



THE COMMUNICATOR

Newsletter of the TAMAMI AMATEUR RADIO CLUB

Incorporated 30 November 1984 – Venice, Florida
Mailing Address: 1419 E. Manasota Beach Rd., Englewood, FL 34223-6341
W4AC Repeater – 444.100 MHz & 146.805 MHz(-) w/100 Hz PL
Web Site – <http://tamiamiarc.org>



-- MARCH 2014 --

-- PRESIDENT'S MESSAGE --

Those of you who find it difficult to awaken early on Tuesday and Friday mornings for the Club's feeding frenzies truly miss a vast number of viewpoints, comments and treasures of knowledge. Some of the talk even pertains to Ham Radio!

The DXers (those that get there prior to 7:15 am) gather at the west end of the table formation with the rest sitting to the east end (mostly the late arrivals). Friday is commonly the biggest group with some 14-16 in attendance. The waitress who wins the coin toss for tending to our whims, by now knows what the regulars desire. The ritual often begins with the passing around of DX QSL cards received, and then rolls over to comments about ARRL's latest trials and tribulations.

You will find a sometimes heated controversy of whether SDR is really Ham Radio or not, and why would you want to just let the SDR equipment run on automatic while you are not in your shack or out traveling the world? Some members comment on their HF amps and the problems they, or others they know, may have. There is also a bit of conversation about QRP operation, but not much. The DXers may tout their individual logging programs and someday I might join this free for all.

I have mentioned some of our weekly chats to encourage those of who haven't joined these Frenzies to come out and join in.

I would like to thank Dave Gill-K4JDG, who has stepped up to the plate--not once but twice. Dave is now our Treasurer and he is also updating our web page. If you see him at a meeting or breakfast, THANK him. In addition you still have time to support your club at the Shark Tooth Festival by participating. Contact me via lathwood@gmail.com.

VY 73 to All de Fred-KJ4TNI

Hard work pays off in the future; laziness pays off now.

Courtesy opens many doors.

-- MARCH MEETING --

Our meeting will start at **7:00 PM** on Wednesday, **12 March 2014** at the Coast Guard Auxiliary Training Center, 1200 South Harbor Drive. Hans Napfel-WB2ZZB will offer a program "Italy as Seen by a Radio Ham." DXers know that Italian stations are strong worldwide—for better or worse—so let's see if Hans spotted any of those Italian Big Guns.

-- ARRL AT ORLANDO HAMCATION --



ARRL President Kay Craigie-N3KN, greets and chats with visitors to the ARRL booth at the Orlando HamCation. HamCation was the first ARRL Regional Centennial Convention.

The inaugural ARRL Regional Centennial Convention at the 07-09 February Orlando HamCation was "a grand success," according to ARRL President Kay Craigie-N3KN, who headed up the contingent representing the League at the event. The 68th HamCation was the first of six such regional events planned to mark the League's 100th anniversary celebration this year.

"There was a really good vibe among the people I met at this event, and it was a fine kick-off to the series of regional centennial conventions," said Craigie, who noted that this was her first visit to the Orlando ham radio gathering. She deemed attendance excellent.

(From ARRL web site 14 February)

May you have great luck.

**Tamiami Amateur Radio Club
Minutes of the Meeting
12 February 2014**

President Fred Lathwood-KJ4TNI called the meeting to order at 7:05 PM with a flag pledge. Al Culbert-K0AL of Cedar Rapids, Iowa, Spence Kerniss (call sign pending) and Marty Folan-KB1TWE of Venice, and Bob Gurniak-K3UC of Emmaus, PA were welcomed as visitors. Introductions were then made all around.

MINUTES – Fred requested a motion to accept the minutes of the 08 January meeting as published in the February issue of *The Communicator*. Tom Fraser-AK4ZM so moved, seconded by Bob Avrutik-N1RA, and passed.

