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 | May, 2021

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Next Month

Fox Hunt Report

President's message.....NS4P

As Bob Dylan once sang, "The Times They Are A-Changin' "…As we approached the Florida QSO party, I read several articles that discuss both the state of change in modes of amateur radio communication, as well as shifts in the demographics of ham participating in contests. While these are arguably independent factors, I think that they will combine in ways that could make ham radio contesting look entirely different than it does today.

We will begin with changes in modes. I doubt that there are many of us that have not heard about the "FT8" digital mode, initially developed by Nobel Prize Laureate Joe Taylor (K1JT) and Steven Franke (K9AN), and released in 2017. While not all of us use FT8 on a regular basis, there is no question that it has been enthusiastically adopted by a considerable number of users. Recent analysis of submissions to ClubLog indicates that FT8 now accounts for over 60% of QSOs submitted. When the related mode FT4 is included, these modern digital modes account for about 70% of QSOs logged.

My personal observations of the DX I am working is that DXpeditions are devoting considerable resources to FT8 and FT4, with the recent Russian team operating in Botswana and Mozambique as prime examples. For those operations, the total number of QSOs with North America logged in FT8 far exceeded the combined total of SSB and CW. For DXpeditions, the advantages of operating FT8 are obvious. Fox/Hound mode basically eliminates pileups, the operation is self-spotted, the QSOs are automatically logged (with no mistakes) and there are no tuner-uppers or "up-police" to gum things up, and QSX is enforced by the application. For the DXers here, the little pistols now have a fair chance – no longer does the most power or biggest antenna win every time. While I recognize that these things that I have mentioned are not universally held as "good things" by the ham radio community, there is no doubt that FT8 has revolutionized DXpeditions for the foreseeable future.

At the same time, we may need to consider the way contests are managed. Analysis of demographic data for the US as a whole, and surveys of younger ham radio operators indicates that contesting as we know it might be a dying art. Most of the single-op contesters are older males, who have the money and motivation to set up a contest station, and the time available to spend 24 or 48 hours on a weekend running in a contest.

Younger hams coming up through the ranks seem to have less of an interest in DXing and rag chewing - who needs ham radio when you have Facebook? Younger hams also don't seem to have the time to devote to traditional contesting. Surveys of young adults that "screen-time" (e.g., television) seems to be the leisure activity of choice. It seems that devoting an entire weekend to sitting in the ham shack, fueled by caffeine and

Continued on page 3 >>>

Next meeting 7:00 PM, Wednesday, May 12, 2021 via ZOOM. *Check Groups.io for the link to connect.*

TAMIAMI AMATEUR RADIO CLUB *Minutes of the 4/14/21 Meeting*

The monthly club meeting was conducted on Zoom and was called to order at 7:04 PM by President Phillips, NS4P. Steve recited the pledge to the flag. Attendance was captured via the Zoom session with a rare appearance on Zoom of club member Al Culbert, K0AL. Betty Greenspan, KO4GKT, a retired nurse and an enthusiastic new member who just purchased her first IC 7300 was in attendance too.

MINUTES: Steve, NS4P, requested a motion to accept the minutes of the March 10, 2021 meeting as published in The Communicator. Motion was made by Paul Nienaber, KN4BAR, seconded by Jesse Snyder, KW4IT, and approved.

CORRESPONDENCE: Patti Phillips, N4IGI, wrote a thank you letter to Active Suncoast for their generous donation in appreciation that TARC provides for their Shark Tooth 10K and Shark Fin 5K races. The donation will be reflected in the April Treasurer's report. The last issue of The Communicator was forwarded to the son of Joy Klapp, N2WUD(SK) ,who was very appreciative to the club for the article Jim Shortill, KJ4NDO, wrote and the nice note he sent.

TREASURER'S REPORT: Treasurer Frank Wroblewski, W2XYZ, reported a beginning balance of $18,871.76, receipts of $191.00, reserve fund contribution of $167.00, expenses of $211.48, reserve expenditures of $12.81, and an ending balance for the month of March of $19,005.47. Motion was made by Chet Fennell, KG4IYS, seconded by Al, K0AL, and the Treasurer's report was approved.

