

# THE COMMUNICATOR



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

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

Incorporated 1984

<http://www.tamiamiarc.org>

May, 2017

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Big Time Radio**

**People are not  
persuaded by  
what we say, but  
rather by what  
they understand.**

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

**T**he K4S radio operation at the Sharks tooth Festival which took place on 7, 8 and 9 April was a big success. We made many US and DX contacts.

Our Mosely two element beam antenna was higher this year with the use of new portable fiberglass mast and stand courtesy of Jim Shortill, KJ4NDO and Gary Hagens, K6OC.

Even though the event, on balance, was a success we compiled a list of what we can do to improve the operation in the future.

Special thanks to Jim Shortill for his tireless effort to make sure the equipment was set up on time and closed down for the night.

Al Culbert, K0AL, has organized our next event, the Florida QSO Party, which will take place on the 29 and 30

of April 2017. Al has volunteered the use of his station for this event. We have eight members who have signed up to operate on Saturday and Sunday for a total of 20 hours.

For the next club event, I recommend that we take a look at setting up to operate at the 2017 ARRL Field Day that will take place on 24 and 25 of June. We will bring this up for discussion at the next club meeting on 10 May. We have two months to prepare for this event. I hope we can do it.

I hope everyone has an enjoyable May.

VY 73 to All de Andy-KB1HIP

## May Meeting

Our meeting will start at **7:00 PM** on Wednesday, **10 May, 2017** at the Coast Guard Auxiliary Training Center, 1200 South Harbor Drive.

## TAMIAMI AMATEUR RADIO CLUB

President Andy Durette, KB1HIP, called the meeting to order at 7:00 PM with the pledge to the Flag. Introductions were made all around by name and call sign.

**MINUTES:** President Durette requested a motion to accept the minutes of the 8 March 2017 meeting as published in the Communicator. Motion was made, seconded and approved.

**CORRESPONDENCE:** We received a letter from DX Engineering concerning technical Power Point presentations during club meetings. We also received a postcard from HAMUNIVERSE.COM advising that a range of useful ham information was available at its web site; <http://www.hamuniverse.com>. The President took these initiatives under advisement.

**TREASURER'S REPORT:** Treasurer Frank Wroblewski, W2XYZ, reported a beginning balance of \$7,428.60, and income of \$99.25. Expenses, were \$125.29, and the ending balance was \$7402.56

**SUNSHINE:** Glenn Hyde reported that his needle biopsy was successfully concluded and that he was awaiting test results. Howard Evans, AC8NS, underwent heart surgery and is recovering nicely.

**VE TESTING:** Don Jansen, KI4VGE, reported that three candidates reported for examination; two took the General,

### *Minutes of the 4/12/17 Meeting*

one took the Amateur Extra. All passed.

**LIAISON TO QCWA:** There were 29 members, spouses and guests present for the April 3, 2017 meeting of Suncoast Chapter 53. The program was by Dennis Blanchard regarding his father's role in WW II as a paratrooper. His father's service included a D-Day drop into Sainte-Mere-Eglise, followed by Operation Market Garden and Bastogne during the battle of the Bulge. His father wasn't the trooper who hung all night on the church steeple, but he was on the other side of the church courtyard and was hung up in a tree for some time.

**MEMBERSHIP:** The club is composed of 46 regular, 5 first year, 4 life and 1 comp members. There are no student members.

**REPEATER / TECHNICAL:** Both the 146.805 MHz digital and the 444.10 MHz digital repeater are operating satisfactorily. Frank Wroblewski, W2XYZ, noted that the Tuesday night net may be in temporary flux. The club formerly met on the Florida State net, but that net is crowded. Thus, the club is transitioning to another digital net, TAC 311, for the club's Tuesday night net. Frank Wroblewski, W2XYZ, advised that he would be available to install upgrades to member digital hand held radios at 8 AM after breakfast at Peaches Restaurant, Friday, 14 April.

**Con't >>>>>>**

## Minutes, continued....

**OLD BUSINESS:** The Shark Tooth Festival station K4S was hard at work during the three days of the festival. Friday was cold and quite windy, but the antenna array was stable and the booth held together, although it needed substantial, extra tie downs to keep it from blowing away. Our radio station was plagued by persistent static that obliterated many calls. Our thanks to the Club operators, both at home and at the field Festival station for their hard work. A special thanks goes to Jack Sproat, W4JS, for obtaining the special event call and for handling the QSL cards; and to Glenn Hyde, N4MXQ, for the cookies and lunch sandwiches that he supplied to hungry field station operators.