SPECIAL ELECTION: Due to persistent medical problems, newly elected treasurer, Rich Greenberg-N6LRT, had to resign from that post. Dave Gill-K4JDG volunteered to assume that post. Fred called for a motion that Dave be elected as Treasurer. Bob Avrutik-N1RA so moved, seconded by Don Jansen-KI4VGE, and passed unanimously.

CORRESPONDENCE – On 23 January, the secretary renewed and paid the \$61.25 fee to the Florida Department of State, Division of Corporations for our Florida Incorporation registration. As the status of Treasurer was in flux at that time, the name of our previous treasurer, Don Jansen-KI4VGE, was kept on the renewal application. Our new Treasurer, Dave Gill-K4JDG, was informed by our bank that recognition of his position would not be given until it showed on the state's records. This required an amendment of the registration and payment of an additional \$61.25. The revised registration was received today.

TREASURER'S REPORT – Treasurer Dave Gill-K4JDG reported that the starting balance was \$4461.92. Receipts were \$19.50 from the January 50/50 and \$160.00 from dues payments, totaling \$179.50. There were no expenses, such that the 31 January balance was \$4641.42. Bob Avrutik-N1RA moved for acceptance of the report, seconded by Jim Shortill-KJ4NDO, and passed.

COMMITTEE REPORTS

SUNSHINE – Nothing reported.

VE TESTING – We had seven candidates at our 08 February VE session. TARC Student Member Paul Lesko-KK4HCP upgraded to Amateur Extra and VHS students Emma Bonham and Luis Canas earned their Technician tickets. In addition, the other four candidates, including

tonight's visitor Spence Kerniss, all passed the Technician exam.

REPEATER/TECHNICAL – Both repeaters are operational, however digital interference with our Tuesday night 440 Net has caused periodic cancelation of the net. Stew Haag-W4MO, trustee of the repeaters, stated that if we called him prior to the net he could deactivate the digital mode. It was suggested that we switch over to use of 146.580 simplex if digital transmissions close down our 440 Net. Fred-KJ4TNI stated that this item would be tabled until our March meeting.

PUBLICITY/MEMBERSHIP – The current roster shows four student members, four life members and all but 11 of our 67 members paid up for 2014.

NET OPERATIONS – Turnout is picking up some with the return of the seasonal members.

LIAISON TO QCWA – There were 23 members, spouses and friends at our 05 February lunch at Denny's up in Sarasota. Hans Napfel-WB2ZZB offered a PP presentation on "A Ham's View of Italy."

OLD BUSINESS – There has not been any follow up regarding short technical presentations at our meetings.

NEW BUSINESS – Advance Preparation for Sharks Tooth Festival: Sign Up Sheets were passed around for volunteers to assist with set up, operating and take down at the on-site K4S station, volunteers to monitor the 10-K Run, and volunteers who will operate K4S from their home stations.

Update License Manuals for Venice Library: Jack-W4JS reported that he is often asked where reference material is available to those wanting to study for radio licenses. As he referred them to the Venice Library, he reviewed what was available and found the material quite out of date. As such, he requested that the Club purchase new ARRL Q&A manuals. Stew Haag-W4MO added that the Club should buy copies of Clinton DeSoto's book "200 Meters and Down" which presents a history of the early days of ham radio in the USA. After discussion, it was proposed that the Club would purchase three copies of each Q&A manual and the DeSoto book. The manuals would be given to the Library immediately, however the DeSoto books would be circulated among the TARC members before being presented to the Library. Fred-KJ4TNI so moved for approval, seconded

