

P.O. Box 2217

St. Petersburg,

Fl. 33731

www.sparc-club.org



Repeater Frequencies

147.060 224.660 444.475

WA4AKH Repeaters

W4GAC Club Station

W4TA Contest Group

SPARC GAP

Fall 2015



A FEW WORDS FROM OUR PRESIDENT

Our web site is working well. Due to SPARC's internet presence, I was invited to give a presentation to the North East Exchange Club about SPARC and amateur radio. The Exchange Club is a nationwide service organization that locally organizes Rib Fest. With any luck we'll interest a few new folks in our hobby.

The General license class taught by Tom, NY4I was a complete success. Four individuals upgraded to General class licensees. Testing was done by the SPARC VE team. Thanks to everyone that participated. There may be an Amateur Extra class in the making. Are you ready?

A deep dive by our repeater gurus found issues with the 220 machine. With the problem corrected and a new antenna in a better location, the 220 aficionados should be happy. Our 440 machine is now equipped with tone access to eliminate interference. Our investment in a spectrum analyzer/tracking generator is paying off with sterling repeater performance.

After participating in the W1AW/x centennial event, W4GAC received a nice engraved plaque from the ARRL. By taking part in national events such as this one, SPARC activity is recognized worldwide.

Field Day was successfully conducted at our new location. Thanks to Tom, NY4I for chairing and organizing the effort. Many thanks to all that helped set up and take down as well as those operated and who furnished goodies to eat. With your help, next year will be even better. Thanks to SM Darrell, KT4WX and ASM Ben, KI4IGX for dropping by to visit.

We all like to answer a CQ call and meet new people. But a funny thing happens when a new operator appears in person at one of our meetings...we tend to ignore them. When you see a new face at a meeting, take the time to introduce yourself and make an "eyeball QSO." You'll make our visitors feel welcome, and who knows, maybe make a new friend.

Finally, we note the passing of former members since the last issue of the SPARC Gap: George Bellows, K4ISS; Harry Kever, WD4EAL (We Drive Four Eastern Air Lines); Warren Elly, W1GUD and Chuck Dean, W4NHQ . RIP OM.

73,

Bob - N2ESP

P.S. A funny for this issue: What do you get when you put root beer in a square glass? Beer.



Field Day by Tom Schaefer, NY4I

The day was hot. The Sun beating down upon us reminded us that Field Day is a contact sport. The antenna work would be long and hard. Fortunately, we have plenty of water for everyone. It's the Friday before Field Day and antennas and cables are being run. Getting a head start acknowledges that Field Day setup is a major undertaking. Throw in a bad BALUN on the Yagi and a redo of the beam on the fly and you have quite a bit of work. Tomorrow will be hot and grueling. Florida is notorious for tough Field Days—mosquitoes, thunderstorms and oh that humidity. It tries the resolve of the most dedicated ham.

If this were any other year, that opening paragraph would have been 100% true. **But, this year, we got smart!** While the part about the antenna setup on Friday is true (as well as having to take the tower back down to fix a feed point issue), Saturday was done in the blissful, air-conditioned comfort of the DMI Research facility. For those that may not know, SPARC houses its club station in a facility graciously donated by DMI Research (a clinical drug-trial company). The year's effort consisted of 3 HF operating positions setup on temporary tables inside the building. **We made sure to NOT use any existing infrastructure for Field Day—not even antenna feed line holes in the walls were used.** We conducted this operation with generators, temporary antennas and temporary operating positions exactly as if we had to setup in a parking lot of a random building. The fact that we were in an air-conditioned building, while a creature comfort, had no bearing on our ability to communicate with makeshift antennas. This was more a testament to the fact that frankly, *we're not getting any younger*. It's harder to do the all-nighters while at the same time competing with the elements, bugs and porta-potties. That being said, we had a blast!