**NEW BUSINESS :** The Shark Tooth Festival after action report was started by Tom Porada, W9AEB, during the Festival. It was passed out for review during the TARC meeting. These items will be discussed during the May meeting. Additional after action comments should be sent to Tom at [tom@porada.com](mailto:tom@porada.com).

Florida QSO Party - HF operations. This event will be held on April 29th and 30th. Hours are noon to 9 PM on the 29th and 8 AM to 5:59 PM on the Sunday, the 30th. Al Culbert K0AL, volunteered to provide his station (and maybe cookies) to those wishing to participate in this club fellowship event. Al passed out a sign-up

sheet for interested members.

**ADJOURNMENT:** The meeting adjourned at 7:50 PM.

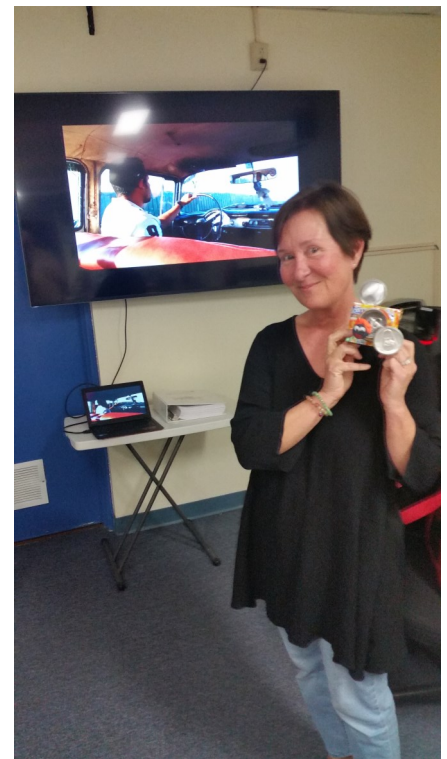
There were 16 club members and one visitor in attendance.

Guenther Henning, AJ4QX, won \$31.00 in the 50-50 drawing. He donated \$10.00 back to the Club.

**PROGRAM:** Al Culbert, K0AL, presented tip about using beeswax to hold tiny screws steady on a screw driver whilst working inside tight radio cabinets.

Micky Taylor, KM4BHF, gave an excellent presentation on current day Cuba. Her pictures of Havana, Cuba were stunning. Club members enjoyed identifying 40s 50s and 60s automobiles by make and model.