See **MINUTES**, page 4

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
Cambodia – XU7ACQ; by KF0RQ	Now to 21 March	349	--	11-12	11-12	12-01	13-02	13-01	14-19	16-18
Uganda – 5X1XA; by G3XAQ	Now to 16 March	77	23-04	22-05	22-05	18-07	12-01	12-01	12-23	14-22
Ascension Is – ZD8D	Now to 11 March	108	23-08	21-09	21-10	00-24	11-04	12-02	12-01	13-00
The Gambia – C5/M1TKA; holiday style	Now to 10 March	88	--	--	--	00-24	12-02	12-01	13-00	14-22
Annobon Is – 3C0BYP; by EA5BYP	Now to 08 March	92	23-06	21-08	21-08	16-13	12-02	12-01	13-00	13-23
Tonga – A35AX; by DK1AX & DK1MA	Now to 07 March	253	05-13	04-14	04-14	00-18	17-09	17-04	17-03	18-01
Guantanamo Bay – KG4WV, KG4NL	Now to 07 March	135	00-24	00-24	12-03	13-01	14-22	17-20	16-21	NO
Marshall Is – V73MW; by N6MW	Now to 04 March	282	06-13	05-14	04-14	23-16	18-04	--	--	--
Zambia – 9J2T; Italian Team operation	28 Feb – 17 Mar	95	23-05	22-05	22-06	18-07	12-00	12-23	13-21	13-19
Christmas Is – VK9X/K7CO	01 to 11 March	334	1200	11-13	11-13	12-23	13-02	13-02	14-01	16-18
Rwanda – 9X0NH; by G3RWF	03 to 12 March	81	23-05	22-06	22-06	19-07	16-03	11-02	12-01	12-23
Palau – T88XT; by VK3BY, spare time op.	08 to 14 March	307	09-12	08-13	08-13	05-19	13-04	13-03	14-01	15-00
Western Sahara – S0/3Z9DX, ++	10 to 20 March	75	--	21-10	--	00-24	11-02	12-01	13-23	14-21
Sri Lanka – 4S7??; German Team operation	10 to 23 March	28	0000	00-01	23-01	20-03	12-02	13-22	14-22	16-20
Chatham Is – ZL7/OE2SNL, mostly RTTY	13 to 26 March	230	05-12	04-13	03-13	00-17	17-08	18-04	18-04	20-02
Tonga – A35JP; by JA0RQV, spare time op.	14 to 20 March	253	05-12	04-14	04-14	00-18	13-09	13-04	18-03	18-02
Tanzania – 5H3MB; by IK2GZU	14 Mar – 11 Apr	83	23-04	22-05	22-05	19-08	15-02	11-01	12-01	13-23
Norfolk Is – VK9NF; by NL8F, digital	15 to 22 March	250	06-12	05-13	05-13	01-16	18-15	18-04	19-03	20-01
Reunion Is – FR/F5MNV, **	16 Mar – 08 Apr	91	23-03	23-03	22-04	19-07	17-01	16-23	14-21	14-19
Austral Is – TX6G; British Team operation	20 Mar – 01 Apr	239	04-12	02-14	02-14	22-18	00-24	16-07	16-05	16-04
Chatham Is – ZL7AAA; Team operation	20 Mar – 01 Apr	230	05-12	04-13	03-13	00-15	17-07	18-05	19-04	20-01
Mayotte – TO7BC; by DL7BC	21 Mar – 04 Apr	85	--	22-04	--	19-07	15-01	11-01	12-01	13-23
Andaman Is – VU4K; by W4VKU	23 to 30 March	8	NO	NO	23-00	11-02	12-03	13-02	15-20	15-20
Fiji – 3D2FJ; by K0UU, ** holiday style	23 to 31 March	258	06-12	05-13	04-13	02-16	12-09	13-05	18-05	18-03
Togo – 5V7MP, 5V7BJ; French operators	23 to 31 March	87	23-07	22-08	21-08	17-11	11-04	11-03	11-02	12-00
Christmas Is – T32TM; by NL8F	25 Mar – 02 Apr	267	04-12	03-14	02-14	16-14	12-06	16-05	16-04	17-02
Mellish Reef – VK9MT; Team operation	28 Mar – 09 Apr	267	07-12	06-13	06-13	03-17	12-06	13-05	14-04	20-02

Updated 26 February based on the 24 February *The Weekly DX*, the 26 February *QRZ DX*, and the NG3K DX Page, <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 date in accordance with the NOAA SWPC 27-day Space Weather Outlook Table and USAF 45 Day AP Forecast.

