

THE COMMUNICATOR

Newsletter of the TAMIAMI 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 – <u>http://tamiamiarc.org</u>



-- AUGUST 2011 -

-- PRESIDENT'S MESSAGE --

"Every Saturday for the past couple of years, the members of the Tuscaloosa Amateur Radio Club have met here, in the back corner of the only Chick-fil-A in this low-slung Alabama river town. They meet to discuss politics and family and sports, but mostly they meet to discuss radio—the paddles, the repeaters, the boat anchors, the birds, and the brass pounders." (From "Ham Radio Hangs On," Matthew Shaer, *The Christian Science Monitor*, 11 July 2011) That sure sounds to me to be a lot like the TARC members who gather at Peach's for our Tuesday and Friday breakfasts.

The article observes that ham radio "should be long since dead," being replaced by the rise of the Internet and Facebook, or by Twitter, which also provides users with instant communication across vast distances. In contrast, ham radio is growing, fuelled by people who share their love of the pastime through community events and newsletters. Rather than being an enemy, the Web has been used to create thousands of online message boards and specialty sites.

Rich Moseson-W2VU, editor of *CQ* magazine is quoted, stating "We bounce signals off the moon. We bounce signals off our own fleet of satellites. We bounce signals through ionized air. What other hobby has all of that?"

Yes, ham radio is unique. While primarily concerned with communication, there are numerous "off the air" interests such as scratch building, equipment refurbishing and repair, antenna design, software development, etc. that can appeal to the vast variety of those who make up the segment of society known as "radio hams."

However, like all other aspects of personal interest, you only get out of it what you put into it. If you work hard to get a license, let it be more than a bulge in your wallet. Put your privileges to use. Do <u>something</u> to show others that you really are an Amateur Radio Operator.

73 to All de Stew Haag-W4MO

Hams do it with frequency.

-- AUGUST MEETING --

Our meeting will start at **7:00 PM** on Wednesday, <u>**10 August 2011**</u> at the Coast Guard Auxiliary Training Center, 1200 South Harbor Drive, just west of the Venice Airport. Following the business meeting, Hans Napfel-WB2ZZB will present a program, "The Ultimate Field Day." Sounds like that just might be quite interesting, so come on out and "Enjoy."

-- WELCOME TO OUR MEETING PLACE --



Here's a view of the venue—the Coast Guard Auxiliary training facility near the Venice Airport. The early birds are waiting for the "key" man.



Hans Napfel-WB2ZZB introduces his presentation of "South Georgia DXpedition with Antarctica Exploration Events" at our July meeting.

TAMIAMI AMATEUR RADIO CLUB Minutes of the Meeting 13 July 2011

President Stew Haag-W4MO called the meeting to order at 7:08 PM and, following a flag salute, introductions were made all around. Robert Unsell of Venice, was welcomed as a visitor.

MINUTES – A motion to accept the minutes of the 01 June 2011 meeting as published in the July 2011 issue of *The Communicator* was made by Peter Pesa-N4RD, seconded by Bob Avrutik-N1RA, and passed.

CORRESPONDENCE – Flyers for the 20 August Fort Pierce ARC Hamfest had been received and were distributed.

TREASURER'S REPORT – Treasurer Don Jansen-KI4VGE gave the June Treasurer's Report. The starting balance was \$3132.01. Receipts were \$16.00 from the May 50/50, and \$20 from membership dues, totaling \$36.00. Expenses were \$24.00 for Calkins LP Gas Co. and \$5.00 for the Attendance Drawing, totaling \$29.00. The ending balance is \$3139.01. Bob Avrutik-N1RA moved for acceptance of the report, seconded by Fred Lathwood-KJ4TNI, and passed.

COMMITTEE REPORTS

SUNSHINE – Nothing reported.

VE TESTING – Our July VE session was held last Saturday with four candidates. Three Generals upgraded to Amateur Extra and one new Technician license was earned.

