralClass/General\\_Study\\_Guide\\_2019-2023.pdf](http://www.arrl.org/files/file/Education/GeneralClass/General_Study_Guide_2019-2023.pdf)




**THE COMMUNICATOR** is a publication of the Tamiami Amateur Radio Club (TARC). It is published monthly; except during the summer months, the July and August issues will be combined. The Communicator is made available to all members via e-mail, and is available for viewing on the club's web site - [www.tamiamiarc.org](http://www.tamiamiarc.org).

Editor - San Yoder, K3SY, who acknowledges and thanks these contributing writers:

Andy Durette, KB1HIP, Jim Shortill, KJ4NDO, Jack Sproat, W4JS, Tom Shrilla, W8QJF, Paul Nienaber, KN4BAR, Steve Phillips, WA1ZKN, Patti Phillips, N4IGI, & Frank W., W2XYZ

Articles of general interest to club members are solicited and welcomed. Please submit photos and/or copy (preferably in Word) to: [k3sy@arrl.net](mailto:k3sy@arrl.net). 73, San

# December, 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 QCWA 11:30 Meets at Den- ny's on Bee Ridge road	3 Breakfast @ Peaches *DMR net @7:30 PM	4	5 TARC net @ 7:30 PM W4AC / RPT 146.805 **	6 Breakfast @ Peaches *	7
8	9 DARN Emer- gency net @ 11 AM Starts on NI4CE/RPT	10 Breakfast @ Peaches <b>TARC Holi- day Party 5:00 PM</b>	11 <b><u>TARC meet- ing @ Coast Guard Train- ing Center</u></b> 7:00 PM.	12 TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net	13 Breakfast @ Peaches *	14 <b>TARC VE Session @ Jacaranda Public Library 10:00 AM</b>
15	16	17 Breakfast @ Peaches *DMR net @ 7:30 PM	18	19 TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net	20 Breakfast @ Peaches *	21
22	23 	24 Breakfast @ Peaches *DMR net @ 7:30 PM	25 	26 TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10 M net	27 Breakfast @ Peaches *	28
29	30	31 Breakfast @ Peaches 			DMR net meets on TAC 311 + 10 meter net follows the 2 meter	* Peaches opens at 6:00 AM, orders taken at 7:00.

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



**TAMIAMI AMATEUR RADIO CLUB, INC.  
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Name \_\_\_\_\_ Call sign \_\_\_\_\_ Class \_\_\_\_\_ ARRL, (Y/N) \_\_\_\_\_

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Phone \_\_\_\_\_ Cell \_\_\_\_\_ E-Mail \_\_\_\_\_

Summer Address \_\_\_\_\_ City \_\_\_\_\_ St. \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Alt. E-mail \_\_\_\_\_

Application Date \_\_\_\_\_ Amount enclosed \_\_\_\_\_

**Please check items of interest:**

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

**For payments by mail send to:  
TAMIAMI AMATEUR RADIO CLUB, INC.  
PO Box 976  
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**Web site payments accepted via PayPal.  
(Add \$1.00 convenience fee.)**

<b>2019 TARC OFFICERS:</b>		
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Vice President:	Gary Hagens	K6OC
Secretary:	Jim Shortill	KJ4NDO
Treasurer:	Frank Wroblewski	W2XYZ
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	Chet Fennell	KG4IYS
	Guenther Hennig	AJ4QX
	Paul Nienaber (PIO)	KN4BAR
	Steve Phillips	WA1ZKN
	San Yoder	K3SY

<b>Dues:</b>	
Regular member	\$20.00/yr.
After 6/1 -	\$10.00 to yr. end
After 10/31	\$20.00 thru next yr.
Family Membership	\$25.00/yr
Non Voting Student	\$5.00/yr
New licensee - first year free.	

For office use:  
RR  EM  CR  MC

*The Communicator is a monthly publication of  
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<http://www.tamiamiarc.org> Webmaster: Paul Nienaber, KN4BAR*