As I mentioned, we had 3 operating positions: one dedicated CW, one dedicated SSB and one floater that could do CW, SSB or *digital* modes like PSK31. The three stations when operating on 20, 15 and 10 meters used the single tri-band beam courtesy of the tri-plexer. The stations were two Elecraft K3 transceivers and one Elecraft K2 (yes, we drank the Elecraft Kool-Aid™). We had emergency power courtesy of the miserly inverting generators (they sip gasoline) and had a great run of operators. With three stations, we had nearly 1300 contacts. 650 QSOs were on CW and the rest on SSB. Unlike past years, we kept the stations busy with phone operators almost the entire time. When we had a lull in SSB operators but available CW operators, the swing station ran CW. This plan worked out quite well and seemed to fit the number of operators we had.



Field Day Continued...


In another departure this year, we did not have a catered lunch or dinner. In past years, we had club-provided sandwiches on Saturday afternoon and BBQ on Saturday night. This year we went for a potluck with the grilled meats provided by the club (and Dee, N4GD manning the grill). This gave us quite a bit of variety as well as a constant supply of snacks to keep the late night operators going. An added benefit is this saved the club a bunch of money (our \$15 dollar annual dues have not changed in many years and are some of the lowest in the area—and every little bit helps).

All in all we had generally good reviews with people feeling they had fun and it was a success. We had about 50 people participate this year and even though we were not in a public place like a park, we still had many guests. If we were missing anything, I guess it was you!

More people attend our monthly meetings than attend Field Day even though Field Day is the biggest club event of the year. I realize people have schedules and other commitments so in the interest of public service; **Field Day 2016 will be on June 25 and June 26 of 2016**. Go ahead and put it in both your calendar and the family calendar right now. That way you do not make other plans or get booked by a spouse or a child deciding to get married that weekend (“the nerve”). “I have Field Day that weekend everyone—I’m unavailable”. Stake your claim to the last full weekend of rain in June. You are a ham and it is a privilege that comes with your FCC ticket (it is printed right on the back of your license—go ahead and look). Let me know how that works and I take no responsibility for your impending divorce. But seriously, perhaps if you commit right now to attending Field Day in 2016, you stand a chance of getting there no matter if it is a SPARC Field Day or another. It is a wonderful place to share the love of radio that motivated us to get our ham tickets in the first place. We get to make new friends, revisit with old ones, operate and *ragchew* with your fellow hams. **How great is that?**

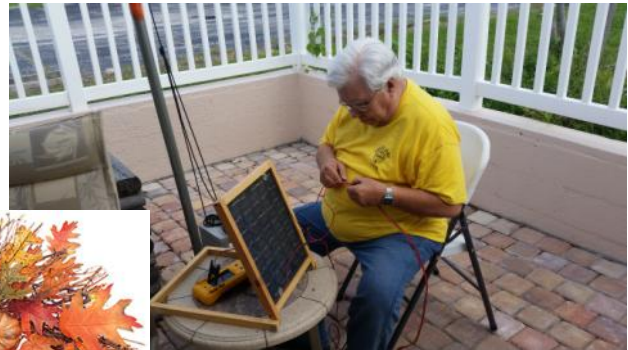
Until next year, CQ Field Day!

Tom NY4I



We are on the Web!
www.sparc-club.org

Pictures of Field Day 2015



Thank you to DMI for providing such a great place for our station, meetings and Field Day operation.

Pictures of Field Day 2015



Noted DXer and Ham Nation Host Visit SPARC

Noted DXers and *Ham Nation* host visit SPARC

A few SPARC members has the pleasure of visiting with Jerry, WB9Z and Valerie NV9L over breakfast recently. Jerry has been on numerous DXpeditions, while his fiancée Valerie is a host on the ham radio webcast "*Ham Nation*."

SPARC members enjoying breakfast were Dave, KR4U; Ron, KP2N; Dee, N4GD; Tom, NY4I; Bob, N2ESP and Bill, W5SJ. Also joining us from Bradenton was Bill, N9US.