COMMITTEE REPORTS:

SUNSHINE: N/A

VE TESTING: Steve, NS4P, mentioned he had nine candidates who successfully tested at the March VE sessions. Congratulations go out to Tom Shrilla, W8QJF, for passing his Extra exam with a perfect score! For the April VE session there were three candidates of which two passed.

LIAISON TO QCWA: Al, K0AL, reported that the QCWA will resume their monthly gatherings probably in October after the summer recession.

REPEATER / TECHNICAL: Frank, W2XYZ, reported both the digital and analog repeaters were working well and the latest adjustments to the EchoLink node seem to have improved performance. The digital net is held on the club 444.100 DMR repeater using Talk Group TAC 315. The digital net opens Tuesdays at 7:30 PM. The club 2m analog repeater frequency is 146.805 MHz (-) PL 100. The 2m net opens Thursdays at 7:30 PM. Hams can participate on the analog net via EchoLink using a computer, an iPhone, or an Android system based phone. Click on W4AC-R (Node 513309) on the EchoLink directory screen to establish EchoLink contact. Note this is a new node for EchoLink. The 10m net is on frequency 28.450 MHz, Upper Side Band, and begins immediately after the conclusion of the 2m net.

Tom Wilson, W1ICU, continues to host via Zoom a Virtual Breakfast gathering on Wednesdays at 10:00 AM. For details, please refer to the Groups.io site.

MEMBERSHIP: Paul, KN4BAR, reported there are now 103 regular members, 6 first year members, 3 associate members (no call sign), 8 life members, and 1 comp for a total membership of 121. All members are listed on the Members Only page on the TARC website. Please email paul9aber@gmail.com the date you joined the club if you have not done so already.

OLD BUSINESS: **1.** Repeater Maintenance Team Update. Chet, KG4IYS, mentioned the tower guys may be returning in May to install a solar tower light, replace existing VHF coax with hard line, re-tension the guy wires, and remove the old coax.

2. Club Remote Station. Chet, KG4IYS, stated if you are interested in using the remote station contact him at chet.fennell@gmail.com. Remember it is free to use by club members. If the usage becomes out of hand, the Board may limit excessive use.

3. Fox Hunts. The regional fox hunt is now called Tamiami Fox Hunt and is scheduled for October 23, 2021. If interested in helping to plan this event contact Paul, KN4BAR. If you want to practice, there will be a local fox hunt on May 1 with San Yoder, K3SY, and Tom Shrilla, W8QJF, as the foxes.

4. Technician Class – Micki Taylor, KM4BHF, received grant money to encourage STEM training for up to 30 students in Sarasota. She requested TARC to provide Technician Training for those students that will be part of the program. The classes will begin in early Fall.

5. YL Outreach – Jim Shortill, KJ4NDO, is reaching out to the Young Ladies Radio League to see how we can help them get more YLs involved in ham radio.

Continued >>>>>

TARC Minutes, continued

6. Informal Gatherings – If you are interested in meeting up with some fellow hams for conversation and a good meal, we have spotted some TARC members on Tuesdays from 6:00-8:00 AM at Peach's, and Wednesdays at 11:30 AM and Saturdays at 9:30 AM at the DAV (remember to ring the doorbell).

NEW BUSINESS: **1.** Frank, W2XYZ, reported that the FL QSO Party begins Saturday, April 24 at noon through 10:00 PM and Sunday April 25 from 8:00 AM to 6:00 PM. At Al Culbert's, K0AL, cottage there will be two phone stations. Hams may also log QSOs from their home QTH and submit logs for a combined club score. Patti, N4IGI, made a motion for the club to approve $100 for food and drink during the event for those participating at Al's cottage. Peter Boers, KV4LR, seconded and membership unanimously approved it.

2. Paul, KN4BAR, will be updating the TARC website security. The club is looking for a member to be a Webmaster backup for Paul.

3. Paul, KN4BAR, mentioned that TARC's analog repeater is now listed on the county's repeater list as SAR-16 and SAR-16S (simplex).

4. The club is looking for a new location to hold in-person club meetings beginning in the Fall. If you know of a location that can hold 50 people with a lavatory and is inexpensive, please contact a board member.

5. The latest issue of CQ Magazine has a small writeup on special events QSL cards and the Shark Tooth Festival QSL card is mentioned.

ADJOURNMENT: Tom Phillips, NT1AP, made the motion to adjourn the meeting, Peter, KV4LR, seconded, and the membership adjourned at 8:09 PM. There were 24 people at the meeting.