-- FEBRUARY SOLAR ACTIVITY --

The Solar Flux ranged from 151 to 194, with a mean value of 170.3 (vs. 108.7 for February 2013 and 110.8 for February 2012), and the A_p index was ≥ 7 on 17 days. The sunspot number through 27 February ranged from 101 to 234, with a mean of 170.8. One X-class, 40 M-class and 301 C-class flares occurred through 27 February.

Quiet conditions generally prevailed other than some disturbed conditions 06-10, 14-16, 19-24 and 27-28 February.

-- MARCH FORECAST --

Solar activity is expected to be at low to moderate levels, with high levels likely through 16 March with the return of old Regions 1967 and 1974.

No proton events are expected at geosynchronous orbit, however, the threat will increase during the transit of old Region 1974, particularly after 09 March.

The greater than 2 MeV particle flux at geosynchronous orbit is expected to be at normal to moderate levels during the month, with the exception of 09-10, 23-24 and 27-28 March.

Geomagnetic field activity is expected to be at quiet to unsettled levels. There is a chance of active conditions 01, 09-10, 23-24 and 27-28 March when active conditions may occur due to recurrent coronal hole high speed streams.

The Solar Flux should range from 145 to 180, and average 166.1 during March.

(From *NOAA Weekly Highlights and Forecasts*, 24 February 2014, *NOAA 27-day Space Weather Outlook Table*, 24 February 2014, and *45 Day AP Forecast*, USAF, 24 February 2014)

-- FEBRUARY'S DX HIGHLIGHTS --

The FT5ZM-Amsterdam Island DXpedition team logged on the order of 170,000 contacts with 36,300 stations on SSB, CW and RTTY. AA4SC had the honor of completing the final FT5ZM contact -- on 12 February at 0220 UTC. Amsterdam Island was the fifth most-wanted DXCC entity, according to *The DX Magazine* annual survey of most needed entities. (*ARRL Letter* 13 February)

Elmo-EA5BYP stirred up a lot of activity with his 3C0BYP operation from Annobon Is.

Both 10 and 15 meters offered great morning polar propagation into India and SE Asia.

MAJOR CONTESTS DURING MARCH

Contest/Special Event	Begin-End Times/Dates	Bands/Modes	QSO With	Exchange
ARRL International Phone DX Contest	0000Z 01 Mar 2359Z 02 Mar	160 – 10 Meters SSB Only	DXCC Entities	RS, State
Straight Key Century Club Weekend Sprintathon	1200Z 08 Mar 2359Z 09 Mar	160 – 6 Meters CW Only	SKCC Members	RST, QTH, Name
North American RTTY Sprint	0000Z 09 Mar 0359Z 09 Mar	80 – 20 Meters RTTY Only	Stations in North American Entities	Both Calls, Serial, Name, S/P/C
BARTG HF RTTY Contest	0200Z 15 Mar 0200Z 17 Mar	80 – 10 Meters RTTY Only	Anyone, Anywhere	Serial, 4-digit UTC Time
Russian DX Contest	1200Z 15 Mar 1159Z 16 Mar	160 – 10 Meters SSB and CW	Anyone, Anywhere	RS(T), Serial
QCWA Spring QSO Party	1800Z 15 Mar 1800Z 16 Mar	160 – 6 Meters SSB, CW, Digital	QCWA Members	1sr yr lic'd, Name QCWA Cpt, QTH
North American Sprint	0000Z 16 Mar 0359Z 16 Mar	80 – 20 Meters SSB Only	Stations in North American Entities	Both Calls, Serial, Name, S/P/C
FOC QSO Party	0000Z 22 Mar 2359Z 22 Mar	160 – 6 Meters CW Only	FOC Members	RST, Name
CQ WPX SSB Contest	0000Z 29 Mar 2359Z 30 Mar	160 – 10 Meters SSB Only	Anyone, Anywhere	RS, Serial

Legend: Serial = 3-digit sequential number of contact starting with 001; S/P/C = State, Province, DXCC Entity
 From ARRL "Contest Corral" and WA7BNM Contest Calendar at <http://www.hornucopia.com/contestcal/>
 NOTE: State QSO Parties are not shown. See above references for such information.