REPEATER/TECHNICAL – The 146 and 444 MHz repeaters are operational in both analog and digital modes. The Kenwood HF transceiver is operational if the operator is using the remote control head and interface box.

CLUB PROPERTY – Stew commented that the inventory of club property has not changed.

PUBLICITY/MEMBERSHIP – San Yoder-K3SY reported that we have a total of 68 members, comprised of 556 dues paying members, eight Life Members and four First Year Free members. San stated that we have 42 Amateur Extra, six Advanced, 13 General and seven Technician class licensees in our membership.

NET OPERATIONS – Net Manager Bob Murphy-WA1UHG was not present but it was commented that turnout for our nets remains very poor.

LIAISON TO QCWA – Some 18 members and friends of Suncoast Chapter 53 enjoyed lunch 06 July at the Panda Pavilion. All are welcome to come on out, have lunch and enjoy our camaraderie the first Wednesday at 11:15, or so, through September.

OLD BUSINESS – Nothing carried over.

NEW BUSINESS – Stew announced the Special Election for Vice President. As Vice President Bruce Brown-WA8IQF is leaving the area, Andy Durette-KB1HIP has offered to serve as Vice President. Although Andy is a snowbird, Article V. Para. 13 of the TARC Bylaws requires only that the President or the Vice President be a permanent resident of the area. Upon calling for the nomination of Andy Durette for Vice President, Peter Pesa-N4RD so moved and Bob Avrutik-N1RA seconded the nomination. There being no nominations from the floor, Hans Napfel-WB2ZZB moved that the nominations be closed; seconded by Charlie Covell-W4DB. The call for a show of hands in favor of Andy showed unanimous support.

COMMENTS FROM THE FLOOR – Tom Barrett-KI6PLK requested information on ARRL membership and he was advised to check out the ARRL web site.

Stew showed off a "Fun Cube" in a thumb drive that covers 64 MHz to 1.7 GHz.

ADJOURNMENT – A motion to adjourn at 7:36 PM was made by San Yoder-K3SY, seconded by Bob Sullenberger-K1RCS, and passed. There were 19 members and one visitor present.

PROGRAM – Hans Napfel-WB2ZZB gave an interesting PP presentation on "Antarctica Exploration Events" followed by a video of the "South Georgia and South Sandwich DXpeditions."

Jack Sproat-W4JS Secretary

-- SOUTH SUDAN; THE NEWEST NATION --



South Sudan, one of the world's must underdeveloped nations, became independent from Sudan 09 July. Amateur Radio came 23 July.

CURRENT and/or SCHEDULED DX ACTIVITY										
COUNTRY – CALL SIGN	ACTIVITY	BEAR-	HF BANDS and BEST OPENING TIMES (UTC)							
	PERIOD	ING	80	40	30	20	17	15	12	10
Papua New Guinea – P29FR; ++ by I2KRR	No Active	283		07-12		12-16	00-04	21-02	21-03	NO
Djibouti – J28FJ; by KB0ZIA	Now Active	61				18-23	18-21	17-22	NO	NO
Afghanistan - T6FR; dates not fixed	Now to Nov'ber	26	NO	00-01	00-02	02-04	01-03	NO	NO	NO
South Sudan – STOR	Now to 10 Aug	74	00-04	23-05	23-05	19-05	13-01	16-01	16-01	NO
Amer. Samoa - KH8/WA8LOW; team op	01 – 17 August	256		03-14	03-14	18-12	18-04	18-03	18-04	19-21
Easter Island - CE0Y/I2DMI; mostly RTTY	01-09 August	208	01-11	23-13	23-11	14-08	15-05	17-03	20-00	16-03
Ogasawara – JD1BLY 40 – 6 meters	01 – 07 August	317		08-12	08-12	12-16	00-04	00-04	NO	NO
Benin – TY1KS; Italian/Spanish team	05 – 14 August	85	23-06	22-08	22-07	11-04	14-03	17-22	14-01	NO
Balearic Is - EA6/EA3PT; ++, holiday style	08 – 21 August	55	00-06	22-08		14-01	17-00	16-23	NO	NO
Market Reef - OJ0UR; Belgian/Dutch team	13 – 20 August	31	00-05	22-07	22-01	14-21	13-21	NO	NO	NO
East Kiribati – T32JB; holiday style	17 – 24 August	267	04-12	02-13	02-13	17-06	18-03	17-05	17-02	NO
So. Cook Is – E51AAO; holiday style	19 – 28 August	246	04-12	02-13	02-13	17-05	18-02	18-00	18-02	19-21
New Zealand - ZL4RUGBY; 2011 World Cup	17 Aug – 31 Oct	236	05-12	03-13	04-12	23-06	21-03	22-00	22-03	23-00
Turkey - TA4/ON6ZK; holiday style	22 - 30 August	44	00-04	22-06	22-05	13-22	16-20	16-20	NO	NO
Crete – SV9/WB2GAI; **	29 Aug – 20 Sep	51	00-05	21-06	21-05	12-22	15-21	15-21	17-19	NO