Program: Tom Babcock, KN4ONE, gave a detailed presentation on "A Solar Power System".

HELP !
HELP !
HELP !
WANTED

If anyone has any website experience or is willing to learn, TARC is looking for a Webmaster Backup to assist Paul Nienaber, KN4BAR, with updates to the TARC Website. The site uses WordPress and Paul will provide training. Remember for any TARC job the salary is close to nothing….no it is nothing, but the benefits are AMAZING! If interested please contact Paul at paul9aber@gmail.com.

President's message, continued from page 1

adrenaline, making QSOs is not on the radar for very many new hams. There are some data that indicate that young adults prefer to be part of team activities (e.g., multi-op stations) where they can limit time to a few hours, rather than an entire weekend.

Despite the overwhelming popularity of FT8, many contests do not recognize modern modes. The Florida QSO Party is a good example – phone and CW only, 80 to 10 meters only (no WARC bands). These rules guarantee that traditional contest stations, many designed and built before WARC bands existed, will rule the airwaves. It has been noted that the rules for these contests are developed by contest groups, the leadership of which seem to consist of the same hams that have a huge investment in a traditional contesting station – phone and CW, on the 5 traditional ham bands (and maybe 160 meters). Changing the rules would make these stations obsolete (or less advantaged), so what is the incentive for making any changes? Should we encourage experimentation and advancement, or continue to freeze the rules in favor of modes and stations from the last century?

So where does this leave us? Should we change the rules for some of the old-time contests? That would require the leadership of the contest groups to think long and hard about what is the purpose of contesting, whom they serve, and what is best for the future of ham radio. At the same time, do we need new contests and what would these contests look like? Perhaps shorter contests (e.g., CWT), WARC bands, modern digital modes? Would anyone participate? I don't know. I do know that these are hard questions with no clear answers, but I do think we need to start asking ourselves where we go from here.

Thanks & 73 , Steve, NS4P

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
Fiji – 3D2ZK, Digital (YL op)	Now Active	258	NO	06-11	06-11	03-13	21-22	23-03	19-02	21-02
Antarctica – VK0PD by VK2PAD	Now Active	188	NO	NO	0700	03-08	NO	NO	NO	NO
UK Base on Cyprus – ZC4GR, Digital	Now to 31 Dec	48	0400	23-04	22-05	19-02	14-22	21-00	NO	NO
Benin – ZS6JSI/TY, FT8	Now to 31 Dec	87	01-04	22-07	22-08	19-03	11-21	15-21	2000	NO
Somalia – 6O1OO by EP3CQ, mostly FT8	Now to 23 June	69	NO	0200	00-01	21-01	18-21	17-20	NO	NO
Ecuador – HC1MD/2 by NE8Z	Now to 15 May	172	--	22-13	21-15	16-11	00-24	13-04	17-18	17-20
Ogasawara – JD1BMH by JG7PSJ, CW/SB/R	Now to 07 May	318	--	09-11	11-12	13-14	20-01	NO	NO	NO
Vietnam – 3W9OK by AA5H	01 May – 30 Jun	345	NO	NO	NO	1400	2200	NO	NO	NO
Niger – 5UAIHM by F4IHM, CW	10 May – 15 Jun	80	--	23-07	--	19-04	--	--	--	--
Falkland Is – VP8ZMS by M0ZMS, Digital	21 May – 21 Aug	165	03-05	00-09	23-08	21-02	12-16	16-21	16-20	18-20
Martinique – FM/OQ3R, CW, holiday style	23 May – 05 Jun	118	23-11	21-13	00-24	00-24	11-04	12-03	18-01	20-24
Tonga – A35P by JA0RQV, CW, SSB, FT8	30 May – 30 Jun	252	08-09	05-12	04-13	02-13	21-04	18-04	19-03	20-02

Prepared 28 Apr 2021 based on https://www.ng3k.com/, *The Weekly DX* 21-17, and the *Ohio/Penn DX Bulletin* No. 1513.

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

-- APRIL SOLAR ACTIVITY --

Through 28 April, the 10.7 cm Solar Flux ranged from 70 to 86, with a mean value of 76.5. The A_p index was $\geq$ 7 on 15 days during that period. Sunspot groups were visible on 21 days, varying from one to four groups at a time. There were C-class solar flares over six days and one M-class flare during April.

