



Photo of launch, view from payload.

READ ABOUT THIS DRAMATIC BALLOON LAUNCH AND RECOVERY IN THIS MONTH'S ISSUE OF THE SCOPE!



PARC Board
of Directors
Meeting 7pm
11 May 2016

14322 Pomerado Road,
Poway, CA 92064

Club
Meeting
7:30pm
4 May 2016

Carlsbad Safety Center, 2560
Orion Way, Carlsbad

Eric J. Goforth N6GOF
presents about APRS.





For our May membership meeting, Eric J. Goforth, N6GOF will be presenting on APRS.

Developed in 1984 by Bob Bruninga, WB4APR, the Automatic Packet Reporting System (APRS) was designed to track Naval Ship movements over HF. Since then; it has developed into a comprehensive data network for Amateur Radio.

This presentation will provide a wealth of information on:

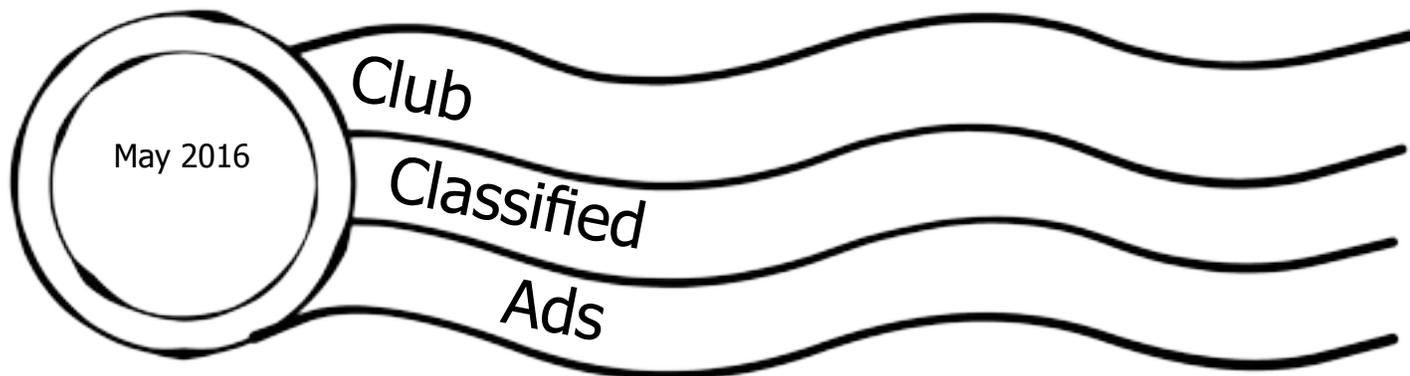
- * How the Network Operates.
- * Types of information that you can disseminate.
- * Equipment Types
- * RF and IS relationship
- * How you can participate
- *The ARISS relationship
- * Use Cases
- * Special Event, Disaster and SAR Operations

Along with a brief presentation, Eric & Joseph Peterson, K6JPE, will be bringing a lot of equipment for everyone to experiment with.

About Eric:

Eric J. Goforth, N6GOF, was licensed in 1998 and holds a General Class license. He is the trustee of the N6GOF-5 iGate in Ramona, CA and deployed numerous digipeaters in the Southern California area. With over 25 years in the technology industry; he is the founder and lead developer of the APRS to Telegram gateway software, a Certified Bitcoin Specialist, Founder of Telebit.org and Chief Technology Officer of CityTwig.

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FOR SALE!

Sony Trinitron 9" color CRT and a B&W CRT video monitor. Designed for side by side 19" rack mount. 120 VAC power. Composite video inputs. One with composite video or RGB 480P color input. Works well for ATV or security monitors. \$5.00 each. WB6IQS@att.net, John, Vista, CA.

Two HyGain TH6DXX tri-band (20/15/10) antennas. Make two into one working antenna. Complete with two main mast sections, one complete set of rebuilt traps, extra hardware and manual. Much cheaper than a stepper auto tune antenna. \$100 or best offer. WB6IQS@att.net, John, Vista, CA.

KM6ARO has *sold out* his six pages of radio and electronics gear!

FOR SALE!

Yaesu FT-2900R -- Rugged High Power 2m Mobile

75/25/10/5 watts RF, 3 watts audio for noisy environments, no fan, extra large bright display. New condition, two months old, never used in the field. Includes packaging, documentation, etc. \$100, firm. Email to KK6LWE@arrl.net

Yaesu FT-270R -- Rugged 2m HT

5 watts RF, 800mW audio for noisy environments, submersible 30 min at 3 feet (IPX7). New condition, two months old, used once in the field. Includes packaging, documentation, etc. \$100, firm. Email to KK6LWE@arrl.net

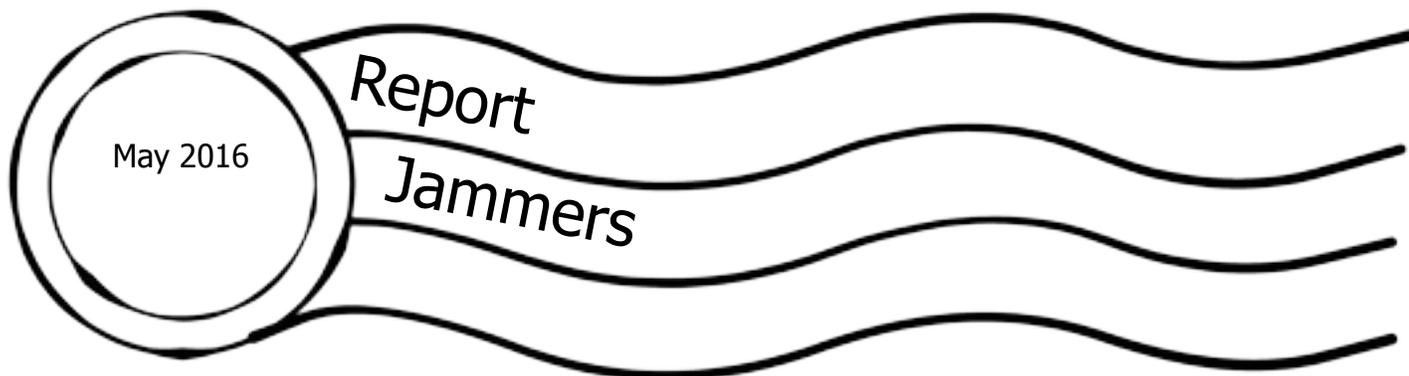
Advertisements are free for members

Have items that need to find a new home? Advertise here! Send your ads to scope@palomararc.org

Club Members ONLY!

PARC has a tube bank that includes many 6 & 12 volt receiving tubes (and some transmitting types) for use by club members to repair their own personal equipment. Not for commercial use or resale. If we have your requests, we will pre-check the tubes and deliver them to you at the next club meeting.

Contact John WB6IQS WB6IQS@att.net



RFinder - The World Wide Repeater Directory - now has Jamming Reports!

In cooperation with ARRL by request of Mike Lisenco N2YBB, ARRL Hudson Division Director, RFinder now includes the ability to make jamming reports. This is already available in RFinder Android and should be available on iOS devices by Dayton. This ability is available worldwide. Those without a device or subscription can make reports at <http://jamming.rfinder.net>. The trial version on Android allows jamming reports to be submitted.

Those responsible for coordinating anti-jamming activities can request access at <http://jamcoordinator.rfinder.net>. to view jamming reports for your area.

"Repeater jamming is a problem worldwide...we've created a way of organizing anti-jamming activities worldwide," says Bob Greenberg, W2CYK, creator of RFinder. "We are evaluating some automated monitoring technology to integrate in the near future...This new feature just extends RFinder's social features even further."

"We came to the RFinder team with this idea and they had it in place within 2 weeks, " says Mike Lysenco N2YBB, ARRL Director for the Hudson Division, " RFinder is a great tool to have in the fight against malicious interference on our repeaters..."

RFinder is the World Wide Repeater Directory and includes over 60,000 repeaters worldwide in over 170 countries. RFinder is integrated directly with EchoLink on both Android and iPhone and provides the ability to share repeater checkins on Facebook, Twitter and APRS. RFinder is integrated with RT Systems and CHIRP radio programmers and has a routing feature at <http://routes.rfinder.net> where you can find repeaters over a route worldwide. Video demos of RFinder can be found at <http://youtube.rfinder.net>.

- RFinder is the Official Repeater Directory of Radio Amateurs Canada... Canadian Amateurs who subscribe contribute to RAC.
- RFinder is the Official Repeater Directory App of Radio Society of Great Britain... UK Amateurs who subscribe contribute to RSGB.
- RFinder is the Official Repeater Directory of Amateur Radio Society Italia... IT Amateurs who subscribe contribute to ARS Italia.
- RFinder is the Official Repeater Directory of Federación Mexicana de Radioexperimentadores... MX Radioaficionados who subscribe contribute to FMRE.
- RFinder is the Official Repeater Directory of Deutscher Amateur Radio Club...DE Amateurs who subscribe contribute to DARC DE.
- RFinder is El directorio de repetidor con la base de datos oficial de Unión de Radioaficionados Españoles...ES Amateurs who subscribe contribute to URE ES.
- RFinder is the Official Repeater Directory of L'association Réseau des Émetteurs Français...FR Amateurs who subscribe contribute to REF FR.
- RFinder is the Online Repeater Directory of American Radio Relay League...US Amateurs who subscribe contribute to ARRL US.

- RFinder is the Official Repeater Directory of Cayman Amateur Radio Society...KY Amateurs who subscribe contribute to CARS KY.