CURRENT/PENDING DX ACTIVITY & PROPAGATION HIGHLIGHTS

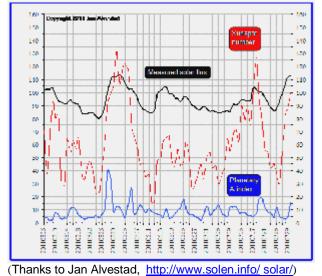
Updated 29 July 2011, based on 25 July 2011 The Weekly DX and http://www.ng3k.com

Notes: **Time in bold** = Bands with 75-100% opening; ??? = Call Sign not yet known; ++ = Mostly Phone; ** = Mostly CW; NO = No Opening forecast. Long Path bearings and opening times are <u>underlined</u>. All forecasts calculated using *W6ELProp V.2.60* propagation software, available to download at <u>http://www.qsl.net/w6elprop/</u>. Solar Flux and K-index varied by date in accordance with USAF 45-Day A/P Forecast.

-- JULY SOLAR ACTIVITY --

During July the Solar Flux ranged from 85 to 119, with a mean value of 94.3 (vs. 80.0 for July 2010 and 68.3 for July 2009). The A-index was \geq 7 on 21 days. Through 30 July, the sunspot number ranged from 30 to 101, with a mean of 65.0—a 15% increase from June's mean.

Sunspot Regions 1243 thru 1265 were active during July, with 48 C-class and two M-Class flares occurring. Geomagnetic field disturbances, primarily due to coronal hole high speed streams, drove the Planetary A Index as high as 48 on 19 and 30 July, disrupting HF propagation.



-- AUGUST FORECAST --

Solar activity is forecast to be very low to low levels during August. However, there is poten-

tial for new, rapidly emerging flux regions could increase activity to moderate levels at any time during August.

No proton events are expected at geosynchronous orbit. The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels 01-02 August due to coronal hole high speed streams (CH HSS). Moderate to normal levels are expected 03-06 after solar winds subside. A return to moderate to high levels is expected 07-13 and again from 16-31 August as the result of three solar wind increases from coronal holes. The Solar Flux should average 94.3 during August.

The geomagnetic field should be quiet 01-04 August. Quiet to active levels are expected 04-11 August due to CH HSS. Mostly quiet conditions should return 12-14 August before the next CH HSS is expected 15-19 August, when unsettled to active conditions return. Mostly quiet levels are expected 20 and 28 August, with the rest of the period 21-31 being mostly unsettled to active due to recurrent CH HSS.

(From NOAA Weekly Highlights and Forecasts, 27 July 2011, NOAA 27-day Space Weather Outlook Table, 27 July 2011, and 45 Day AP Forecast, USAF, 27 July 2011)

-- DX TIP --

STOR, from the new nation of South Sudan, has been putting excellent signals into our area on 15 to 40 meters. Although 10-meter openings were not forecast, it has been worked on that band by at least two local DXers.