-- MAY FORECAST –

Solar activity is expected to be low with a slight chance for moderate activity from Region 2820 through 01 May, when the region will rotate around the West limb.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to range from moderate to high. High levels are likely on 14-22 May due to activity associated with an anticipated negative polarity CH HSS. Normal to moderate levels are likely for the remainder of the month.

Geomagnetic field activity is expected to range from quiet to G2 (Moderate) geomagnetic storm levels. Active conditions are likely on 02-03 May and unsettled on 04 May under influence from a positive polarity CH HSS. A SSBC is expected to cause unsettled conditions on 11 May and negative polarity CH HSS influence is expected to cause active conditions on 12 May, G1 (Minor) conditions on 13 May, G2 (Moderate) conditions on 14 May before decreasing to active conditions on 12-17 May as CH HSS effects wane. Another negative polarity CH HSS is expected to cause active conditions on 20 May and unsettled conditions on 21 May. Active conditions are forecast for 30 May followed by unsettled conditions on 31 May. The remainder of the month is expected to be at quiet levels.

The solar flux should range from 72 to 79, and average 75.4 for the month.

(From *NOAA Weekly Highlights and Forecasts*, 26 April 2021, *NOAA 27-day Space Weather Outlook Table*, 26 April 2021, and *45 Day AP Forecast, USAF*, 26 April 2021.)

-- THE LOW BAND DXER --

The indefatigable "Gil" Gildersleeve captured the price one usually pays for spending long nights chasing DX on the low bands.

(It's a shame that QST *no longer offers humor on its pages.)*

-- HOPES, PLANS AND REALITY –

In addition to the marginal propagation now available, DXers ("The Deserving") are subject to the whims of the operators of the DX which they seek. We may hope and plan to get a New One. But if that op isn't on when there's propagation, or if they're on the "wrong" band or mode when there's propagation, such planning is for naught. DXer's need patience and longevity.

TARC SHOWING GRIT BY MEETING FOR GRITS!!

It happened in the pre-dawn hours on April 6th, 2021, a day that will live on in the hearts of the TARC-breakfast-at-Peaches faithful.

We finally broke the back of the Covid shut-down, and gathered for breakfast, and more importantly, the chatter and camaraderie of hams talking radio to other hams.

Eight old-timers and one new ham spent a long-awaited couple of hours together for the first time in a year. It felt good!

As "icing on the cake", so to speak, Karen Haynes, President and Founder of Active Suncoast Foundation, and promoter of the Shark's Tooth 10 K run, stopped by to present a check for a $250.00 donation to TARC as a thank you for our participation in that event.

TARC thanks the Active Suncoast Foundation for their generous donation which will help the club continue to provide communication services for such events.

* Since our first meeting at Peaches, the restaurant has closed for lack of workers, therefore, our Tuesday breakfasts have been moved to Perkin's.

Quote of the morning on 4/27:

K3SY: "Frank, how many Brazil contacts on 10 meters on Sunday?

W2XYZ: "A Brazillion."

HF Remote Station News

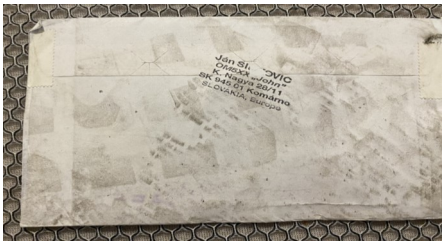
by Chet, KG4IYS

As most of you know, a capability to remotely access a HF ICOM 7300 transceiver over the internet has been created at our club's repeater site. Currently we have a multiband inverted dipole installed at the 125 foot level of the tower. We have created a special interest group (SIG) to manage and operate the site on groups.io. I am soliciting those club members who are interested in beta testing the current and future setups to help the team gain experience, solve issues, and plan future improvements. If you are interested, please contact Chet Fennell KG4IYS via email at ***chet_fennell@msn.com***.

Active radio club seeks accommodating owner of a meeting room for long term relationship.

The US government is threatening to tear down the Coast Guard training facility on Harbor Drive. Thus TARC has lost it's meeting place. We are actively looking for a new location to gather once Covid restrictions are relaxed. Several possibilities are being investigated, but affordable facilities are in short supply.