Subscribe to RFinder by visiting <http://subscribe.rfinder.net> from your iPhone/iPad/iPod Touch or your Android. Those without an Apple or Android device can subscribe with the link at the bottom of <http://subscribe.rfinder.net>. RFinder is available on Android as Trialware. Download RFinder on Android from Google Play. Downloading RFinder on iOS devices for \$9.99US from The App Store includes your first year subscription.

The screenshot shows a web form titled "RFinder - Report Radio Jamming". At the top, it says "Please take the time to fill this out. Passive listening only." Below the title, there are several sections of input fields:

- Full Name ***: Three input fields for First Name, Last Name, and Callsign (if applicable).
- Date/Time of Occurrence (Local Time) ***: Three input fields for Date (MM/DD/YYYY), Hour (0-23), and Minute (0-59).
- Email ***: One input field.
- Repeater Location ***: One input field.
- Callsign of Repeater ***: One input field.
- Output Frequency of Repeater ***: One input field.
- Type of Interference ***: A list of radio button options: VOICE, TONE, CARRIER, and OTHER (Explain Below).
- Effect of Interference ***: A dropdown menu with the selected option "Strong signal, blocked QSO".
- Duration of Interference ***: A list of radio button options: Under 30 Seconds, 30 Seconds to 1 minute, and Over 1 minute (Add details below).
- Comments**: A large text area for additional information.

At the bottom of the form is a "Submit Report" button.

The screenshot shows the mobile app's "Interference Report" dialog box. At the top, there are buttons for "Update Info" and "Request Delete". The dialog contains the following information and options:

- Machine:** W2DQ 145.2100
- Occurred:** 2016-04-21 23:10
- Type:** Radio button options: Voice (selected), Tone, Carrier, and Other (explain below).
- Effect:** Strong signal, blocked QSO
- Length:** Radio button options: Under 30 seconds (selected), 30 secs to 1 minute, and over 1 minute.
- Comments:** A text input field.

At the bottom of the dialog are "Submit" and "Cancel" buttons. Below the dialog, on the main screen, are "Check In" and "Close" buttons.



New hams and seasoned hams alike are invited to join the Simplex Search exercise, an enjoyable hour spent locating hidden radio operators stationed around a park by setting in and calling the specific simplex frequency used by each.

It is a grand opportunity to actually use our HT's while enjoying nature in a beautiful setting. The Search will be held on Saturday May 7, at Agra Norte Park, located off Poinsettia one-half mile east of El Camino Real.

Pre-assigned control personnel and Elmers should arrive at 8 am, while searchers should arrive between 8:30 and 9 am.

All should check in with Search Control on 145.555 simplex, who will be located on a bench by the handicapped parking, clearly visible by the first entrance to the Park. Elmers will be available to help newer hams, and certificates will be issued to each searcher on completion of the course. For further information, contact John, AC7GK, at, appropriately enough, ac7gkjohn@gmail.com.

SCOPE page 7

SAN DIEGO SMART CITY HACKATHON

[HARNESS THE DATA]

May 20-22, 2016, UCSD Faculty Club

FRYS OPERATING DAY-SD



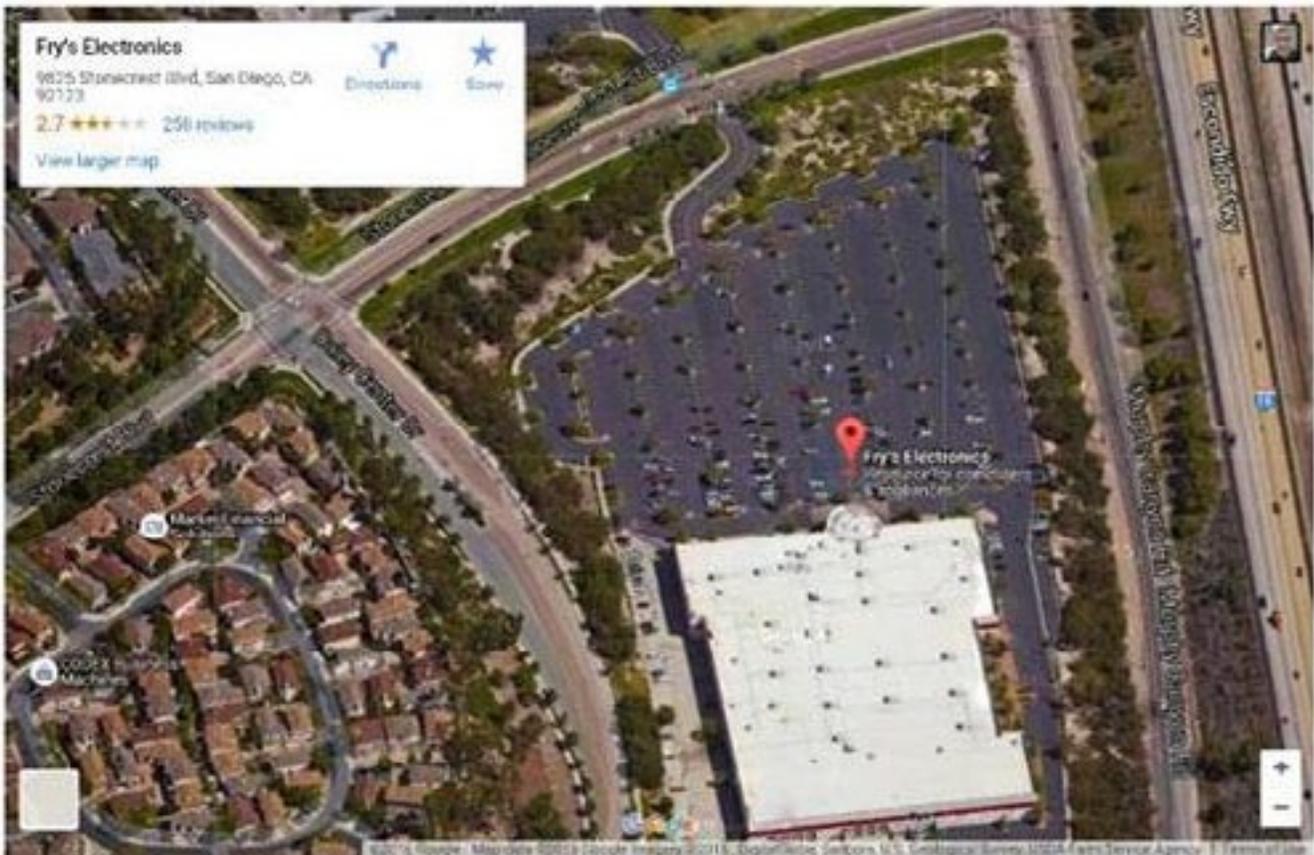
Saturday, April 30th, 2016

9825 Stonecrest Blvd, San Diego, CA
92123 (off Aero Dr.)

Setup at 7am - Public Operations by 9am -
Until 4pm (+/-)

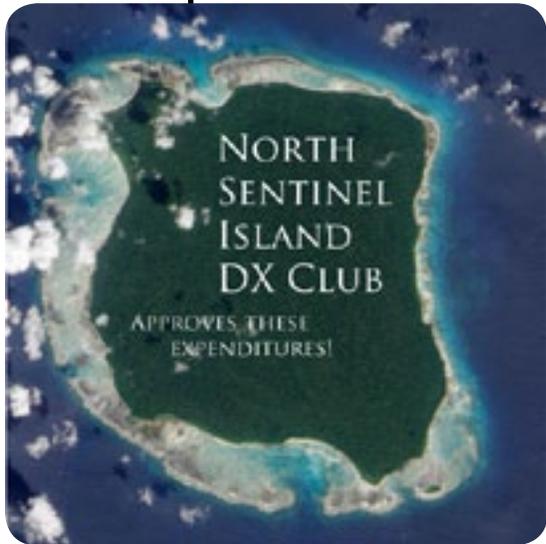
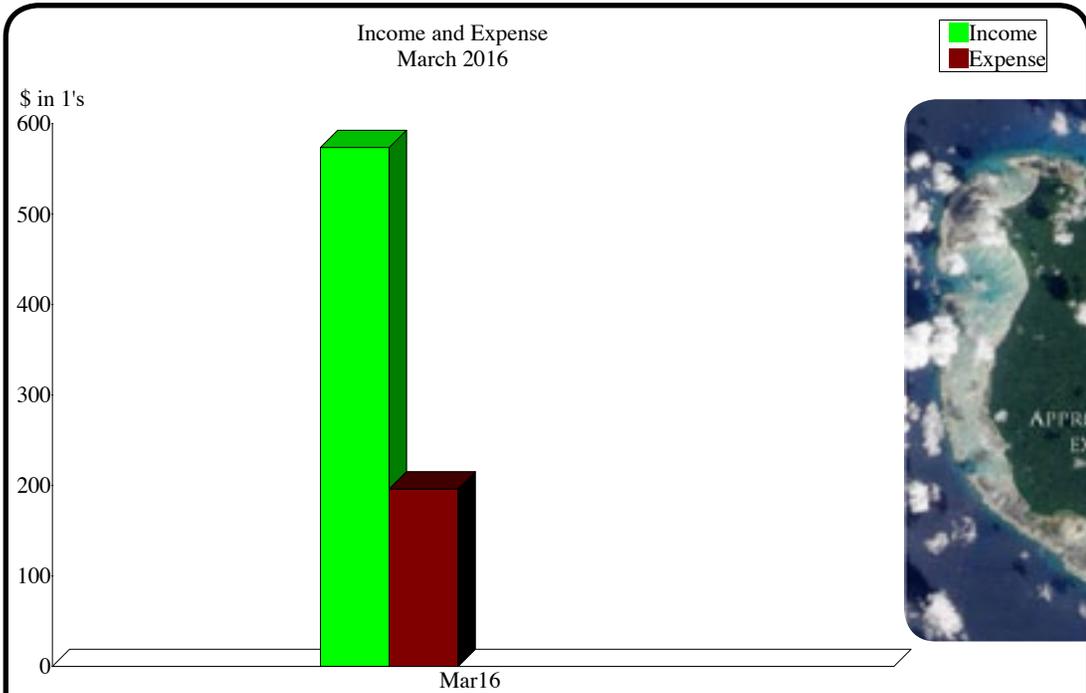
WATCH FOR FURTHER DETAILS