Contest/Special Event	Begin-End Times/Dates	Bands/Modes	QSO With	Exchange
North American QSO Party	1800Z 06 Aug 0600Z 07 Aug	160 – 10 Meters CW Only	Stations in North Amer- ica and Hawaii	Name and State
Worked All Europe	0000Z 13 Aug 2359Z 14 Aug	80 – 10 Meters CW Only	European Stations (see web site for QTC rules)	R/S/T and Serial
Dominican Republic Contest	0000Z 13 Aug 0000Z 14 Aug	80 – 20 Meters SSB Only	Dominican Republic Stations	R/S and Serial
SARTG WW RTTY Contest	0000Z 20 Aug (see web site)	80 – 10 Meters RTTY Only	Anyone, Anywhere	R/S/T and Serial
Russian District Award Contest	0800Z 20 Aug 0800Z 21 Aug	160 – 10 Meters SSB and CW	Russian Stations	R/S/(T) and Serial
Keymen's Club of Japan Contest	1200Z 20 Aug 1200Z 21 Aug	160 – 6 Meters CW Only	Japanese Stations	R/S/T + Conti- nent Code (NA)
North American QSO Party	1800Z 20 Aug 0600Z 21 Aug	160 – 10 Meters SSB Only	Stations in North Amer- ica and Hawaii	Name and State
SCC RTTY Contest	1200Z 27 Aug 1159Z 28 Aug	80 – 10 Meters RTTY Only	Anyone, Anywhere	R/S/T + 4-digit year 1 st licensed
Romanian DX Contest	1200Z 27 Aug 1159Z 28 Aug	80 – 10 Meters SSB and CW	Anyone, Anywhere	R/S/(T) and Serial

MAJOR CONTESTS DURING JULY

Legend: Serial = Sequential number of contact; S/P/C = State, Province, DXCC Entity From ARRL "Contest Corral" and WA7BNM Contest Calendar at http://www.hornucopia.com/contestcal/

-- ANTENNA TUNER BASICS --

An **antenna tuner**, transmatch, or antenna tuning unit (ATU) is a device connected between a radio transmitter or receiver and its antenna to improve the efficiency of the power transfer between them by matching the impedance of the equipment to the antenna. An antenna tuner matches a transceiver with a fixed impedance (typically 50 ohms for modern transceivers) to a load (feed line and antenna) impedance which is unknown, complex or otherwise does not match.

An ATU allows the use of one antenna for a broad range of frequencies. An antenna plus ATU is never as efficient as a naturally resonant antenna due to additional induced losses on the feed line due to the SWR (multiple reflections), and losses in the ATU itself, although issues of pattern and capture area may outweigh this in practice. Strictly speaking the 'ATU' is only an antenna matching unit, as it is unable to change the resonant frequency of the aerial.

For systems which need to operate over a wide frequency range such as a power amplifier operating over the range 1 MHz to 30 MHz in some solid state designs a series of wide band transformers wound on ferrite cores can be used. This design has the advantage of not requiring any tuning when the operating frequency is changed. This type of design can also be used to match an antenna to a transmission line, it has the advantage of not

requiring any tuning but it has the disadvantage of not being capable of fine adjustment. These networks can be used to extend the useful range of a conventional narrow band ATU.

In solid state RF power amp design these networks are useful because MOSFETs and bipolar transistors are designed to operate with low resistance loads. Tube-type RF amplifiers are very different because the load resistance which a tube is designed to operate with is normally much greater, hence for power designs the circuit designs are often very different.

A parallel network consisting of a resistive element (1000Ω) with a reactive element (-j 229.415 Ω) will have the same impedance and power factor as a series network consisting of resistive element (50 Ω) and a reactive element (-j 217.94 Ω). By adding another element in series which has a reactive impedance of +j 217.94, the impedance is 50 ohms (resistive)

Typically the ATU is connected between the antenna and the radio transmitter or receiver. More specifically, the ATU can be connected between the feedline and the antenna to minimize loss, or between the feedline and the radio for convenience. However, SWR in the feedline must be considered in this second configuration.