After a filling breakfast at Jessi's restaurant, we took our visitors on a tour of W4GAC. There we presented Jerry with a donation from SPARC for the K1N Navassa DXpedition. Jerry was one of the many operators that put this rare entity on the air. In addition to Navassa, Jerry has participated in the 9M0M Spratley Island, VK0XX Christmas Island, VK9YY Cocos-Keeling, K5D Desecheo, VP8ORK South Orkney, FT5ZM Amsterdam Island, K9W Wake Island, HK0NA Malpelo, and N8HS Swains Island DXpeditions. Jerry would not reveal his next DX destination, but he said it was on the top ten most wanted list. WOW!

Valerie is a well-known host on the *Ham Nation* webcast, covering DXing and contesting. Valerie was the "Chief Pilot" for the FT5ZM Amsterdam Island, a "Chief Pilot Relay" for the K9W Wake Island DXpedition and "North American Pilot" for the NH9S Swains Island DXpedition. If you don't know what a DXpedition pilot does, click here: <https://www.youtube.com/watch?v=w3H1O-VN5Us>

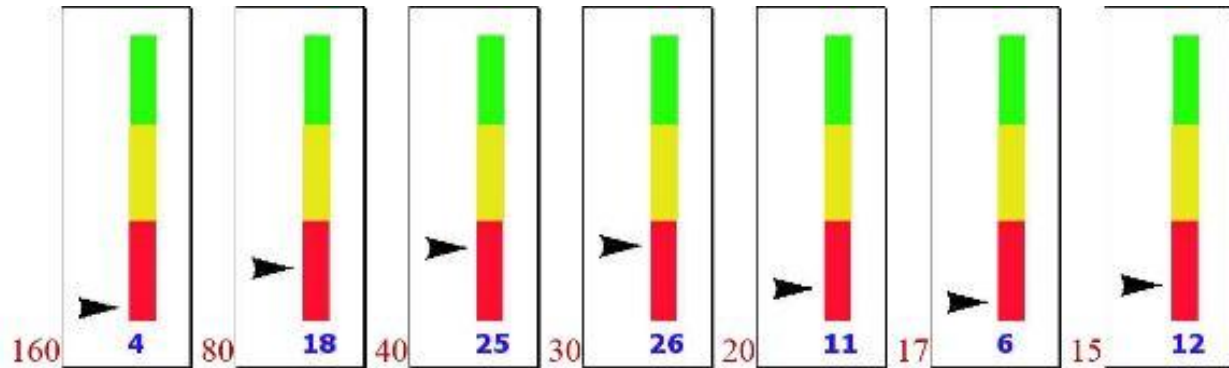
Bob N2ESP



Propagation by Bob N2ESP

Many times when I get in the mood to operate my station, I would like to know what conditions are like. There are many sources of propagation information, the A-Index, the K-Index, sunspot numbers etc. What do they all mean? There are lots of web sites available to fill your mind with all kinds of scientific gobbledygook. C'mon man, all I want to do is chat with someone.

There is a solution. Click on <http://www.bandcondx.com/> to see a real time snapshot of what the bands are doing



The graphic is self-explanatory and is automatically updated every 30 seconds. Conditions were not so hot the day I wrote this article

2014 WRTC by Bob N2ESP

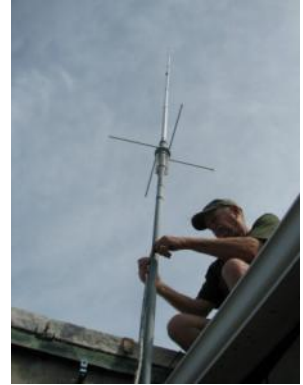
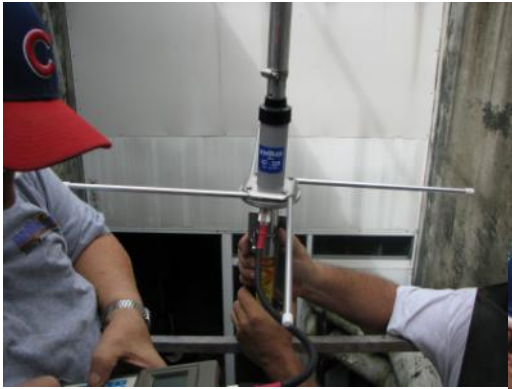
If you operated in the IARU 2014 HF Championship, you also participated in the Word Radiosport Team Championship (WRTC). The 2014 WRTC was held in the US last July. One of the benefits of participation was a QSL card from *each* WRTC station contacted. Each card features a photo of the two operators and the team referee, the station QTH, and our QSO details. Of the 59 teams participating, I was able to contact 36 teams on one or more bands. A photo of my 2014 WRTC QSL cards appears below.