Come on out and test out your To-Go Box, antennas, etc. Plus, put a face with the Ham friends that you talk with daily. ***Come support attending clubs and Ham organizations and help acquaint the public with Amateur Radio.***



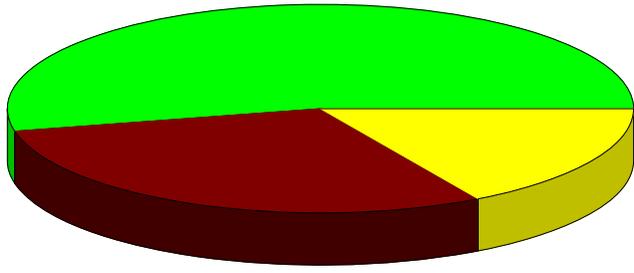
21 April
2016

Club Financial Update



Expense Summary
March 2016

Refund Dues	\$ 105.00
Rptr Electric	58.90
Rptr Phone	32.20
Total	\$196.10



By Account

Reported ATV Status

1 May
2016

Would you like to help us
revitalize our ATV system?
We could use your help.
Contact board@palomararc.org
to volunteer.

PARC
ATV
System

915 MHz WBFM in
5.8 MHz audio subcarrier

146.415
79.7
intercom

1241.25 MHz VSB out
NTSC standard

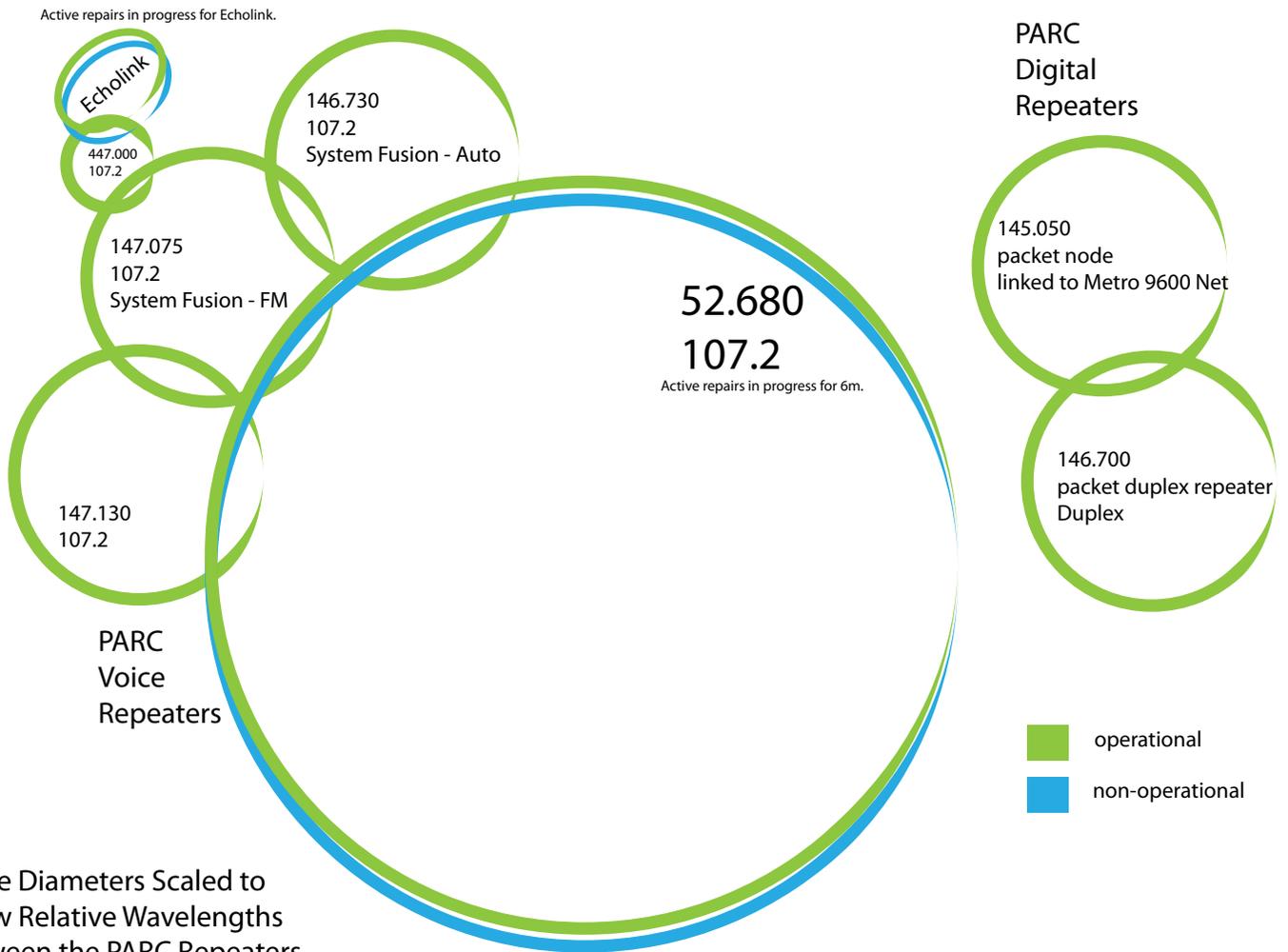
2441.5 MHz WBFM in
6.0 MHz audio subcarrier

 operational
 non-operational

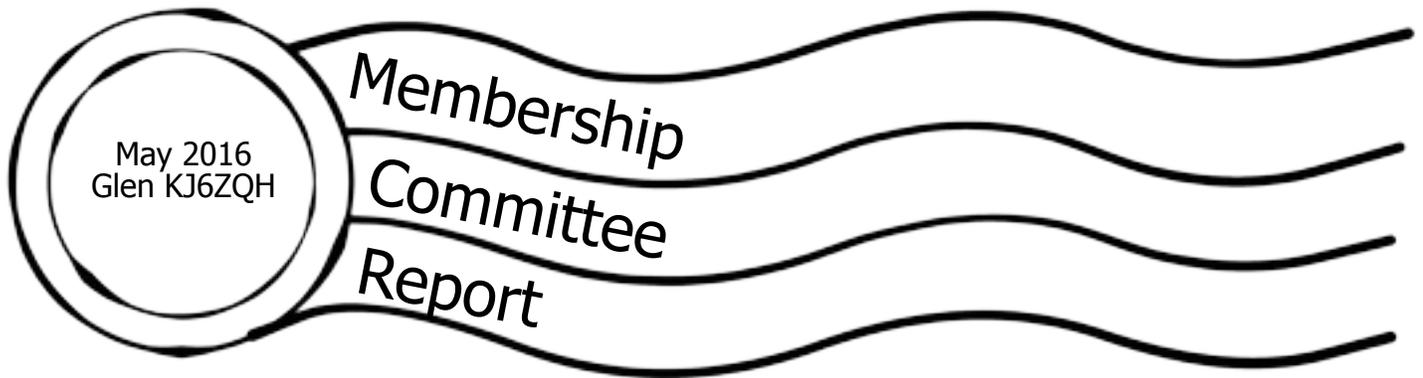
Circle Diameters Scaled to
Show Relative Wavelengths
Between Equipment

Reported Repeater Status

1 May
2016



Substantial 6m repeater repair progress has been made. New cavities are at the repeater site awaiting installation.



From the Membership Table

You can check the status of your membership 24/7. Go to the club's website and navigate to Join and click on "here" at the top of the page. Enter your call sign into the box and click the "Look up my membership status now" button.

To renew your membership or extend your membership, fill in the form on the Join page. Make sure you select the correct value from each of the drop-down menus (Type of Membership, How many years, I'm an ARRL Member, Newsletter option and License Class).

If you want to receive an email when your membership is coming due for renewal, please make sure that I have a valid email address for you. To do that, please send an email to Membership@palomararc.org.

73,
Glen KJ6ZQH, Membership Chair

Soon to expire (on or before June 1st club meeting) or already expired PARC memberships: (in alphabetic order by callsign - as of 4/28/2016) Click the links to renew!