If any TARC members have knowledge of organizations that can offer meeting space for up to 50 people at a reasonable price, please convey that information to any of the officers or directors.



You've heard of foot-stompin' music; well how about foot-stompin' QSL cards? Steve, NS4P recently got these cards in the mail with evidence of someone trampling the proof of his DX efforts. Perhaps it was the boots-on-the-ground in Slovakia who did the dirty deed, or possibly another USPS worker going postal. Whatever the source of the tracks, fortunately the cards inside survived the attack with not too much damage, and Steve added to his collection.

The State of Florida, Party of QSOs Report

by Frank, W2XYZ

Every year during the last weekend in April, the Florida Contest Group hosts the Florida QSO Party (FQP). Operation of the FQP last year was complicated due to COVID, but this year with most seniors being vaccinated against the virus, our club was able to participate in the FQP in the normal club manner. Additionally, anyone operating a transmitter located in Florida was permitted to donate their points to the club of their choosing.

Al, K0AL, once again invited the club to his 'cottage' (read: super-station) in Nokomis to operate the FQP. At the cottage we were able to use a 20m yagi and a 40m yagi mounted high atop Al's tower. He also let us use his Yaesu FT-1000 on 40m and his new Yaesu FT-101D on 20m. Both stations operated on low-power, 100 watts. Eleven TARC members (K0AL, K3SY, KB1HIP, KJ4NDO, KY4GH, KT4DDS, W9CIB, KO4GKT, KO4PIV, and W2XYZ) took turns operating and/or logging at the station

I have proof, TARCies are Party Animals. Yes, they really know how to party-hardy. The recent Florida QSO Party is that proof. The space weather people (spacemen as opposed to weathermen????) were predicting poor propagation conditions for the weekend of April 24-25. Unlike the earth weather people (earthlings????) the space weather prediction was right. Saturday's conditions were bad and on Sunday conditions were worse. So, even with the bad conditions predicted, several home stations called CQ FQP, or answered other Florida stations calling CQ, and made many points for the club. Exactly how many points home stations donated to "Tamiami Amateur Radio Club" is a mystery because each home station submits its report individually under its own call sign. Talking to a few members I was able to determine over 1100 QSO's were made by TARCies from their home stations and those points will be added to our club score.

Meanwhile, back at the cottage, operators were pulling contacts out of the ether. Over a period of 20 hours, the 40m station made contact with 443 other stations that were located in 43 different States, 34 Florida counties, 3 Canadian Provinces, and 7 DX countries. The 20m station contacted 602 stations located in 46 different States, 3 Florida counties, 6 Canadian Provinces, and 7 DX countries. During a lull on 20m, we switched to 10m and worked another 6 stations (4 local and 2 Brazilians). If you add that together, W4AC worked 1151 stations on Phone with 100 watts.

Shiny aluminum in the sky really helps a lot. The food and beverages donated by N4IGI and NS4P was also greatly appreciated. I, for one, had a great time, and I'm pretty sure everyone else did too.

73, Frank Wroblewski, W2XYZ

K0AL's Cottage scenes

More >>>>>>

More looks inside Al's 'cottage'

LAST CALL - FOX HUNT, SATURDAY, MAY 1ST

"There are many ways of going forward, but only one way of standing still." —*Franklin D. Roosevelt*

An End-Fed Half-Wave Escapade

By Tom, KN4ONE

My first HF antenna was an end-fed half-wave (EFHW) from MyAntennas.com. It seemed like a good choice for a beginner since it covered 10 through 80 meters. Mine is installed about 26' off the earth. The transformer box is mounted at the top of a grounded steel pole. Approximately the midpoint of the 132' wire runs through a plastic pulley atop a fiberglass pole, where it makes a 90 degree turn. The end is held up by a short rope and insulator at the top of a flagpole. It works well and did turn out to be an excellent choice for me.

There are lots of videos and articles discussing EFHW's and the 49:1 transformer that feeds the wire. Some suggest good performance with the transformer mounted at or near ground level. I wanted to try some alternate configurations but didn't want to take down my existing installation to try. So… It was time to make my own. It was easy to do, and far less costly than the store bought ones.

I used a 2.4" mix 43 ferrite toroid (KF7P Metalwerks, $5 when I got them), some enameled 14GA wire from a ham fest, and a 100pF 3kV capacitor (eBay). I wound the transformer according to the diagram on the link below. It is mounted on a crude backboard with an SO239 connector and some screws for connecting the wire.