*Cuban camera made from soda cans.*



*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	BEARING	HF BANDS and BEST OPENING TIMES (UTC)							
			80	40	30	20	17	15	12	10
South Cook Is - E51AND, JD & BQ, ++	Now to 13 May	246	<u>04-12</u>	<u>02-13</u>	<u>01-12</u>	<u>22-05</u>	<u>18-00</u>	<u>18-03</u>	NO	NO
Vietnam - 3W9FU by RM0F	Now to 12 May	<u>348/168</u>	No	SPLP	Open	ings	Fore	cast		
South Cook Is - E51BAS & E51DLD	Now to 12 May	246	<u>04-12</u>	<u>02-13</u>	<u>01-12</u>	<u>22-05</u>	<u>18-00</u>	<u>18-03</u>	NO	NO
Solomon Is - H44MS by DL2GAC, ++	Now to 10 May	275	<u>07-11</u>	<u>06-12</u>	--	<u>03-06</u>	<u>02-04</u>	<u>01-04</u>	NO	NO
Vietnam - XV9G by JP7MBO, CW & SSB	Now to 09 May	<u>348/168</u>	No	SPLP	Open	ings	Fore	cast	--	--
Maldives - 9Q7EJ by G3VDE, ** holid style	Now to 07 May	41	--	--	NO	01-02	02-03	--	--	--
Botswana - A25UK by GOVJG and team	Now to 06 May	105	<u>23-05</u>	<u>22-06</u>	<u>21-07</u>	<u>18-02</u>	<u>16-17</u>	<u>15-16</u>	NO	NO
Ogasawara - JD1BMH by JG7PSI, all modes	Now to 05 May	317	<u>09-11</u>	<u>08-12</u>	<u>08-12</u>	<u>11-16</u>	<u>03-04</u>	NO	NO	NO
Lord Howe Is - DL1YAF/VK9L, holid style	01 to 08 May	249	<u>06-12</u>	<u>04-13</u>	<u>04-13</u>	<u>01-05</u>	<u>01-05</u>	<u>00-04</u>	NO	NO
West Malaysia - 9M2/KL2PFL, holid style	01 to 08 May	<u>352/172</u>	No	SPLP	Open	ings	Fore	cast		
Vietnam - 3W9DQ by DF7DQ, holid style	01 to 10 May	<u>348/168</u>	No	SPLP	Open	ings	Fore	cast	--	--
Seychelles - 879J by LZ1PJ	02 to 10 May	68	<u>00-02</u>	<u>23-03</u>	<u>00-03</u>	<u>22-00</u>	<u>22-23</u>	<u>20-21</u>	NO	NO
Kosovo - Z68BG by HB9TSW, **	04 to 23 May	46	--	<u>22-06</u>	<u>22-06</u>	<u>18-23</u>	<u>15-22</u>	NO	NO	NO
Jersey - M/PA1AW, PA3WP, PA9JO, PB5X	05 to 11 May	46	<u>23-06</u>	<u>22-08</u>	<u>20-10</u>	<u>15-00</u>	<u>15-00</u>	NO	NO	NO
Fernando de Noronha - PV0NY by PY4NY	05 to 15 May	115	<u>23-09</u>	<u>21-11</u>	<u>19-13</u>	<u>16-01</u>	<u>15-04</u>	<u>16-02</u>	NO	NO
Philippines - DU9SP5APW	09 to 16 May	327	--	<u>10-11</u>	--	<u>10-11</u>	1100	NO	NO	NO
Cape Verde Is - D44TWO by DF2WQ, holi st	09 May - 02 Jun	89	--	<u>20-11</u>	<u>19-12</u>	<u>12-01</u>	<u>15-00</u>	NO	NO	NO
North Cook Is - E51LYC by VE3LYC	11 to 23 May	255	--	<u>02-14</u>	<u>01-13</u>	<u>17-05</u>	<u>17-04</u>	<u>17-05</u>	NO	NO
Palau - T88MZ by JHOCKF, ++	12 to 19 May	307	<u>09-11</u>	<u>08-12</u>	--	<u>06-15</u>	1130	NO	NO	NO
Galapagos Is - HC8LW9EOC, all modes	15 to 29 May	196	<u>23-12</u>	<u>00-24</u>	<u>00-24</u>	<u>16-03</u>	<u>17-02</u>	<u>16-02</u>	NO	NO
Minami Torishima - JG8NQM/D1	15 May - 15 Jul	308	<u>08-11</u>	<u>07-12</u>	<u>07-12</u>	<u>08-15</u>	<u>03-04</u>	NO	NO	NO
Palestine - E44WE by SP9FIH, incl 6m	16 to 30 May	49	--	--	--	--	<u>18-01</u>	NO	NO	NO
Eritrea - E31A & E39DI by 4 op team	19 to 29 May	61	<u>00-03</u>	<u>23-04</u>	<u>00-03</u>	<u>22-05</u>	<u>00-01</u>	NO	NO	NO

Updated 28 April 2017 based on the 24 April 2017 *The Weekly DX*, the 26 April QRZ DX and, <http://www.ng3k.com>

Notes: Time in bold = the 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. Solar Flux and K-index varied by dates in accordance with the NOAA SWPC 27-day Space Weather Outlook Table and USAF 45 Day AP Forecast.

**-- APRIL SOLAR ACTIVITY --**

Through 01-29 March, the 10.7 cm Solar Flux ranged from 71 to 112, with a mean value of 81.0 (vs. 93.2 for April 2016 and 129.4 for April 2015), and the A<sub>p</sub> index was ≥ 7 on 23 days. Through 28 April, the sunspot number ranged from 0 to 97, with a mean of 30.0.

Solar activity through to 28 April was moderate with seven Class M and 61 Class C solar flares. Significant G1 and G2 geomagnetic storms occurred on 01, 04, and 19 to 23 April.