<http://www.palomararc.org/memberlist/search.php?callsign=AB6O>
<http://www.palomararc.org/memberlist/search.php?callsign=AE6HF>
<http://www.palomararc.org/memberlist/search.php?callsign=AF6GM>
<http://www.palomararc.org/memberlist/search.php?callsign=AG6EK>
<http://www.palomararc.org/memberlist/search.php?callsign=AI6KO>
<http://www.palomararc.org/memberlist/search.php?callsign=AK6R>
<http://www.palomararc.org/memberlist/search.php?callsign=K1NJH>
<http://www.palomararc.org/memberlist/search.php?callsign=K6DRH>
<http://www.palomararc.org/memberlist/search.php?callsign=K6GOR>
<http://www.palomararc.org/memberlist/search.php?callsign=K6ISS>
<http://www.palomararc.org/memberlist/search.php?callsign=K6OT>
<http://www.palomararc.org/memberlist/search.php?callsign=K6PLR>
<http://www.palomararc.org/memberlist/search.php?callsign=K6SC>
<http://www.palomararc.org/memberlist/search.php?callsign=K6SML>
<http://www.palomararc.org/memberlist/search.php?callsign=K6WJH>
<http://www.palomararc.org/memberlist/search.php?callsign=K7ELH>
<http://www.palomararc.org/memberlist/search.php?callsign=K7MRP>
<http://www.palomararc.org/memberlist/search.php?callsign=K7WYV>
<http://www.palomararc.org/memberlist/search.php?callsign=KB6CPZ>
<http://www.palomararc.org/memberlist/search.php?callsign=KC6HUK>
<http://www.palomararc.org/memberlist/search.php?callsign=KC6YSO>
<http://www.palomararc.org/memberlist/search.php?callsign=KC7CJ>
<http://www.palomararc.org/memberlist/search.php?callsign=KD6AEB>
<http://www.palomararc.org/memberlist/search.php?callsign=KE6NPL>
<http://www.palomararc.org/memberlist/search.php?callsign=KG6HSQ>
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<http://www.palomararc.org/memberlist/search.php?callsign=KG6TFL>
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<http://www.palomararc.org/memberlist/search.php?callsign=KJ6WUY>

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<http://www.palomararc.org/memberlist/search.php?callsign=KJ6ZBQ>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6CTF>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6CTI>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6DRA>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6FFJ>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6GHF>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6GO>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6IJN>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6JDM>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6LJ>
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<http://www.palomararc.org/memberlist/search.php?callsign=KK6UFP>
<http://www.palomararc.org/memberlist/search.php?callsign=KK6UYP>
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<http://www.palomararc.org/memberlist/search.php?callsign=N6ERD>
<http://www.palomararc.org/memberlist/search.php?callsign=N6ISC>
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<http://www.palomararc.org/memberlist/search.php?callsign=WD6FZA>
<http://www.palomararc.org/memberlist/search.php?callsign=WQ6V>
<http://www.palomararc.org/memberlist/search.php?callsign=ZZ9JJ>

May 2016

Committee Chairs
and
Board Members

Contact
Info

Current Board of Directors

President	Charlie Ristorcelli NN3V	(619) 368-7617
Vice President	Joe Peterson K6JPE	(619) 630-8283
Treasurer	Tom Ellett W0NI	(858) 546-1148
Secretary	Sandy Pratt KK6EED	(858) 748-2611
Director #1	Kevin Walsh KK6FRK	(858) 722-5069 (text welcome)
Director #2	John Walker AC7GK	(949) 212-5533
Membership Chair	Glen Christensen KJ6ZQH	(858) 735-1144
Repeater Technical Chair	Mark Raptis KF6WTN	(760) 672-0223
Scope Editor	Michelle Thompson W5NYV	(858) 229-3399 (text welcome)

Not on the Board

Repeater Site Chair	Mark Raptis KF6WTN (acting)	(760) 672-0223
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The board members might have callsign@amsat.org mail aliases.

Committee Chairs

EchoLink	Bernie Lafreniere N6FN	N6FN@niftyaccessories.com
mesh networking	Phil Karn KA9Q	karn@ka9q.net
Operating Day	Tom Martin K6RCW	k6rcw@amsat.org
SANDARC Representative	John Walker AC7GK	ac7gkjohn@gmail.com
SANDARC Representative	Paul Williamson KB5MU	kb5mu@amsat.org
SANDARC Alternate	Michelle Thompson W5NYV	w5nyv@amsat.org
SD Microwave Group Liaison	Kerry Banke N6IZW	kbanke@sbcglobal.net

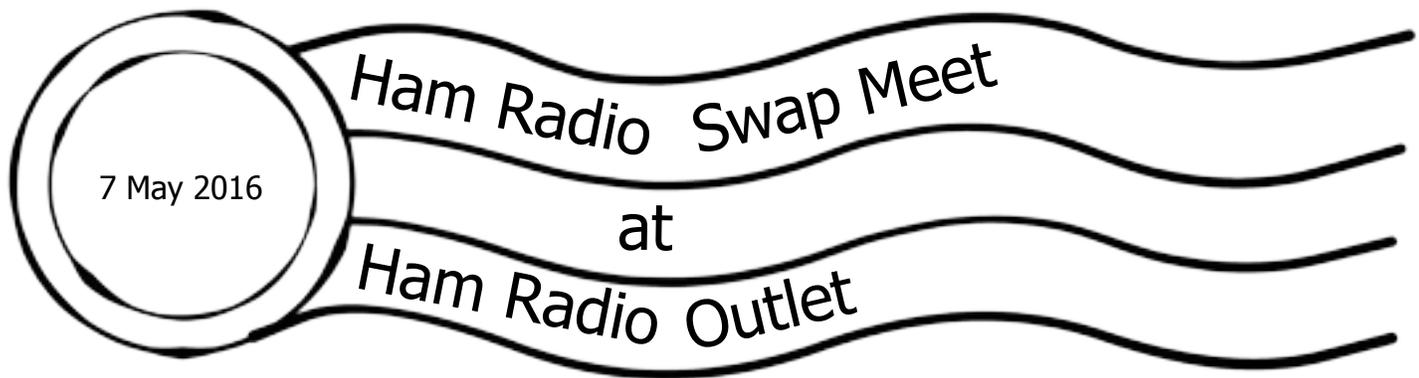
Upcoming Event

National Parks on the Air

Take part in this 2016 operating event, celebrating the US National Park Service Centennial.

Start Planning Now

National Parks ON THE AIR 2016



Greetings San Diego Ham Community,

Spring has sprung and hopefully, the wet weather of winter is behind us and our longer, warmer days are closing in. To that end we are announcing our SPRING HAM RADIO SWAP-MEET 2016.

Many have asked us, "When will you hold the next swap-meet?" The answer is Saturday, May 7, 2016 @ 8:00am, Ham Radio Outlet, San Diego. The swap-meet will run through till 2:00pm.

It has been a while since our last swap meet so we will bring the swap meet back out to the front of the store, setting sellers up along the grassy boulevard in the very front of the parking lot. Sellers will park parallel to the curb, limiting their selling space to the length of their vehicle.

Space has always been an issue, and this time is no exception. Sellers will be asked to limit themselves to cars/vans and pick-up trucks only. There will not be room for trailers or RV's if we want to accommodate everyone. We are striving to make everyone happy, but sometimes that can be a difficult chore. We certainly would appreciate everyone's compliance with this request.

As in the past, there is no cost to sell, but we must limit the swap-meet to only 24 sellers, so if you want to sell, you must CALL the store and reserve your space BEFORE Wednesday, May 4, 2016. Of course, if the 24 spaces are reserved before the date, we can continue to accept reservations for those who want to be notified of a cancellation up through the 6th of May. No reservation requests will be taken AFTER that date.

There is no fee to sellers or buyers at this swap-meet, so if you aren't selling, you should stop by to cash in on that ever-so-elusive bargain you've been searching for. Also, make it a point to stop in and check out some of the deals being offered in the store as well.

You've asked for it and we are only happy to make it happen. We hope to see you on Saturday, May 7, 2016 for the SPRING HAM RADIO SWAP-MEET 2016 at Ham Radio Outlet, San Diego!

To reserve your space, contact Joe, N6SIX at 858-560-4900 M-F 10a-5:30p.

You HRO San Diego Staff:

Jerry, N5MCJ

Joe, N6SIX

Pete, N3PV

Bill, W6RGS

April 20, 2016

EchoLink Node & Repeater Controller Project Status

By

Bernie Lafreniere, N6FN

As you may recall from prior reports, since the new Yaesu DR-1X repeaters as delivered by Yaesu are not compatible with EchoLink or IRLP repeater linking requirements, the EchoLink project morphed into evaluating several commercially available repeater controllers to solve the problem. While the Yaesu repeaters are not very flexible in how they can be configured, the DR-1X repeaters included a remote operation capability – i.e. the ability to use an external controller.

Several controllers were evaluated and one was purchased which I have now programmed and bench tested with one of our DR-1X repeaters. Since the provided Yaesu remote operation capability does not allow for the repeater to quickly switch from FM to Digital mode of operation, the installation of an aftermarket CTCSS decoder and Squelch board into the repeater and some rather tricky and clever programming of the external controller provides a work-around solution. While I would like to claim credit for this solution, it was actually provided by Justin Reed, NV8Q who did the design and published an application note and the code for the controller.

For his solution to work in our situation, I found I had to modify his suggested wiring and make a few changes to the code. But this was really tinkering around the edges with his solution. The test controller is now working quite nicely with the DR-1x repeater. I've been testing all kinds of different control operator commands and different / random application of FM and digital input signals, and it looks like everything is working.

I'm now part way through the process of converting the controller script code to run on different ports. The controller we bought can control up to three repeaters. Consequently, the need to modify the code for each port. Since it's an entirely manual process, somewhat akin to hand assembly of machine language code, it takes quite a bit of time and it's easy to make mistakes. But I know the code works, so any malfunctions will be because of some error in converting the code. I now have it running on two of the three ports.

In parallel with converting the code, we have been working on the documentation of the entire installation so it can be duplicated on another controller, and ultimately retrofitting the three DR-1x repeaters currently operating at the repeater site. In addition to installing the CTCSS decoder / Squelch board into the repeater, several wire harnesses needed to be designed and a set fabricated for each repeater. A schematic containing assembly information and a bill-of-material for the harness assemblies has been created. John Kuivinen, WB6IQS has volunteered to build up the necessary harnesses and install the Decoder / Squelch boards into the repeaters.

Since it is known that the Yaesu repeater firmware can occasionally lock up, requiring a trip to the repeater site to power the repeater off and back on again, we are implementing another solution suggested by Justin Reed, NV8Q. He recommends installing a power interrupt relay in series with the power line going into the repeater. By the addition of some code to the controller, which can detect a stuck repeater situation, the relay can automatically be cycled, clearing the fault. Of course, this requires selection of a relay, figuring out how to mount it, placing it into some kind of suitable enclosure and creating the wiring to put it into operation. We are now in the process of buying the necessary parts and will be putting a prototype together and bench testing it.