Pictures of Working at the Repeater site



Pictures of Working at the Repeater site



GRITTY for RTTY

By Bob Wanek N2ESP and Ed Erny NZ1Q

Radioteletype has been around since the early 1940's. However, it is still very popular among hams because RTTY is an easy mode to setup and is widely used around the world. Although, as many of us that have used RTTY know all too well, the most challenging aspect of RTTY is poor decoding from band conditions and QRM.

A new RTTY decoder program named GRITTY is being offered for FREE by its author, Alex Shovkopyas, VE3NEA. Unlike currently available programs such as MMTTY, Fldigi or 2 Tone, GRITTY's decoding algorithm is a statistical model using Bayesian probabilities. The input to the model is the 5-bit Baudot code information that makes up an individual character. This information is provided by the PC's sound card, which is fed by receiver audio.

How it Works

The primary function of the Bayesian decoder is to compute the 5-bit Baudot code for each character received as well as the probability of error in each of its bits. After computing the "correctness" probability of each character, GRITTY displays the "amount of correctness" of each character to the user by varying the intensity of each printed character; dark print for reliable characters, lighter print as the reliability decreases.

GRITTY includes logic to identify and color code specific text information. Callsigns are displayed in red. Contest exchanges are shown in blue and QSO keywords are green. All other words are displayed in black. Again, dark colored print indicates a reliable character and light color print is used for questionable characters. Sample text can be seen in the accompanying screen capture.

Rather than use signal amplitude to squelch the signal, GRITTY logic uses a received character's error probability to "smart squelch" totally random data. According to the GRITTY help file: "This works better than the traditional squelch since it allows decoding of very weak signals but suppresses strong signals when interference makes accurate decoding impossible. The net result is very little garbage in the output."

Once a text stream has been decoded, GRITTY uses its probability algorithm to analyze the text. If similar callsigns appear in the text, GRITTY compares them bit by bit using the probability information previously determined and combining the probabilities using the Bayes formula. The resultant callsign is then put on the call stack with a high degree of confidence. When participating in a RTTY contest, GRITTY can be configured to the format of the most popular events. Knowing the expected exchange format permits GRITTY to correct errors in exchange numbers and keywords.

Is GRITTY the ultimate RTTY decoder? No. Having simultaneously run GRITTY with another popular decoder, MMTTY, it's evident that each program has its strengths and weaknesses.

GRITTY continued...

Example 1

The image shows two software windows. The top window is 'WinWarbler 8.4.2 for nz1q @ 2015-05-25 22:07 Z [CC,DXK,PF,DXV,SC,PV]'. It has a 'QSO Info (Receive Pane 1)' section with fields for Call, QSL, Buro, LoW, eQSL, Test, Via, CQ, Az, TX#, rst S, rst R, ITU, WPX, Path, Name, QTH, Pri sub, Comment, Contest, DXCC, Cont, Sec, Begin, Log, End, Spot, and Xcvr Freq. The bottom section shows a list of decoded text in yellow on a black background. The bottom window is 'GRITTY 1.2'. It has a toolbar with icons for USB, a frequency meter, and a list of stations. The main display area shows a spectrogram and a list of stations. The bottom section shows a list of decoded text in color on a white background.