There is a common misconception that high See **ATU**, pg. 5

ATU, from pg. 4

standing wave ratio (SWR) in and of itself causes loss. This is not the case. An antenna with a high SWR (e.g. 4:1) when properly configured with an ATU could have only a few percent additional loss compared to an intrinsially matched antenna. The ATU essentially redirects the reflected energy back along the feedline and antenna path. The additional losses come from the inherent losses within the feedline and antenna itself. SWR causes feed line losses to be multiplied. (Ed. note: 4:1 SWR adds about 1 dB to normal feedline loss.) Low loss feedline would have minimal loss when tuned with an ATU whereas a "lossy" feedline/antenna combination of the same SWR could have significant loss.

Without the ATU, SWR from a mismatched antenna could cause reflections of power back into the transmitter, which will cause heating in the transmitter and significant power loss.

While modern solid state power stages do not like an SWR above 1.5, in reality an antenna VSWR of 2 means 11 % of power is reflected, 11 Watts of 100 supplied, 89 Watt send forward in the antenna.

(From http://en.wikipedia.org)

-- NON-RESONANT VS. RESONANT --

The resonant antenna looks like a 70-ohm resistor if it is one-half wavelength above ground. Rather than dissipating heat, however, this "resistor" radiates electromagnetic waves. The only true resistance is in the wire from which the dipole was made.

If the dipole is too long for the frequency, it looks like a resistor and inductor in series. The inductor's reactance increases rapidly as the antenna is lengthened and can be much more than 70 ohms. To get the same radiated power-the same current through the resistor as before—we have to apply a higher RF voltage. If such voltage is applied, the resistor radiates exactly as before since it carries the same current as before. The inductor produces a magnetic field during one-half of the RF cycle. On the other half-cycle, the field collapses and returns the energy to the circuit. There is no loss, so the efficiency of the too-long antenna is just as good as that of the resonant antenna.

If the dipole is too short then there is a capacitive reactance in series with the resistor. Again if enough RF voltage is applied to get the same current through the resistor the result is the same. Only this time the capacitor charges

during a half-cycle of the RF and discharges during the other half-cycle. No power is used and, again, the non-resonant antenna performs as well as the resonant antenna.

If the inductive or capacitive reactance is too high for out transmitter to drive the antenna, we use a tuner to reduce the reactance to zero. In the case of the too-long antenna the tuner adds an equal capacitive reactance. The current in the inductor lags the current in the resistor by 90 degrees. The current in the capacitor leads the resistor current by 90 degrees. So these two currents are 180 degrees apart.

If we make the two reactances equal then the two currents cancel and our transmitter sees just the resistor. It can drive it just as though it was a resonant antenna. The inductor is still there and so is the capacitor that the tuner added. Current flows through both of them but there is no loss in either.

The non-resonant antenna radiates just as well as a resonant antenna.

(From "The Power Play: Non-Resonant vs. Resonant Antennas," Kurt N. Sterba, *WorldRadio Online*, April 2011)

-- BACK IN RORATONGA --



Let's go back to March 2004 when Bob Avrutik-N1RA and XYL Marie took a cruise from Hawaii to New Zealand. When the ship arrived at the Cook Islands, Bob had a 2-meter QSO with Victor Rivera-ZK1CG (now E51CG)—for Victor's first 2-meter QSO. Once ashore, Bob looked up Victor and here they are. This photo is on Victor's QRZ.org web page.

(TNX to Don Watson-K9DDO for finding this!)

Evidence has been found that William Tell and his family were avid bowlers. Unfortunately, all the Swiss league records were destroyed in a fire, ...and so we'll never know for whom the Bells bowled.