Glen KJ6ZQH and John AC7GK setting up our new booth for the Emergency Preparedness Fair on 23 April 2016. This is the club's very own canopy and banners!

This particular fair was focused on Emergency Preparedness. PARC members provided contacts and context for emergency communications support and how it fits in to the emergency preparedness movement.





The Club's Field Day site is already reserved. The location is the corner of Valley Center Road and Lilac Road. Other logistics are on order. The Fire Department is arranged to fill the barrel counterweights, food services are planned, etc. In case you do not remember, Field day will take place June 24th. through 26th. Mark your calendars to participate, to help set up, or just come out to see PARC's FD operation. As in the past, the Club will begin set-up of the FD site on Friday, June 24th. Field Day radio operations will start at 11:00 AM on Saturday morning the 25th., and will end at 11:00 AM on Sunday 26th.

FD site will be serving the great tri-tip BBQ for lunch on Saturday, and having excellent breakfast on Sunday. Everyone is invited to attend, and hopefully participate and operate during the FD period. You do not have to operate a station to enjoy the BBQ. Just come out and support the event. In preparation for FD there will be several work parties to prepare the FD equipment.

The first work party was held March 20th at NN3V QTH, and saw successful completion of all technical tasks!



Scout Fair Report

16 April 2016
by Michelle
W5NYV

Thanks to Kevin KK6FRK's apt and able coordination, I and others were able to successfully volunteer at the Radio booth in the Merit Badge Midway at today's Boy Scout Fair at Qualcomm Stadium. Our purpose was to provide at least two requirements for the Radio merit badge.

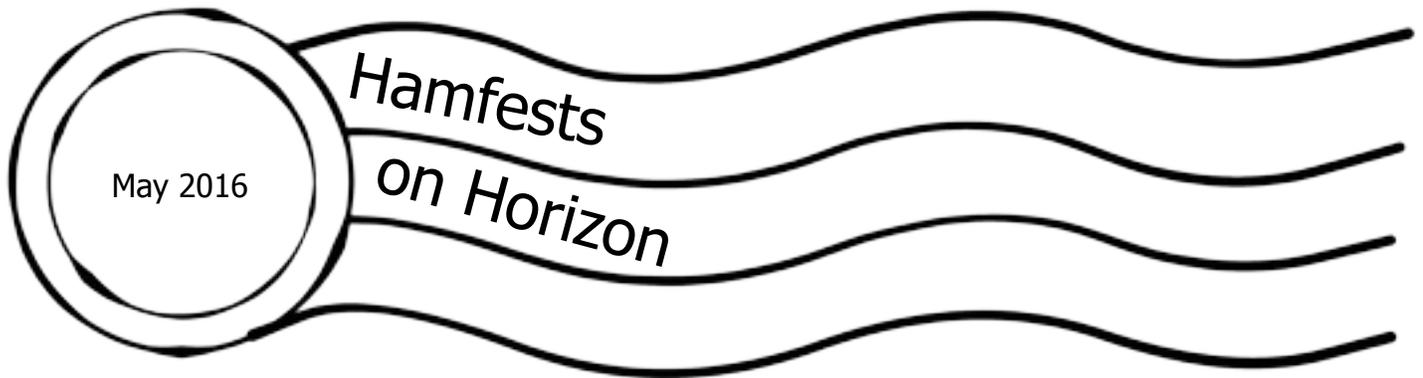
This event was highly successful and very enjoyable. The weather was gorgeous, the scouts were enthusiastic, and the fellow volunteers were gracious, kind, and fun to be around.

We minted at least two new Radio merit badges (fully completed at our booth!) and we enabled a lot of partial requirements on a lot of blue cards. Scouts that got a partial badge will have an opportunity to complete their badge at an upcoming event.

Thank you to Kevin and the other volunteers for making this such a successful event!

I met several sets of scouts and parents that had recently found out about PARC, heard about PARC at the fair, and had checked in on the Boy Scout Net recently. This was an excellent day of support and service and I was very proud to be part of it.





The time is near for you to be thinking about going to a hamfest. And there are some on the horizon that are really very good.

The **Dayton Hamvention**. Start planning now! If you are a ham and have not been to Dayton at least once in a lifetime, then you are not yet "a real ham! Just kidding of course, but there is no question that Dayton is the largest amateur radio event in the world. Getting to and from Dayton is relatively inexpensive as Southwest and other bargain airlines offer excellent fares. And hotel accommodations in the vicinity of Hara Arena are very reasonable. Ignore the rumors you've heard about there being no Hamvention because Hara arena is falling down. Not true. It is in need of extensive renovation, but repairs have begun. And if you are looking for something about ham radio and cannot find it at Dayton, then it has not been invented or created yet! Dayton takes place at Hara Arena, Dayton, Ohio, the weekend after Mother's Day: May 20 – 22, and you can read all about it at:

<http://hamvention.org/>



SAN DIEGO



HAMFEST 2016

DATE: OCTOBER 1, 2016



Time: 7AM—3PM

6AM “Old Radio Trade Show”

Old Radio Trade Show In parking lot !

Ham Fest Cost: \$5.00

Old Radio Trade Show “\$5.00 To Show”

Location:

Lakeside Rodeo Grounds

12584 Maplevue St. Lakeside CA.

Free Parking and Antenna Friendly.

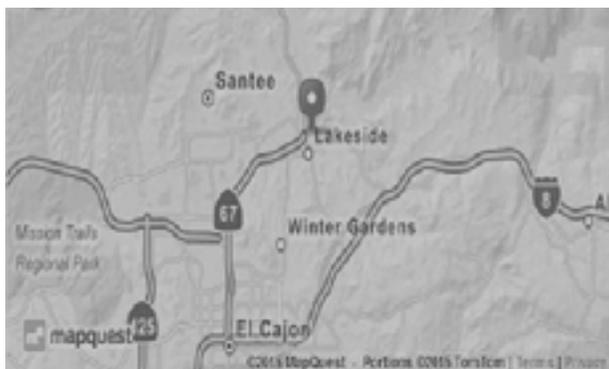
*You are cordially invited to attend the
2nd Annual San Diego Hamfest 2016. We*

plan on starting out the day with a Old

Radio Trade Show, Vendors,

Speaker Forums, and VE Testing.

So come on out and let's Ham it Up!



SPONSORED BY: LAKESIDE AMATEUR RADIO CLUB

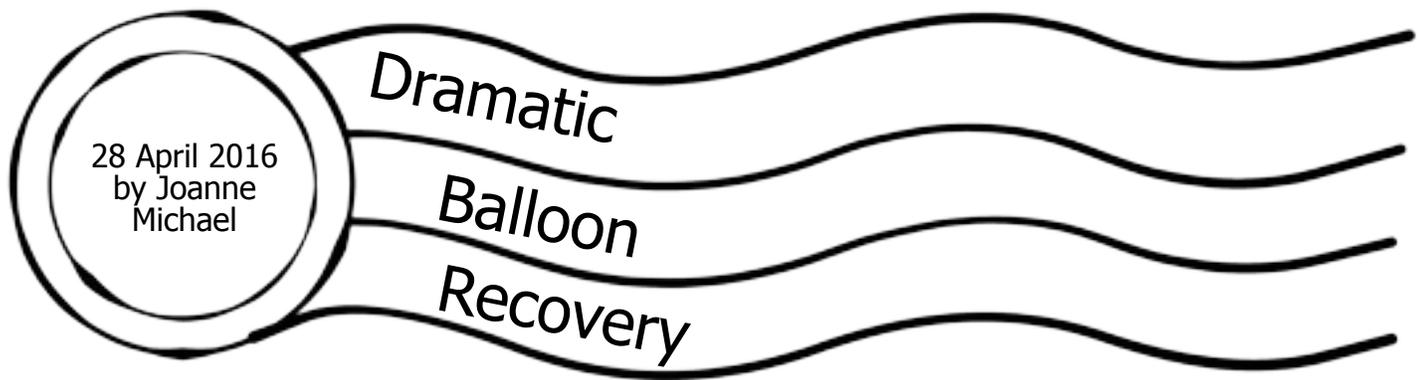
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Facebook!**



**For the most up to date information
please visit: www.SDhamfest.org**

QLS/SDHAMFEST2016-ver1.0



I am a hands-on elementary science teacher in Manhattan Beach, California- about 5 miles east of Los Angeles International airport. I teach the entire school- I talk to the classroom teachers about what they are covering in their classrooms about science, and then create and teach a hands-on component in my science lab. I am also quite the space geek- I attended Space Camp for Educators in 2010, Advanced Space Camp for Educators in 2012, and was part of a MicroGravity team in 2013. The ultimate in my space geekiness? I had my son in 2013, and we chose his middle name as Apollo, in honor of the space program. My students know if they want to get me off-topic, to ask me about how the "Mission to Mars" is going, or when the next launch to the ISS will be, and then sit back and listen.

I am also deeply passionate about education. I was a good student in school, but by far my favorite classes were when the teacher was clearly passionate about the subject matter. I am not a strong math student in the least, but I learned so much from one of my math teachers in high school, simply because his passion exuded from him, and his students had no chance but to absorb and thrive in that environment. I hope to be similar as an educator myself- that my students have incredible opportunities and learn about the many branches of science that they could be a part of, (if they choose to do so), because they see my passion for science.