For the first test, a "longer than 10M ½ wavelength" 18GA wire was attached, with the idea it would be

trimmed to tune. A neighbor's tree overhangs my property line so I figure it's there for me to use. The wire was hauled straight up so the transformer hangs about 18" above the earth. All I had was 2' of ground rod so that was used to ground the transformer. A ferrite bead-type choke is installed right at the feedline connection. Scanning the 10M band with the NanoVNA showed near 1:1 match across the band. I must have done something wrong! The actual length of wire is 17'-1". Mileage may vary.

Performance is just as good as anything I've tried yet on 10M, and I got my strongest signal report yet on the 10M net. One serious advantage is the stealthy aspect of a single wire running straight up from the ground. The feedline is on the ground. When I use a dipole hanging in the same spot, there is an unsightly feedline draped from the roof of my shed to the midpoint of the dipole.

Give it a try! It may make a believer out of you. I have two 100pf caps for the asking, going to the first two HAM's brave enough to roll your own.

https://elginradio.wordpress.com/2017/10/17/end-fed-half-wave-antennas/

TOM'S TECH TIPS:

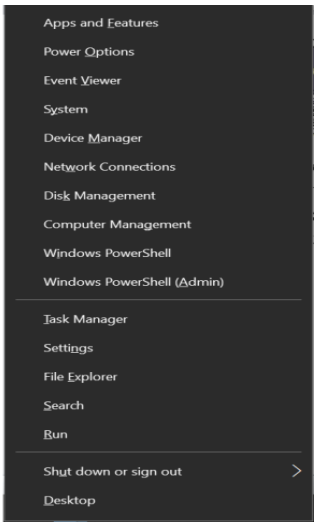
by W8QJF

Access your *secret* Start menu

The regular Windows Start menu is just a click away. Hit the Windows icon in the bottom left of your screen, and you're good to go. It reveals a layout of your most-used programs, as well as power options and shortcuts to the computer's settings.

But have you heard of the ***secret Start menu***? Hold down the Windows key on your keyboard and tap on the letter **X**. This takes you to an advanced menu with Device Manager, Task Manager, and Disk Management options. It's a clean, easy way to see even more settings without all your programs clogging things up.

Secret Start Menu



Coming to a repeater near you??

de K3SY

The following piece is an excerpt of portions of an article by Joel Brand entitled "The Radio That Can Hear Over Itself" in the March, 2021 issue of the IEEE Spectrum. It delves into the challenges of developing full duplex operation of radio-wave devices on the same frequency using self-interference cancellation (SIC).

"Cellphones, Wi-Fi routers, and other two-way radios are considered full-duplex radios. This means they are capable of both sending and receiving signals, oftentimes by using separate transmitters and receivers. Typically, radios will transmit and receive signals using either frequency-division duplexing, meaning transmit and receive signals use two different frequencies, [this is the mode our repeaters use] or time-division duplexing, meaning transmit and receive signals use the same frequency but at different times. The downside of both duplexing techniques is that each frequency band is theoretically being used to only half its potential at any given time – in other words, to either send or receive, not both.

"It's been a long-standing goal among radio engineers to develop full duplex on the same frequency, which would be able to make maximum use of spectrum by transmitting and receiving on the same band at the same time. You could think of other full duplex measures as being like a two-lane highway, with traffic traveling in different directions on different lanes. Full-duplexing on the same frequency would be like building just a single lane with cars driving in both directions at once. That's nonsensical for traffic, perhaps, but entirely possible for radio engineering.

"To be clear, full duplex on the same frequency remains a goal that radio engineers are still working toward. Self-interference cancellation is bringing radios closer to that goal, by enabling a radio to cancel out its own transmissions and hear other signals in the same frequency at the same time, but it is not a perfected technology.

"SIC is just now starting to emerge into mainstream use. In the US, there are at least three startups bringing SIC to real-world applications.

"Upon first consideration, SIC might seem simple. After all, the transmitting radio knows exactly what its transmit signal will be, before the signal is sent. Then, all the transmitting radio has to do is cancel its own transmit signal from the mixture of signals its antenna is picking up in order to hear signals from other radios, right?