WinWarbler 8.4.2 for nz1q @ 2015-05-25 22:07 Z [CC,DXK,PF,DXV,SC,PV]

QSO Info (Receive Pane 1)

Call ? rst S rst R Name DXCC Begin Log X

QSL Via CQ ITU QTH Cont End Spot

Buro Grid WPX Pri sub Sec

LoW IOTA Az Path Comment

eQSL Pwr TX# RX# Contest

Test Prev QSOs Last

Xcvr Freq

RX 14,085.540

TX 14,085.540

Config Help

RTTY

CT1DNU

QSL CT1DNU 599 CT0DNU K

OZDL9WNM 73 QSL TU DE AO150H QRZ? PMZQ KZMXXGWVABVQZCW

ZWBV

SX00/E

IODIVSFO 599 N8EFO DE AH DE ZE,/"

N8SFO 15hH KVQ

DCPTIGQISFO 73 QSL TU DE AO150H QRZ?

GRITTY 1.2

USB

0 dB

N8SFO

DE HP1DCP

DE ZA9PJG

DE DL9WNM

DE K3SAE

A0150H DE ZA9PJG

N8SFO 599 N8SFO DE A0BZPH

21:56 DE HP1DCP HP1DCP HP1DCP

N8SFO 73 QSL TU DE A0150H QRZ?

Above, WinWarbler (a module of DXLab's free Ham software suite using the MMTTY engine) attempts to decode text in the top text box above. The decoded text is almost impossible to read, where AO150H has been calling CQ, is answered by several station and acknowledges N8SFO. Compare the last several lines of yellow print with the Gritty decode below it, which is much clearer. Lighter printed letters being questionable.

GRITTY continued...

Example 2

In this second example, the advantage again is clearly seen. The contact between DL0GC and K1VOI is easily read with the help of Gritty's decode.

```
JNNCO8NDZ CO8NDZ KIEUHBAACEK'.s:  
CO8  
ZQGC DL0GC SPECIAL DOK 45L06 CQ  
S ARPK1VOI K1VOI K O  
AGN PSE AGN  
HOQVOI K1VOI K  
K1VOI  
QSL K1VMM
```

```
CQ DL0GC DL0GC DL0GC SPECIAL DOK 45L06 CQ  
K1VOI K1VOI K  
AGN PSE AGN  
K1VOI K1MOI K K  
T  
K1VOI  
QSL K1VO
```

Example 3

The third example where AO150H is sending 599 and completing the QSO with EC8BO is very clear in Gritty, rather than the guessing required in the typical decode that would appear in many other RTTY programs.

```
EC8BO 599 EC8BO DE A0AQTPH UPA5MC599 599 EC8BO EC8BO TU A0150H  
S  
MKXH  
EC8BO 73 QSLPTU DE A0150H JBVKWM
```