3 years ago, I had a goal- I wanted to send a balloon into the edge of space. One of my close "space sisters", Kaci Heins (KF7RCV) had done it with her students for a number of years (mind you, they were middle school students, but that shouldn't matter!). Not knowing how to fund it, or really how to do it in the first place, I tried writing grants, getting sponsors, talking to aerospace companies- nothing. My school district started a grant to let teachers do "out-of-the-box" projects, and so I jumped on the opportunity. My project was funded, and the planning began. Kaci got me in touch with an incredible man and educator named Bruce Sidlinger (KG7IXX), who has a small business to help educators do high-altitude weather balloon launches (among other projects). We immediately started talking and planning, and I even drove out to Flagstaff from Los Angeles to watch Kaci's launch (which went 106,000 feet!), and to pick up the supplies from Bruce, as well as gain hands-on training that was invaluable.

As soon as I returned, it was really time to get to work. 34 students were selected out of the school, 2 from each classroom (kindergarten through 5th grade), based on their love of science, personal drive, and ability to work with others. The next challenge- where to launch! As one can understand, trying to launch anything in the air near LAX is not easy. "Class Bravo airspace" has the most stringent regulations out of all the classes of airspaces for travel. I couldn't launch off of my school field, as the school is located directly under the takeoff airspace of LAX. Most other airports around the area were not willing to accommodate my request. I technically did not have to use an airport, but I wanted to have the benefit of a control tower when dealing with this kind of situation. After a long search, Goodyear donated their mooring field for a launch site. Their airship, the "Spirit of Innovation", would be away that morning, and so we could use the area. It was only about 5 miles away from my school's location, so it wouldn't be difficult for families to get to, and would really show the area.

Bruce told me I would be required to get my HAM-technician license in order to use a radio that would transmit my signal up as high as we wanted the balloon to reach. I put it off, but finally sat down, studied intently for a week, and took the test hosted by the Associated Radio Amateurs of

Long Beach (W6RO/KE6LB), and passed! Hooray!

All too soon it was a week and a half before the launch- time to order my APRS radio, have my call sign programmed into it, and get the payload ready to fly. Only one problem- the Greater LA VRC was having a technological problem, and the FCC wasn't able to process any applications! We waited as long as we possibly could, but it became crunch time- I HAD to get my radio ordered and delivered to me! In a panic, I found the South Bay Amateur Radio Club (W6SBA) online (which is where my school is located, and is the closest amateur radio club to me), located their "contacts" page, and e-mailed Jerry Cook (KJ6JJ), the events chair. I explained the situation, and would anyone be interested in allowing me to "borrow" their call sign so I could launch my weather balloon. Jerry called me back about 15 minutes later, and after a brief conversation, forwarded my e-mail to Tom Carter (KI6RC). Tom called me a bit later in the day, and graciously allowed me to use his call sign. After literally crying tears of joy and relief, he told me he was extremely interested in high-altitude weather balloon launches, had launched some before, and would love to be a part of this adventure, if I would allow it. Without a doubt!!!

The week of the launch, everything was getting ready. I contacted the FAA, and filled out a TRACON (a form that gives the FAA an awareness that you want to do a "special event" in their airspace). They have the right to say no, and honestly, I was half-way expecting them to say no- we're wanting to launch a balloon almost 6 feet in diameter not even 10 miles from the 2nd busiest airport in the United States! If the payload is under 4 pounds, the FAA technically cannot do anything, but as I was teaching young children, I wanted to show them the "right way" to do everything- not show them that you can get away with things as long as you keep quiet. I received an e-mail response quickly, stating that they were pleased with my voluntary TRACON report, and would be happy to assist, as long as I do a NOTAM (Notice to Airmen) report 48 hours in advance, and contacted the control tower 15 minutes before my launch. I couldn't have thick cloud cover within 3 miles, no strong winds or gusts, and obviously the FAA/Air Traffic Control had the final say on if we could launch or not.

Kaci was going to drive out to assist me in the filling of the balloon (which is where the majority of the mistakes and failures in a high altitude balloon launch occur). She ended up getting seriously ill, and let me know she would not be able to attend. All of a sudden I began to panic again- after getting everything in place, I realized I had no clue how to actually fill this balloon! I remembered Tom (KI6RC) had mentioned he had filled and launched a balloon in the past, and called him, asking him if there was any way he would be willing to help me fill and launch my balloon. Remember- I had not even heard his name 4 days prior, and all of a sudden I'm cold-calling him to give up his Saturday and help an unknown teacher and her students launch a balloon into Class Bravo airspace. He immediately said he would, was happy to do it, and we set up a time the next day for me to come to his home to get some training. Jerry (KJ6JJ) was there as well, and was interested in being a part of the launch.

I was immediately taken aback by how friendly, warm, and inviting these gentlemen were. I brought along my payload and parachute, as well as an inflator gauge (although I had no clue how to use it- my mentor was going to teach me). They took the time to explain how it would work, gave me some tips on what to buy and how to set it up, even some websites that could help in weather prediction.

One other hitch- there are multiple weather balloon prediction websites, that after inserting coordinates for launch, mass of the payload, projected burst height, etc, will show you predicted location of burst and projected drop site. It only works about a week in advance, as the software uses the weather patterns as well. I had been watching it closely, putting dates in for months, to get a good idea of where it would launch. It was reliably turning north-east of the launch site, near Palmdale. We set up the payload for a desert landing, and I started contacting friends to help us for the "chase team" to recover the payload. However, when it was time for us to put in the actual dates and information for our launch, the payload was projected to go south-west... directly into the ocean, about 20 miles off-shore of La Jolla. That hadn't happened before!

The payload was waterproof (although we had cut holes in it, we fortunately had the forethought to purchase 2 payloads, and the other one was still brand-new), the cameras had waterproof coverings, but obviously we wouldn't be able to just drive out there and get it! I started contacting yacht clubs in San Diego, fishing vessels, whale-watching companies, even the Coast Guard- every company said they couldn't go out and help me recover it, but would send the word out to try to find someone

to help me. I had no choice- everything else was ready to go, and I just trusted that we figure out SOME way to retrieving it.

The morning of the launch, everything was as perfect as could be. The winds were absolutely calm, not a cloud in the sky, warm weather, and excitement filled the air. There were about 100 students, parents, community members, and friends, who gave up their Saturday morning to see the balloon off into near-space orbit. After a brief introduction and some safety instructions, we all lined the edge of the Goodyear blimp mooring pad as the balloon slowly inflated with helium.

My ground crew of students quickly got to work, putting to use what we had been learning, preparing for, and practicing for months. They had given up their time after school to come in, determine which experiments were going onboard, where the cameras should be placed, how the APRS and SPOT Trace (our backup GPS) would work, everything. My goal was that I would be in charge of the balloon, but the students would really be in charge of the payload (under my close supervision, of course). While we were filling the balloon, we heard a helicopter, and noticed it was the LA Sheriff. He did a few circles over the field, and sounded his alarm, as everyone waved and cheered. I got extremely nervous for a moment, until I realized they had a heads-up this was happening, and wanted to see it in action as well. They would also help any other small air traffic stay away from the balloon at the low altitudes. At precisely 9:09 AM on Saturday, April 16, the balloon was launched from the field, along with the realization that dreams can really come true. The kids and parents cheered, I cried once again, we took hundreds of pictures as the balloon became nothing more than a tiny white dot across the clear blue sky, and then disappeared from sight.

As the balloon soared to 97,405 feet above the Earth, our new chase team of 2 student families and I drove along the coast watching it on aprs.fi, and aiming towards La Jolla. My college roommate and her husband came down from Ventura for the launch as well- her husband Ryan (KM6BWK) had just received his technician and general's license, and was excited to track our balloon to give him experience for his next rocketry adventure. The prediction was accurate, splashing down about 2 kilometers from the predicted location. The entire time, I was continuing to call companies and people, trying desperately to get a hold of someone who would go out to retrieve our payload. When we reached Solana Beach (where it had landed, about 20 miles offshore), we realized that no one would be able to recover it, as it had been declared a small-craft advisory. We quickly ate lunch, hoping the winds would change, and they did- to a gale-force warning. Ryan drove to the top of a hill and used his yagi, but couldn't get any packets of information that would show the coordinates. The SPOT Trace GPS worked at first, but as they only show location when they feel the transmitter is moving (and even though we assumed it was floating at the time, and thus moving), it was moving too slowly for it's program to send out any coordinates. We had occasional pings of updated locations, but after about 2 hours, had no new coordinates. I continued scouring the internet, calling any company I could think of, to see if there was any chance someone would help us. We were willing to rent a charter to go out there, but as it was so far out in deep ocean water, most people didn't even consider giving us a chance- I even had a number of companies hang up on me! The APRS hadn't sent out any new coordinates for hours, despite Ryan and others trying as many search methods as they could think of using.

Eventually, a boat captain named Russell Moore, owner of a small company called Xplore Offshore answered, and was up for the challenge. He warned me he wouldn't be available until the morning, but as he needed to have one of his boats out in the ocean for a few hours to do some sea trials, he was happy to help- it would give them something to go for! The distance off-shore didn't bother him in the least- he did a lot of whale and dolphin watching trips, and his boat was ready to take in the large waves. The most amazing part? If I gave him the coordinates, he would scour the ocean, and if he couldn't find it, he wouldn't charge me anything, as he had to be out there anyways! If he did find it, we would figure out a way of getting it back to me. We had set up the SPOT Trace GPS to "ping" once a day, so we had coordinates of where it was (and knew if it pinged, then it must not have sank), but as I inadvertently set the time for 9:41 PM (based on when I originally turned on the GPS the night before), the coordinates would be many hours old before anyone would go out to try to retrieve it.

Bright and early the next morning, Russell crossed back and forth across the ocean, spending 4 hours out, armed only with coordinates that signaled where the payload was almost 12 hours before. He was not successful, and came back to shore, where he called me and told me he wanted to go out

the next day if I got any more leads on fresh coordinates! He declared he was now as invested as I was about finding this payload!