"In reality, SIC is more complicated, because a radio signal must go through several steps before transmission that can affect the transmitted signal.

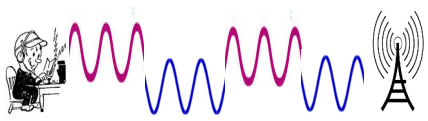
"So to be done well, self-interference cancellation techniques depend on a mixture of algorithms and analog tricks to account for signal variations created by both the radios components and its local environment. Recall that the goal is to create a signal that is the inverse of the transmit signal, when combined with the original receive signal, should ideally cancel out the original transmit signal entirely – even with the added noise, distortions, and reflections – leaving only the received signal. In practice, though, the success of any cancellation is still measured by how much cancellation it provides."

The article goes into much more detail of how the cancellation process works, and can be viewed here: **| IEEE Journals & Magazine | IEEE Xplore**

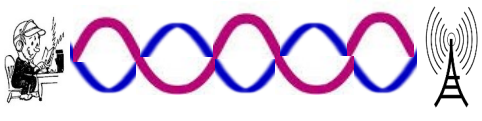
So, how long will the W4AC repeaters be chewing up all that spectrum before they must be replaced with an SIC unit? Who knows? But things are changing rapidly!

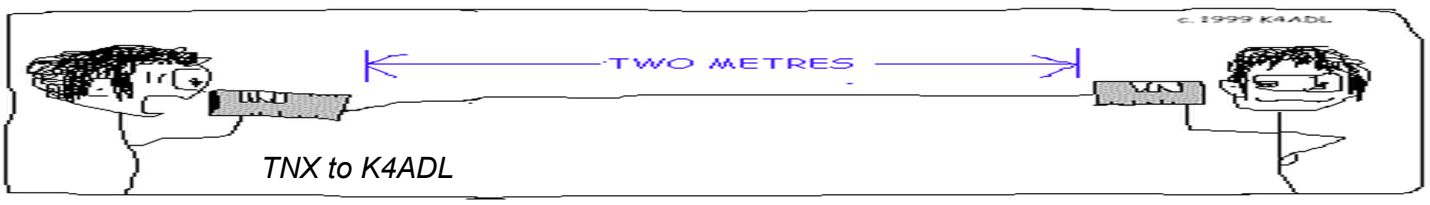
Frequency-division duplexing

Time-division duplexing



Full duplex on same frequency





May 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Breakfast notice; Watch Groups.io for a change in venue if Peaches reopens	** Tarc gathers @ 6 orders taken @ 6:45*	*# See Groups.io for sign-on to virtual breakfast*			1 *Breakfast @ DAV 9:30* *Fox Hunt 9 AM*
2	3 *QCWA 11:30 AM Denny's Bee Ridge Road*	4 *Breakfast @ Perkins * DMR net @ 7:30 PM W4AC 444.1*	5 # Virtual breakfast via ZOOM 10 AM	6 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	7 *Breakfast @ Perkins 9AM*	8 *DAV 9:30* *TARC VE session @ NS4P resi-dence*
9  *K3FBI On the air*	10 *Darn net 11:00 AM Starts on NI4CE/rpt 145.43 pl100*	11 *Breakfast @ Perkins * DMR net @ 7:30 PM W4AC 444.1*	12 *# Virtual Breakfast 10 AM* *TARC meeting 7:00 PM via ZOOM*	13 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	14 *Breakfast @ Perkins 9AM*	15 *Breakfast @ DAV 9:30* *End K3FBI run*
16	17	18 *Breakfast @ Perkins * DMR net @ 7:30 PM W4AC 444.1*	19 # Virtual breakfast via ZOOM 10 AM	20 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	21 *Breakfast @ Perkins 9AM*	22 *Breakfast @ DAV 9:30*
23	24	25 *Breakfast @ Perkins * DMR net @ 7:30 PM W4AC 444.1*	26 # Virtual breakfast via ZOOM 10 AM	27 *TARC net @ 7:30 PM W4AC / RPT 146.805 ** +10M net*	28 *Breakfast @ Perkins 9AM*	29 *Breakfast @ DAV 9:30*
30	31 					

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 forwarded to all members via e-mail, and is available for viewing on the club's web site - www.tamiamiarc.org - Webmaster - Paul Nienaber, KN4BAR.*

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

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