MINUTES, from page 2

by Tom Fraser-AK4ZM and passed.

New Appointed Position: Fred-KJ4TNI stated that the Club is in need of better publicity and, in keeping with many clubs, proposed that the position of Public Information Officer (PIO) be created and staffed. Fred asked that any members willing to assume such a post please contact him.

COMMENTS FROM THE FLOOR – Don Jansen-KI4VGE stated that if any members were interested in a club name badge to contact him and Dave Gill.

Guenther Hennig-AJ4QX reported that the Coast Guard Auxiliary would have their communications trailer on display at the Sharks Tooth Festival and that perhaps there could be some coordination between the TARC and the CGA.

ADJOURNMENT – A motion to adjourn at 8:01 PM passed. There were 15 members and four visitors present.

PROGRAM – Due to severe rainstorm conditions in the Sarasota area, Hans Napfel-WB2ZZB cancelled out on making the drive south to Venice, so no program was offered tonight.

Jack Sproat-W4JS
Secretary

Plan to be spontaneous tomorrow.

-- EMPIRICAL DESIGN STANDARDS --

Bill Kollenbaum-K4XS up in Brooksville, FL recently raised a good question on the Florida Contest Group reflector: "Ever wonder how 120 radials became the standard for verticals?" Bill then offered the following, taken from the Top-band reflector.

Jerry Sevick-W2FMI, has an interesting comment about the "120" number in his book, "The Short Vertical Antenna and Ground Radial." At the end of the first chapter he notes: "...it should be mentioned that the world standard for the number of radials to be used with verticals in the AM broadcast band is 120. This number was based on the classic paper published in 1937 by Brown, Lewis, and Epstein. During the course of a business meeting with Dr. Brown, I asked him how he and his colleagues arrived at the 120 radial figure--because I was quite sure 100 would work as well. His answer was interesting. He said that he and the others had been thinking in terms of 100 radials, but the farmer who plowed in 100 radials had wire left over because copper is soft and stretches easily. When he asked what to do with the extra wire, the farmer was told to plow it in. The result was a world standard of 120 radials."

Do the right thing because it is right. Have the courage to face it.

-- THE EARLY YEARS --

American hams won high praise for their considerable help to the military during World War I. However, at the end of the war, hearings in Congress began on an effort to put all radio matters under the control of the US Navy. It was expected that the Navy would abolish Amateur Radio--despite the debt owed to hams for their war service.

ARRL President Maxim and representatives of many of the large radio clubs in the country attended the hearings and spoke against the proposed legislation. The ARRL called on its membership and on families of hams killed in action to speak out in opposition to the bill, which they did -- in large numbers, and with emotional pleas. So, despite a strong effort to push the bill through, it died in committee and never reached the floor.

On 12 April 1919, five months after the armistice was signed, the US Navy Department announced that the ban on amateur *receiving* would be lifted, but that the ban on transmitting would continue until the President of the United States officially announced that a state of peace existed.

Three months later, on 24 July, the Navy tried again. The Secretary of the Navy wrote the President of the Senate, asking that legislation be enacted to give the Navy a monopoly on all oceanic and international radio communication. This effort was also defeated by the combined forces of American radio interests, including the efforts of the ARRL.

In August, the Navy *again* postponed the removal of the ban on transmitting by hams. A bill was introduced in Congress to force the Navy to lift the ban. Finally, under the threat of congressional action, the Navy, on 26 September 1919, lifted the transmitting ban and ceded authority over radio matters to the Department of Commerce. Amateur Radio was back in business!