The next day he went out again- this time with a second boat and updated coordinates. As they were out, a large wave pushed the payload out at 10:30 AM, triggering the GPS on board, and giving me brand new coordinates that were different than the ones they had been predicting- perfect for Russell to capture it. Unfortunately, Russell was too far offshore to be able to receive them! I called and called, ignoring my class for a moment (in reality, they were hanging onto my every word on the phone and immediately stopped talking as soon as they saw me put my phone up to my ear- they knew what was going on, and were so excited to be on the inside track!). Phone calls and text messages went unanswered, since he was not getting any cell phone reception. I knew that once he came back in, he wouldn't want to go out again- I know how difficult it is to run a small business, how expensive marine fuel is right now, that he had to have a crew on board (which he had to pay, obviously), and he can't just spend all day driving 20 miles offshore for a teacher he's never met- he has a business to run!

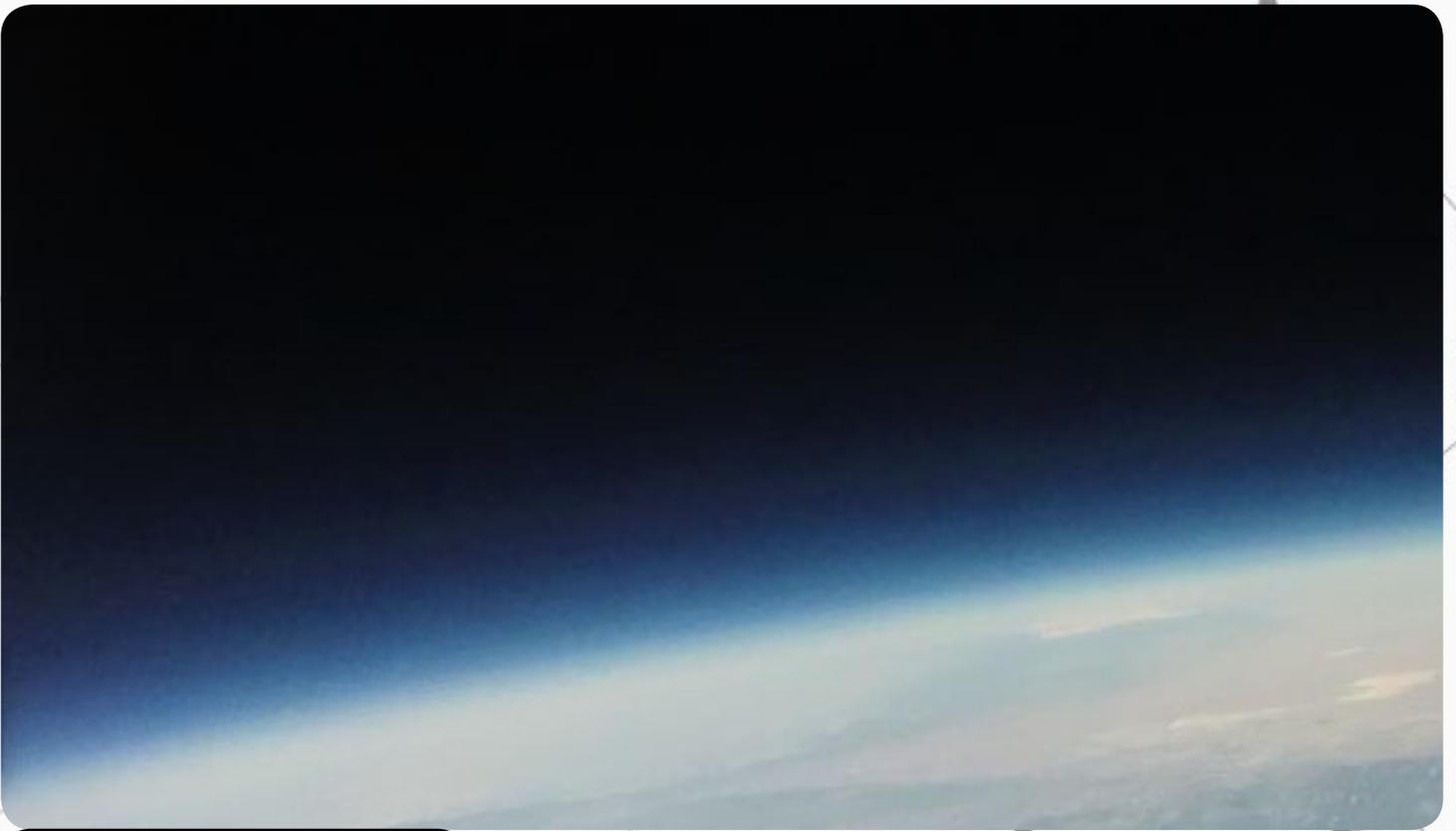
I dismiss my class, with a promise that I will keep them up to date if there are any new happenings. All of a sudden, my phone rings. It is Russell, who just received the coordinates, and decided to make one last run out there. My heart lifted, but was still reserved- who knows if they will find a small floating box of styrofoam, encased in orange, floating out in the middle of the wide ocean. I watched my SPOT Trace website intently on the computer, between bouts of pacing the classroom and the school campus. I knew that the GPS would send out a "ping" if it moved enough for the satellites to pick up, but who knows if it would go again, or if that was just a fluke signal, and those were the coordinates from days ago- they were totally different than the projected coordinates, based off of calculations we had made over the last few days' worth of coordinates.

All of a sudden my GPS "pinged", letting me know there were new coordinates. 3 minutes later, a new location! Another 3 minutes- another location! There was only one way it could be transmitting that quickly- the payload must be on a boat! I went screaming from my classroom down the hallway to my principal, where I received a picture on her phone- the payload, balloon, and parachute, bobbing calmly in the ocean. I honestly could not believe it- I was shaking so hard that I could barely show my phone to her! After another moment of glee (and permission from my caring and understanding principal, as well as a colleague who graciously agreed to cover my last class), I got in her car, and safely but excitedly drove to La Jolla, where I met Russell at his home. In the driveway, Russell had laid out my payload, parachute, and balloon, where I truly saw my dreams come alive.

Russell and I talked for awhile, and I learned how much of an expedition he had traveled to recover my payload. He went a total of 140 nautical miles, and had used almost 40 gallons of fuel on one boat on Monday alone- I don't want to know how many gallons of fuel he used over both days, and all the boats he used. It was just shocking to me that he donated his time, the fuel, his employees, his boat- all because he wanted to help out an elementary teacher he had never met, who had launched a balloon into the air.

Before this epic experience, I had taught my students that there are good people in this world- people that will help when you are in trouble, people who will give you advice, aid, comfort- all you have to do is ask. I have said this for years, but it took this adventure to truly understand that. If it wasn't for Goodyear, for Bruce (KG7IXX) and Kaci (KF7RCV), for Tom (KI6RC) and Jerry (KJ6JJ) (and other members of W6SBA), without Russell and his entire team at Xplore Offshore, I would have never been able to successfully launch and recover the balloon. This experience has truly changed my mindset, my focus, and my future. I am in the process of joining W6SBA, and can't wait to help the next group of HAM radio enthusiasts discover and attain their dreams.

Mrs. Joanne Michael
Science Specialist - Meadows Elementary
CSTA Upper Elementary Director



90K feet- Southern California



Gemini

Cancer



Catalina and edge of South Bay-
maybe 60K ft.

Cassiopeia

Libra



LA- South Bay- 40k ft or so

Sagittarius

Aquarius

Minor

Gemini

Cancer



LA-South Bay 2k ft

Cassiopeia

Libra



burst at 97,405 feet, Channel Islands in UPPER left, balloon in lower right.

Sagittarius

Minor

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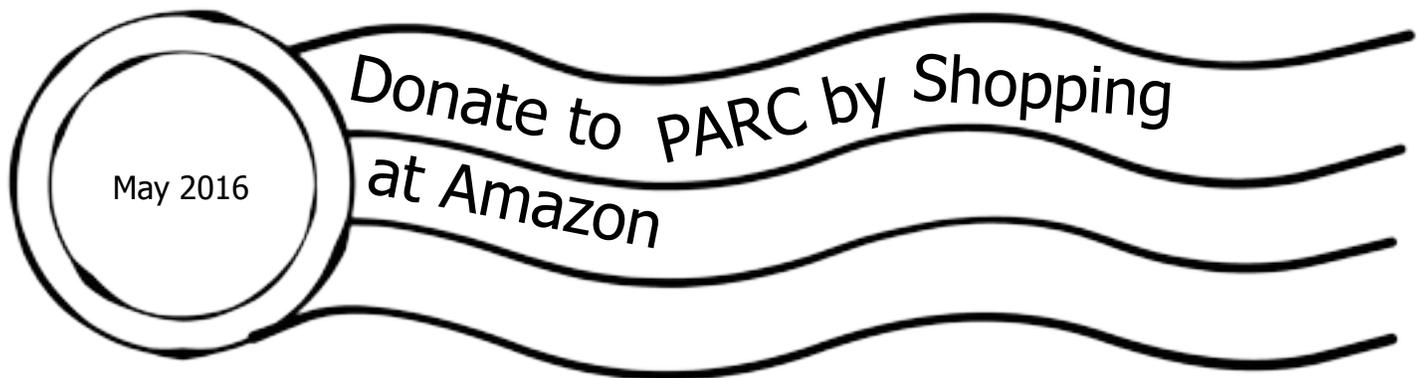
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There is good news about our club's non-profit status. As mentioned in December, PARC is now a tax exempt non-profit public corporation. If you choose to donate money or equipment to PARC, and if you itemize deductions, you can take a tax exemption for the value of the donation.

BUT There is even an easy way to donate to PARC! Do you shop online at Amazon?