-- "WHISPER" --

If you've been around Stew Haag-W4MO in recent weeks, you've surely heard him talk about "working" numerous DXCC entities with a half-Watt or so of power even when he wasn't awake or at home. What's this all about? Well, weak signal guru and Nobel laureate Joe Taylor-K1JT has developed a program known as WSPR (pronounced "whisper") which stands for "Weak Signal Propagation Reporter." This program is designed for sending and receiving lowpower transmissions to test propagation paths on the MF and HF bands. Frequencies currently being used include 3.5926, 5.2872, 7.0386, 10.1387, 14.0956, 18.1046, 21.0946, 24.9246, and 28.1246 MHz. Therefore, WSPR is an interactive beacon system between those who register for the program and procure the required equipment.

Version 2.11 of WSPR includes FMT, a package of command-line utilities that can help you make highly accurate frequency measurements without expensive laboratory equipment. WSPR is an open-source program designed for weaksignal digital communication by amateur radio. Normal usage requires a standard SSB transceiver and a personal computer with soundcard. SimJT is a utility that generates simulated signals for test purposes. A ready-to-run Windows version is available for free download.

WSPR implements a protocol designed for probing potential propagation paths with lowpower transmissions. Normal transmissions carry a station's call sign, Maidenhead grid locator, and transmitter power in dBm*. The program can decode signals with S/N as low as -28 dB in a 2500 Hz bandwidth**. Stations with internet access can automatically upload their reception reports to a central database which includes a mapping facility. If you go to the page <u>http://wsprnet.org/drupal/wsprnet/map</u>, you can see a live version of the map. Click on a call sign and see who they have heard or to whom they have transmitted.

* dBm (sometimes dBmW) is an abbreviation for the power ratio in decibels (dB) of the measured power referenced to one-milliwatt (mW). It is used in radio, microwave and fiber optic networks as a convenient measure of absolute power because of its capability to express both very large and very small values in a short form. Examples are 60 dBm = 1 kW, 30 dBm = 1 Watt, 27 dBm = 500 mW, and 26 dBm = 400 mW. ** S/N ratio is defined at $P_{signal, dB} - P_{noise, dB}$, where P = power. Therefore, with a S/N ratio of -28dB it means that the noise is 28 dB stronger than the signal.

(From http://wsprnet.org and Wikipedia)

-- SOUTH SUDAN SCENARIOS --



A residential area in Juba, the capital of the new Republic of South Sudan, whence ST0R is operating to the delight of DXers worldwide.



Grazing land with homes in the background.



The operators (in their NCDXA shirts) who gave us ST0R. TNX for your efforts!

-- THE DISPLACED ELEMENTS --



(Gil – April 1961 QST)

The temperatures are hitting the 90s and some rain has started falling on a daily basis, so Summer has arrived. QRPers are everywhere, hippity-hopping about in the sunshine, with one hippity-hopping up the drive last week. We thought everyone would be happy, what with the nice weather and STOR from South Sudan and VK9HR from Lord Howe Island both on the air, but not this QRPer.

"What happened?" we asked. The QRPer sighed. "Remember the wind we had last week?" he asked, and we did recall the event. For a true blue DXer worries not whether the roof is going to stay put—it is the tower for which one has to be concerned.

"Lose your tower?" we ventured. "No," the QRPer said, "the tower is solid. But after that wind I could not get the signals sorted out. Everything sounded somewhat garbled. So I checked the tower and guess what I found!" We did not need to guess, for disaster was written everywhere in bold letters. But, we had to know the specifics. The QRPer supplied them.

"All the elements on one side of the boom were blown to the other side. Now I have an antenna with all the elements on one side of the boom. All on one side!"