(By Al Brogdon-W1AB, *ARRL Letter*, 13 February)

-- CLASSIFIED --

Jack Gaddas-KY1Z has some parts for a 3-element cubical quad antenna that he no longer needs:

3 – Cubex aluminum spreader brackets; designed for a 2" boom

12 – Weatherproofed Fiberglass spreaders long enough for 18 MHz and higher

18-ft 1 7/8" aluminum boom—one piece extra heavy.

Contact Jack direct if you're interested.

-- STEALTH STATION --



<http://www.hamuniverse.com/humor.html>

-- TOWER REPAIR ACCIDENT --

Robert Galindo-KE7ADT was critically injured when the winching cable snapped while he was working on his forty foot crank-up tower.

Galindo, who goes by his middle name of BearPaw, age 52 of Athol, Idaho was trapped and dangling 20 feet up in the air when rescue crews arrived at his home. The accident which was witnessed by his wife Gail Perry-KE7ADN resulted in the loss of Galindo's right hand and several fingers on his left hand.

Multiple agencies responded to Ms. Perry's 911 call, with help arriving 25 minutes later. Officials say that it took rescuers 20 minutes to raise the upper tower sections and to extricate Galindo. Galindo was transported by a Life Flight helicopter crew from Sandpoint, Idaho to Kootenai Health in Coeur d' Alene. At 3:00 PM trauma surgeons began more than 4 hours of surgery to Galindo. Galindo was listed in critical condition following the surgery and is expected to remain hospitalized for several days.

The town of Athol is unique, in that one out of every 10 residents is an amateur radio operator. The small community of 692 residents located in extreme northern Idaho boasts 69 licensed ham operators.

(Ed. Note: One thing that is constantly drummed into every ham using a crank-up tower is that you never climb that tower unless it's fully retracted or, if slightly extended, all sections must be securely blocked to avoid such an accident.) (From <http://www.nevadahamradio.com/>)



-- SPREAD-SPECTRUM ORIGIN --

In telecommunication and radio communication, spread-spectrum techniques are methods by which a signal (e.g. electrical, electromagnetic, or acoustic) generated with a particular bandwidth is deliberately spread in the frequency domain, resulting in a signal with a wider bandwidth. These techniques are used for a variety of reasons, including the establishment of secure communications, increasing resistance to natural interference, noise and jamming, and to prevent detection. The frequency-hopping concept serves as a basis for modern spread-spectrum communication technology, such as Bluetooth, COFDM (used in Wi-Fi network connections), and CDMA (used in some cordless and wireless telephones)

The invention of an early spread spectrum technique was due to the interests and efforts of movie actress Hedy Lamarr and musical composer George Antheil. Upon its invention in 1941, the technique was deemed so vital to national defense that government officials would not allow publication of its details.

Lamarr was born Hedwig Eva Maria Kiesler in 1914 in Vienna, Austria-Hungary. Friedrich Mandl, her first husband, had Lamarr accompany him to business meetings where he conferred with scientists and other professionals involved in military technology. These conferences became Lamarr's introduction to the field of applied science. This marriage ended in 1937 and Lamarr left Europe for Hollywood after meeting Louis B. Mayer in London. Mayer gave her the stage name of Hedy Lamarr.

Composer George Antheil, a son of German immigrants and a neighbor of Lamarr in California, had experimented with automated control of musical instruments, including his music for *Ballet Mécanique*. This score involved multiple player pianos playing simultaneously. During World War II, Antheil and Lamarr discussed the fact that radio-controlled torpedoes, while important in the naval war, could easily be jammed by broadcasting interference at the frequency of the control signal, causing the torpedo to

go off course. Antheil and Lamarr developed the idea of using frequency hopping to avoid jamming: using a piano roll to randomly change the signal sent between a control center and the torpedo at short bursts within a range of 88 frequencies in the radio-frequency spectrum (there being 88 keys on a piano keyboard). The specific code for the sequence of frequencies would be held identically by the controlling ship and in the torpedo. It would be practically impossible for the enemy to scan and jam all 88 frequencies, as this would require too much power or complexity. The frequency-hopping sequence was controlled by a player-piano mechanism, which Antheil had earlier used to score his *Ballet Mécanique*.