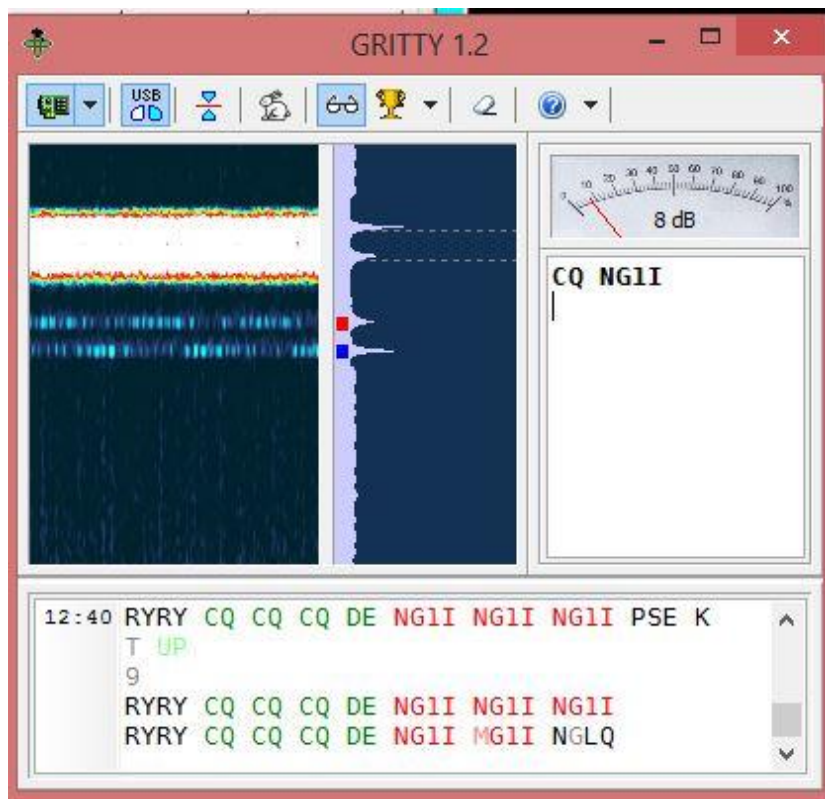
```
22:22 EC8BO 599 EC8BO DE A0150H  
EC8BO 599 EC8BO DE A0150H QA5MC  
599 599 EC8BO EC8BO TU A0150H  
EC8BO 73 QSL TU DE A0150H QRZ? DEJKWB0
```



GRITTY continued...

User Interface

This screen capture shows the controls at the top of the screen, the horizontal “waterfall” in the left center of the window. To the right of the waterfall is the spectrum display. In the spectrum display are the mark (red) and space (blue) tone boxes of the received signal. Barely visible at the top of the spectrum display are the nominal mark and space tones as indicated by dotted lines. To the right of the spectrum display is the Signal-to-Noise meter. Below the SN meter is the callsign stack, which displays all decoded callsigns. At the very bottom of the window is the received text area with time stamp. Clicking any text in the window puts the text on the clipboard for use with other programs.



The controls from top left to right are: **Soundcard** button used to select your sound card and audio channel. **Sideband** button selects upper or lower sideband to match your radio. **AFC** (Automatic Frequency Control) button enables compensation for any audio frequency drift. **Auto QSX** button moves the decoders focus to another station in the receiver passband after the first station ends its transmission. **Smart Decoding Mode** button is used to disable the after decode logic functions. **Contest Mode** button sets the RTTY contest you are participating in and enables the contest logic. The **Erase** button clears the received text. **Info** button accesses the Help system, version information and the data files which may be used to configure GRITTY to work with virtually any third party software.

If you have room on your monitor, GRITTY adds a new dimension to RTTY reception.

For more information about GRITTY and to download a free copy, go to:
<http://www.dxatlas.com/Gritty/>

Information from GRITTY Help system copy write by Alex Shovkoplyas, VE3NEA

Upcoming Events (*) and Contests

*Saint Petersburg Science Festival 10/17

CQ WWDX Contest SSB 10/24-10/25

ARRL Sweepstakes Contest CW 11/7-11/9

*SPARCFEST Tailgate 11/14

ARRL Sweepstakes Contest SSB 11/21-11/23

Anyone interested in operating any contest
please contact Tom NY4I at 727-437-2771

CQ WWDX CW Contest 11/28-11/29

ARRL 160 Meter Contest 12/4-12/6

10 Meter RTTY Contest 12/6

ARRL 10 Meter Contest 12/12-12/13

Note: Contest information for any month or the
entire year is readily available, simply GOOGLE
WA7BNM and select the contest calendar.

Station Report by David KR4U

Our club and contest station W4GAC/W4TA has recently undergone a cleanup and slight rearrangement along with our storage area in the building. The main two stations are fully operational and we will shortly integrate the Heathkit SB-104 (from JY1) into our setup. The tower project has moved along very well lately. It will sure be great to move our big beam from the storage trailer to the tower and put our station in a much more competitive position for upcoming contest events. SPARC has done very well in several world wide and domestic contests over the past few years and it will be fun to give some of those events a try again with good antennas. Thank you to all members involved in the cleanup and tower projects for the great support!