**-- MAY FORECAST --**

Solar activity is expected to be very low with a chance for C-class flare activity throughout the month.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is likely to reach very high levels on 29-30 Apr with high levels likely on 06-12 and 17-20 May. Normal to moderate flux levels are expected for the remainder of the period.

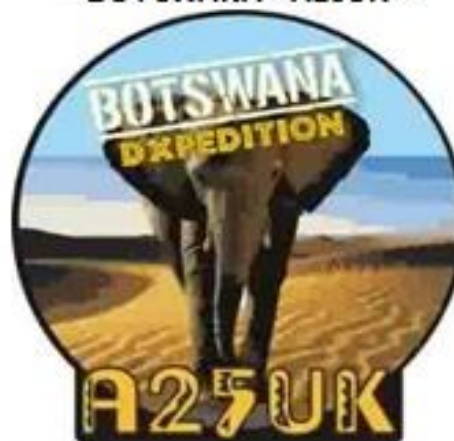
Geomagnetic field activity is likely to reach G2 (Moderate) geomagnetic storm levels on 19-20 May with G1 (Minor) geomagnetic storms likely on 01, 17-18 and 21 May due to the influence of multiple, recurrent CH HSSs. Active conditions are likely on 05-06, 16, 22-25 and 28 May with

quiet or quiet to unsettled field activity expected for the remainder of the month.

The 10.7 cm Solar Flux should range from 75 to 85, and average 78.4 during May.

(From NOAA *Weekly Highlights and Forecasts*, 24 April 2017, NOAA 27-day *Space Weather Outlook Table*, 24 April 2017, and 45 Day AP Forecast, USAF, 24 April 2017.)

**-- BOTSWANA - A25UK --**



The 10-op team from the UK fired up on schedule 25 April and had 15,220 Q's in their logs in 3.4 days.

*Only one thing is immortal:  
The DX I haven't got...*

## Digital Frank's page-DMR Wizardry By W2XYZ



Hi All, I'd like to mention our DMR Net, that we hold on Tuesday evenings at 7:30 PM, is working well with using Talk Group "TAC 311." We were able to conduct the net with all interested parties, even if they were not in range of the Englewood repeater. We had one check in from Pennsylvania on a Pennsylvania repeater, a check in from Punta Gorda, on the Punta Gorda repeater, and a number of check-ins on our Englewood repeater.

Anyone living in north Venice, Nokomis, Osprey, or southern Sarasota might find it easier to check in the net by going through the Laurel repeater. Just switch your zone to "Laurel" by using the green menu button, then selecting "Zone" and finally selecting "Laurel." Green button again to enter this selection, then hit the red button a couple of times to get back to the regular screen. Now turn the knob on the top to "TAC311" or possibly labeled as "T311" and you'll be ready for our net.

This month I was going to show you some neat stuff that Roger, KY4RS, found on the Internet. The procedure Roger found lets one update the firmware, and update the user's database on their MD-380, without having a Linux computer. The "Trick" is to install a program called

"VMware" that allows your Windows computer to emulate a Linux computer.

Apparently VMware works well on some computers and requires major surgery to the bios of certain other computers in order for it to work. The program itself is great; however I think trying to use it will cause more problems for our group than what it is worth. It seems to like 32 bit processors and will work with certain 64 bit processors. Other 64 bit processors require a work-around. If anyone really wants to try this on their own, contact me and I will provide them with the links for downloading the files and needed instructions for using them, otherwise, we'll drop this idea.

I have a couple of ideas of what we could talk about next month, but I'd like input from you as to what you'd like to hear about next. We could talk more about how to use the MD-380 or even switch gears and go to hf. With hf we can talk about PSK-31, or JT65/JT9, Reverse Beacon Nets, or even WSPR. Let me know what you'd like next.

73 until next month,

Frank, W2XYZ

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### K4S QSO summary.....

Although there was a glitch in the logging program on the laptop used at the Shark's Tooth Festival site, here's the "best guess" of QSOs completed:

330 SSB Qs from the STF site.

153 CW from W5GJ station

43 RTTY from N1RA station

Total QSOs = 526

# The K4S Story in Pictures.....

It wasn't a dark and stormy night, but it was a cool and breezy morning when the first of the PBC (Peaches Breakfast Club) arrived at the Shark's Tooth Festival grounds. Plenty of time to survey the site and plan the morning's setup activities.