Certainly this was astounding to us, for Dr. Yagi had never planned things that way. "How does it work?" we asked cautiously and got the sorrowful look from the QRPer. "Well," he went on sadly, "you know how 20, 17, 15, 12 and 10 are upper sideband and 40, 80 and 160 are lower sideband....right?" We did admit to this. "Well," the QRPer continued, "now all I get is lower sideband on 20 to 10 meters. Oh, why didn't the wind blow them the other way and things would be OK." We started getting the feeling that maybe we had missed something along the way.

"You serious?" we asked, and the QRPer was adamant. All he was receiving was lower sideband on the beam, and with that good DX on the air. "Maybe if you rotate the beam and work them off the back you will have upper sideband in that direction," we suggested. After a reasonable pause there was a quick smile of delight on the face of the QRPer.

"I knew you would know the answer," he shouted, and he hippity-hopped down the drive. We were not ready to admit all of that, but we did know some ways to move a QRPer out of the way.

(From *DX IS!, The Best of the West Coast DX Bulletin*, edited and published by C. T. Allen-W5DV and J. M. Allen-W6OGC, 1981)

-- AN ALTERNATIVE TO HAMMING --



It ain't ham radio but the world really looks much better from the back of a good horse. Your editor and XYL Yuli, are seen here after several hours of saddle time on wooded trails up near Ocala. Yuli's on "J'Lo," a thoroughbred mare, and W4JS is aboard "Hook," a Rocky Mountain gelding.

A famous Viking explorer returned home from a voyage and found his name missing from the town register. His wife insisted on complaining to the local civic official, who apologized profusely saying, "I must have taken Leif off my census."

"Thhh-aaa-tts All Folks!!"

August 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Oun						
	1	2 Breakfast @ Peach's, <u>+</u> 7:30 AM TARC Net @ 7:30 PM 146.580	3 QCWA Lunch, 11:15 AM TARC DX Net 8 PM, W4AC Repeater 146.805	4 TARC Emer- gency Net @ 7:30 PM, W4AC Repeater 146.805	5 Breakfast @ Peach's, <u>+</u> 7:30 AM	6
7	8	9	10	11	12	13
	DARN Emer- gency Net @ 11 AM Starts on NI4CE re- peater 145.430	Breakfast @ Peach's, <u>+</u> 7:30 AM TARC Net @ 7:30 PM, 146.580	TARC Meet- ing @ 7 PM, Coast Guard Training Center	TARC Emer- gency Net @ 7:30 PM, W4AC Repeater 146.805	Breakfast @ Peach's, <u>+</u> 7:30 AM	TARC VE Session @ 10:00 AM, Venice Library
14	15	16 Breakfast @ Peach's, <u>+</u> 7:30 AM TARC Net @ 7:30 PM, 146.580	17 TARC DX Net 8 PM, W4AC Repeater 146.805	18 TARC Emer- gency Net @ 7:30 PM, W4AC Repeater 146.805	19 Breakfast @ Peach's, <u>+</u> 7:30 AM	20
21	22	23	24	25	26	27
		Breakfast @ Peach's, <u>+</u> 7:30 AM TARC Net @ 7:30 PM, 146.580	TARC DX Net, 8 PM, W4AC Repeater 146.805	TARC Emer- gency Net @ 7:30 PM, W4AC Repeater 146.805	Breakfast @ Peach's, <u>+</u> 7:30 AM	
28	29	30	31			
		Breakfast @ Peach's, <u>+</u> 7:30 AM TARC Net @ 7:30 PM, 146.580	TARC DX Net, 8 PM, W4AC Repeater 146.805			

NOTE: If the W4AC Repeater is inoperative, nets scheduled for activity on the repeater will be held on the simplex frequency of 146.580 MHz. 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

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Editor:	Jack Sproat-W4JS		
Circulation:	San Yoder-K3SY		
2	2011 TARC Officers		
President:	Stew Haag-W4MO		
V. President:	Andy Durette-KB1HIP		
Secretary:	Jack Sproat-W4JS		
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	Peter Pesa-N4RD		
	Fred Lathwood-KJ4TNI		
	Bob Avrutik-N1RA		