Programs for Meetings

One of the most difficult tasks of a club administration is trying to come up with programs that would be of interest to the membership. Such programs could be entertaining like a DVD of a dxpedition, informative, a demonstration of some kind or even a presentation with hands on experience for interested people. Please give some thought on this subject for the upcoming year and make your wishes known to our Vice President.

Several years ago when we resided at the American Red Cross, Ron KP2N and I put on a PSK31 demonstration and there seemed to quite a bit of interest from the membership. I would like to do this again and carry it a bit farther by making the program a two-part event. The first segment at a meeting and the second part the Saturday following the meeting where interested people could actually operate on the air using PSK31. We would use a very basic and the least expensive setup which would show just how efficient this mode can be to make contacts all over the globe. It is an ideal mode for deed restricted or even apartment dwellers to get on the air.

We all know how the ham radio hobby has changed over the years and a program demonstrating what was required in the 50's and 60's for a beginner to get into the hobby may be of interest to many folks today. It sure has undergone a great change. I recently completed a restoration of a 50's vintage Novice transmitter and I would like to do a program on this subject.

73 for now David KR4U

SPARC Meetings

First Friday every month, 7:30 pm

*Testing : Third Tuesday every month 6:30 pm

at DMI

6699 90th Ave. N. Pinellas Park

*contact Mike Scott K4ZPE at 727-492-6454

Some Members meet for Breakfast

Every Saturday, 7:00 am at the

Biff Burger 49th St. & 38th Ave. N. St. Petersburg

SPARC Purpose:

1. To further and promote the social benefits and technical advancement of the radio arts.
2. To acquire, organize, establish and maintain facilities for social and emergency communication, both mobile and stationary.
3. To assist and cooperate with authorized agencies in any emergency of local, state or national scope.
4. To further fellowship among radio amateurs, potential radio amateurs and other parties interested in amateur radio.

ELMERS

<u>Specialty</u>	<u>Name</u>	<u>Call</u>	<u>Contact Information</u>
Digital, CW, and Antennas	Dave Trewin	KR4U	trewins@aol.com
PSK	Dave Trewin	KR4U	trewins@aol.com
RTTY, Repeaters	Ron Hall	KP2N	kp2n@arrl.net
HF, 10-10	Leslie Johnson	WA4EEZ	wa4eez@verizon.net
Classic Radio Operation	Dick Keller	KF4NS	kf4nsradio@verizon.net
New Ham Elmers	Kyle Jeske	N4NSS	n4nss@arrl.net



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Welcome To Our New Members

Thangapandiyan Rajakumar
KK4NOU
Lakshmi Rajakumar KK4NOT
Douglas Caruso, Sr. KB0SDQ
Gretchen Caruso KB0SDR
Linda Miscavish KM4KUF
Dan Gerson KB4BOQ

Arnold Toney, Jr. KQ4MI
John Rieman KM4KEK
Verne Betlach K4VEB
Adam Lemons WN4ADM
Bruce Roggenkamp WD9FMI
Bradley Bartlett KM4LTG
Ron Milbourn N4KPJ

Tom Arseneau WA6NJV
Stephan Klein KM4LTF

Club Officers for 2015

President Bob Wanek N2ESP

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Vice President Clayton Parrott KJ4RUS

vice-president@sparc-club.org

Secretary Ron Graham KK4RC

secretary@sparc-club.org

Treasurer Tom Wedding AI4QP

treasurer@sparc-club.org

Repeater Trustee Ron Hall KP2N

trustee@sparc-club.org

Net Manager Johnnie Popwell W4TSP

netmanager@sparc-club.org

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W4GAC

W4TA

David Trewin KR4U Bob Wanek N2ESP

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Dee Turner N4GD boardmember2@sparc-club.org

Tom Schaefer NY4I boardmember3@sparc-club.org