First order of business was to set up the antenna. Pres. Andy is doing the brain work while Frank and cohorts stand by in case Andy needs a hand. Frank was heard to say "I have the fishing pole part, but where's the reel and bait?"



Connecting the radio and amp was the next order of business. Lotsa' coax, ground wires and power cords to connect - a ham's delight!



Antenna's up! Ain't she a thing of beauty?



Time for a class picture of the K4S antenna erection crew. Climbers all!

# The K4S Story in Pictures.....

Time to get down to some serious operating as Jim calls CQ - DX. With propagation as it was, DX was Ohio. It was rumored that the Podunk Sunshield Company has filed a patent infringement suit against unknown parties for stealing their computer sunshield design.



As evening falls, things are quickly buttoned up with high hopes for the next two days.



Back in operation with Andy on the mike and Jim logging. Note the redesign of the sunshield in efforts to head off costly patent litigation.



The typical scene over the three days of operating, with club members coming and going, and some interaction with interested passersby.



Sunday afternoon saw it all coming to a close for another year. The last of the cleanup crew paused for a final photo after the entire K4S setup was removed. Another successful operation - 73 to all.

# 5G—The New Wireless Frontier

By Sanj KESY

**J**udging from the habits of the usual bunch dining at Peaches on Tuesday and Friday mornings, TARC members are intimately familiar with 4G cell phone technology.

5G is on the horizon. The following excerpts are from the IEEE publication “the institute”, volume 41, Issue 1, March 2017. The issue is dedicated to “5G – The new Wireless Frontier”.

From Kathy Pretz, editor in chief:

“IEEE believes 5G will be truly revolutionary. It expects 5G will become the cornerstone of future wireless networks, enabling fundamentally new applications, including the Internet of Things and connected cars. At the same time, the technology is likely to provide broadband access to millions of users at a low price.

“Wireless carriers have started building 5G networks in China, Japan, South Korea, and the United States, even though issues – like defining standards to ensure interoperability and outlining security requirements – are still being worked out.

“South Korea hopes to introduce 5G services in time for the 2018 Winter Olympics there, and the European Union wants 5G mobile broadband to be available around all its major roads and rail links by 2025.

“Carriers will be working to reduce delays in transmission time. The 5G latency is expected to be less than 1 millisecond; 4G networks have a latency of 25 milliseconds. (Latency is the amount of time it takes for a packet of data to get from one forwarding point to another.) Low latency is particularly important for such applications as self-driving cars and robot aided surgeries,

where the slightest delay in transmission time could mean life or death.”

From Monica Rosenfeld:

“Seeing the enormous potential of 5G wireless systems – IEEE Fellow Joy Lasker three years ago helped found Maja Systems. Based in Milpitas, Calif., the startup has developed a first-of-its-kind chip to connect machines wirelessly to one another over millimeter waves while sending data to the cloud in real time.

“The company’s 60-gigahertz CMOS single-chip transceiver integrates with a high-performance antenna for multi-gigabit wireless connectivity. The chip includes millimeter wave components, a modulation engine, and analog-to-digital and digital-to-analog converters. It consumes fewer than 400 milliwatts and fits in a module. ... It is available now to select customers, and is expected to debut to the general public later this year.

“The new chip’s antennas can work with frequencies up to 80 GHz. Today’s 4G cellular systems have frequencies below 6GHz. Antennas for 5G are shorter, between 1 and 10 millimeters instead of centimeters for 4G

“Maja’s 4G products support data rates of 3.5 gigabytes per second, moving toward 10 Gb/s and higher for 5G.”

From Kathy Pretz:

“IEEE launched its 5G initiative in December. IEEE Fellow Gerhard Fettweis is the initiative’s co-chair. Fettweis is a professor at Technische Universität in Dresden, Germany, and a senior research scientist with the International Computer Science Institute, an independent nonprofit in Berkeley, Calif.

**Con’t >>>>>>**



## ***5G, continued .....***

Fettweis was asked several questions. The first: “What 5G application excites you the most?”

His answer:

“A concept I introduced in 2012 called the tactile Internet. It will offer an instant reaction that mimics the experience of touching something in real life. With 5G wireless networks expected to send and receive data in a millisecond, that speed would match the reaction time the human body has to touching something.