On 11 August 1942, U.S. Patent 2,292,387 was granted to Antheil and Hedy Kiesler Markey, Lamarr's married name at the time. This early version of frequency hopping, although novel, soon met with opposition from the U.S. Navy and was not adopted. The concept was not implemented in the US until 1962, when it was used by U.S. military ships during a blockade of Cuba after the patent had expired.

At the Electronic Frontier Foundation's Sixth Pioneer Awards in 1997, Lamarr and Antheil were honored with special awards for their "trail-blazing development of a technology that has become a key component of wireless data systems".

(From *Wikipedia*)



<http://www.hamuniverse.com/humor.html>

Security is not in having things; it's in handling things.

March 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 Breakfast @ Peach's, ± 7:00 AM 440 Net @ 7:30 PM, 444.100 Rptr	5 QCWA, 11:30 @ Denny's in Sarasota	6 TARC Net @ 7:30 PM, W4AC Repeater 146.805	7 Breakfast @ Peach's, ± 7:00 AM	8 TARC VE Session @ 10:00 AM, Venice Library
9	10 DARN Emer- gency Net @ 11 AM Starts on NI4CE re- peater 145.430	11 Breakfast @ Peach's, ± 7:00 AM 440 Net @ 7:30 PM, 444.100 Rptr	12 TARC Meet- ing @ 7 PM, Coast Guard Training Center	13 TARC Net @ 7:30 PM, W4AC Repeater 146.805	14 Breakfast @ Peach's, ± 7:00 AM	15
16	17	18 Breakfast @ Peach's, ± 7:00 AM 440 Net @ 7:30 PM, 444.100 Rptr	19	20 TARC Net @ 7:30 PM, W4AC Repeater 146.805	21 Breakfast @ Peach's, ± 7:00 AM	22
23/30	24/31	25 Breakfast @ Peach's, ± 7:00 AM 440 Net @ 7:30 PM, 444.100 Rptr	26	27 TARC Net @ 7:30 PM, W4AC Repeater 146.805	28 Breakfast @ Peach's, ± 7:00 AM	29

NOTE: If the W4AC 146.805 Repeater or the 444.100 Repeater are inoperative, nets scheduled for activity will be held on 146.580 MHz simplex. Thanks for your cooperation.

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

Name _____ Call Sign _____ Class ____ ARRL (Y/N)____

Local Address _____ City _____ Zip _____

Summer Address _____ City/State _____ Zip _____

Tel. No. _____ E-Mail _____ Application Date _____

Please check activity interests: Ass't Net Control __, RFI/TVI __, VE Testing __, Training __, Packet __, RTTY __,
Computers __, DXing __, Contests __, Field Day __, Publicity __, Emergency Communications __, Special Events __,
VHF/UHF __, SSTV __, ATV __, Repeater __, EchoLink __, Other (specify) _____

Regular Member @ \$25.00/year __, Family Membership @ \$30.00/year __, Non-Voting Student Membership @ \$5.00/year __ . (New Regular Members joining after 30 June pay \$15.00 for remainder of calendar year. \$25.00 dues payment after 31 October grants membership through remainder of year and all of the following year.)

MAIL TO: TARC, 1419 E. MANASOTA BEACH RD, ENGLEWOOD, FL 34223-6341

**TAMIAMI AMATEUR RADIO CLUB, INC.
1419 E. MANASOTA BEACH ROAD
ENGLEWOOD, FL 34223-6341**

The Communicator is a monthly publication
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Editor: Jack Sproat-W4JS
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2013 TARC Officers

President: Fred Lathwood-KJ4TNI
V. President: Andy Durette-KB1HIP
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