“The tactile Internet will be used in areas such as automation, education, entertainment, gaming, farming, health care, and industrial transportation. For the tactile Internet we’ll need more powerful devices and a much faster wireless network, 100 times faster than the current 4G.

Then this question:

“Which areas will 5G applications affect the most?”

His answer:

“Transportation, sports, and education. 5G will allow vehicles to react in an instant to 5G enabled vehicles and pedestrians, thereby nearly eliminating accidents, traffic jams, and even traffic lights. Pedestrians using 5G enabled smartphones would be able to walk safely into the street without checking for cars, because 5G-enabled cars would be routed automatically around the person or come to a full stop. In 20 years, most fatalities on the road should be a thing of the past.

“For sports, instead of simply watching football players from way up in their seats, or on stadiums’ big-screen TVs, fans wearing smartglasses will be able to see the action from a player’s point of view, without the player having to wear a camera. Hundreds of ultra-high definition cameras joined together in a digital rendering system will be positioned in multiple rings around the field,

and players will be tracked by vision systems. Fans will be able to activate a particular player’s tracker and, through the screen in their smartglasses, see what the player sees on the field.

“In classrooms, students will be able to learn by doing, using virtual reality technology to interact. Headsets will be mobile, and not plugged into computers. People will no longer learn a new language from a book or tape, but by having real conversations with fellow students within virtual settings.

“Ultimately 5G will revamp education. It’s going to be an exciting world.”

And this question:

“What is your hope for 5G?”

With this answer:


“That the technology will cover every corner of the planet and provide Internet access to the nearly 3 billion people who live in rural and remote areas where Internet connectivity does not exist today.

“With 5G, everyone is talking about rolling out services for high-density networks using smaller cells for urban areas with ranges of 10 to 100 meters. In general, 5G initiatives are not concerned with sparsely populated areas that need to connect to a base station located 100 kilometers away. The need is being addressed only by the airborne balloon of Google X’s Project Loon and Facebook’s Aquila solar-powered drone project, both of which transmit from above.

“Because IEEE covers the entire globe, we believe we can easily address all needs globally, whereby every individual counts.”

*And there you have it! 5G is coming. How long till hams figure out a way to hack the system and reach out and touch someone via amateur radio using 5G?*

# May 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 QCWA 11:30 AM Oriental Buffet 4458 Bee Ridge	2 Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1	3	4 TARC net @ 7:30 PM 146.52 Simplex	5 Breakfast @ Peaches *	6
7	8 DARN Emer- gency net @ 11AM Starts on NI4CE/RPT 145.43 pl100	9 Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1	10 <b>TARC meet- ing @ Coast Guard Train- ing Center 7:00 PM</b>	11 TARC net @ 7:30 PM 146.58 Simplex	12 Breakfast @ Peaches *	13 <b>TARC VE Session @ Jacaranda Public Library 10:00 AM</b>
14	15	16 Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1	17	18 TARC net @ 7:30 PM 146.58 Simplex	19 Breakfast @ Peaches *	20
21	22	23 Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1	24	25 TARC net @ 7:30 PM 146.58 Simplex	26 Breakfast @ Peaches *	27
28	29	30 Breakfast @ Peaches * DMR net @ 7:30 PM W4AC 444.1	31			* Peaches opens at 6:00 AM, orders taken at 7:00.

\*\* The W4AC 146.805 Repeater is now DMR.

**TAMIAMI AMATEUR RADIO CLUB, INC.  
MEMBERSHIP APPLICATION**

Name \_\_\_\_\_ Call sign \_\_\_\_\_ Class \_\_\_\_\_ ARRL, (Y/N) \_\_\_\_\_

Local Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

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) _____        |  |   |

**MAIL TO: TAMIAMI AMATEUR RADIO CLUB, INC.  
PO Box 976  
Nokomis, FL 34274**

**2017 TARC OFFICERS:**

President:	Andy Durette	KB1HIP
Vice President:	Gary Hagens	K6OC
Secretary:	Jim Shortill	KJ4NDO
Treasurer:	Frank Wroblewski	W2XYZ
Directors:	Peter Boers	KV4LR
	Larry Bryan	W8LIG
	Don Jansen	KI4VGE
	Tom McDermitt	W3GXV
	San Yoder	K3SY

**Dues:**

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.

*The Communicator is a monthly publication of  
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<http://www.tamiamiarc.org> Webmaster: Dave Gill, K4JDG*