PARC is now registered with smile.Amazon.com as a not-for-profit public corporation. If you so choose, any purchase you make on Amazon can be identified as a purchase for which you desire that Amazon donate funds to PARC!

Here is how it works.

If you wish to designate that some funds of your Amazon purchases be donated to PARC, go to www.smile.amazon.com and log on to make your regular purchases just as you always do. After logging in, you proceed to order your purchase as usual, and in the checkout procedure you are offered an opportunity to designate a portion of the purchase to be distributed by Amazon to any of thousands of charities. There we ask that you select "Palomar Amateur Radio Club" as the non-profit to which the funds will be donated by Amazon.

This will have absolutely NO EFFECT on the regular purchase price of your item.

What happens is that without any further action on your part, Amazon will forward to PARC's bank account 0.5% of the purchase price of what you bought.

You can learn all about this further by visiting the following link:
<https://smile.amazon.com/ch/95-3737299>

Amazon is aware of one problem with this initiative. **The Amazon smartphone shopping app DOES NOT work for charity designations. You must use the web browser.**

Your PARC Board of Directors hopes you will consider donating to PARC as you shop on Amazon. The Board of Directors is evaluating a series of projects to update the Club's infrastructure, to bring remote capability to PARC members, to upgrade our FD equipment, and to update the technologies we have available throughout our repeaters. Some of these projects are the result of your response to questionnaires, or suggestions you forwarded to the board for consideration. All these potential projects will be evaluated and announced to you so you can give us feedback about the project's desirability. To carry the projects to completion will require that club member volunteers get hands-on experience in the project. This too will be an opportunity to follow the requests expressed by members, and also an opportunity to elmer recent licensees in all aspects of ham radio.

You asked that the Club be revitalized in this manner, and here are the beginnings of the effort. So please remember, when you shop on Amazon, donate to your club! But they will all involve material purchases for which the Club will be using funds that are donated for the project accomplishment.

We hope you will be generous in donating to PARC through Amazon purchases since the donation has zero impact on what you buy.



Want to help PARC earn more awards?

Contact board@palomararc.org about using the club call sign in upcoming contests or operations!

We aren't that far from getting several more shiny stickers!

At right is the overall picture of our club call sign's Logbook of the World WAS record.

Notice that 20m Phone and 20m CW are pretty close to having all 50 states.

Which states are missing? See the image at the bottom of this page. We need Hawaii for 20m Phone and Nevada for 20m CW.

Think you can bag these states to give us two more awards?

The cost of the award will be covered by a donor. Want to help?

- 1) arrange for permission to use W6NWX by writing the board about your plans.
- 2) submit a log of the contacts to the board. Uploading to LoTW and application for awards will then occur.
- 3) get accolades from the club!

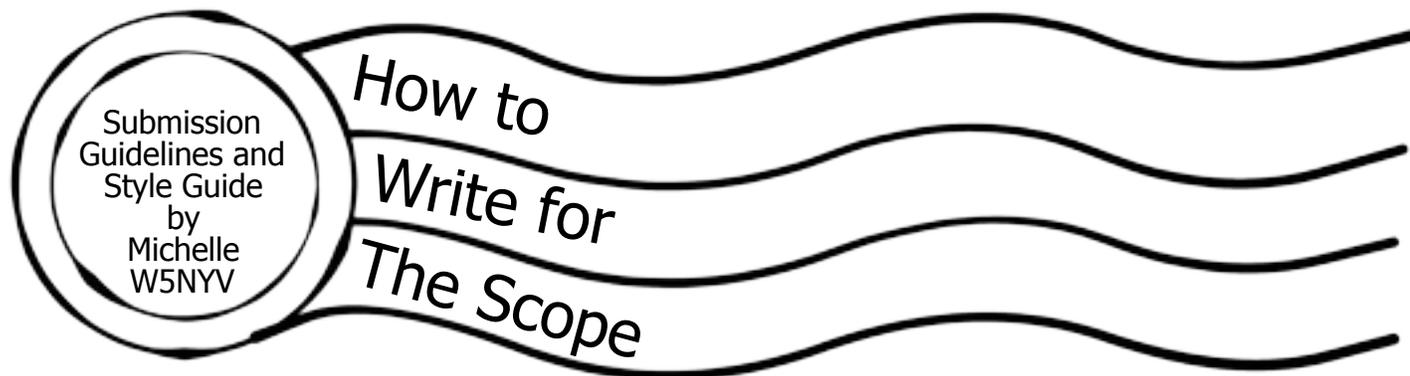
Your Logbook WAS Account (W6NWX WAS)

Account Status

WAS Award	New LoTW QSLs	LoTW QSLs in Process	WAS Credits Awarded	Total
Mixed *	0	0	50	50
80M	22	0	0	22
40M	39	0	0	39
20M *	0	0	50	50
15M	40	0	0	40
10M	6	0	0	6
CW *	0	0	50	50
Phone *	0	0	50	50
80M Phone	15	0	0	15
80M CW	13	0	0	13
40M Phone	19	0	0	19
40M CW	38	0	0	38
20M Phone	49	0	0	49
20M CW	49	0	0	49
15M Phone	23	0	0	23
15M CW	37	0	0	37
10M Phone	5	0	0	5
10M CW	1	0	0	1
Triple Play	100	0	0	100
5-Band	157	0	0	157

* = Award has been issued

20M Phone	49	<input type="checkbox"/>	The 20M endorsement sticker to be affixed to your Phone WAS certificate. Missing: HI
20M CW	49	<input type="checkbox"/>	The 20M endorsement sticker to be affixed to your CW WAS certificate. Missing: NV



Submission Guidelines

Article submissions in most modern file formats are accepted. Plain text in the body of an email, with attached full resolution photographs, is most preferred. Dropbox and several other file transfer services are supported.

Sending a fully-formatted PDF, so that the author can control formatting and exact wording, is also accepted. We use Tahoma font for body text, but will accept PDFs with other fonts. If any editing is necessary, then it will be negotiated with the author, and will then be the responsibility of the author.

For 2016, the Scope theme is postal marks and radio-related stamps. Postal theme artwork is welcome! Scans of amateur radio stamps, stories about stamps in general, interesting or quirky postal marks, fun things to do with the mail, puzzles about stamps, interesting stamp-related narratives, stories about current mail technology, QSL cards, QSL bureaus, and QSL collections are all very highly desired throughout 2016.

We want to publish articles about amateur radio and amateur radio related events and interests. Amateur radio covers a very broad swath of subjects. Contesting, technical experiments, narratives about the hobby, stories about how you became a ham, suggestions for an interview, ideas for more puzzles and games, experiences in community service, emergency communications, tours and travelogues of places of interest to amateur radio operators, mobile installation articles, ham shack articles, good operational practices, ideas for what PARC should be doing in 2016, and many other subjects are what we want to print in the Scope every month.

Articles that misrepresent a person, subject, or event will not be printed. Articles that are attack pieces, demean groups or individuals, or ridicule others will not be printed. The editorial staff

of the Scope, in coordination with the Palomar Amateur Radio Club Board of Directors, has the final say on what is published in the club newsletter. Being a member of the club does not guarantee that a submitted article will be published. No payment is given in exchange for any article. Copyright remains entirely with the original author.

Style Guide

Time: Use 24-hour time in the following format.

"We started the event at 9:00 and began tear down at 16:00."

Name and Call Sign: Name is followed by call sign with no commas.

"Michelle Thompson W5NYV began writing the article."

After the first name and call sign is listed in an article, the style is to shorten it to first name and call sign with no commas.

"Michelle W5NYV was writing all day."

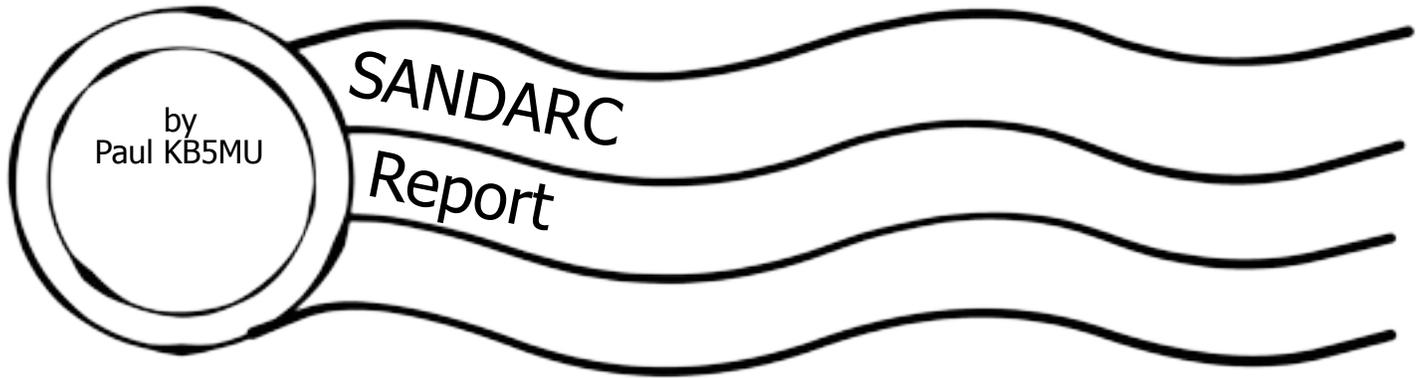
Do not use ellipses unless you know exactly how to use ellipses.

Ellipses... are not... the same thing... as a comma... or a pause...

Capitalization should be used for proper nouns. Proper nouns are the names used for an individual person, place, or organization. They are spelled with initial capital letters. For example, Michelle, New Mexico, and Boston Red Sox.

"And... that's it! That's All there is To It!"

What's the next step? Write an article, or propose one. If you need help, just ask! Mail to: scope@palomararc.org



April SANDARC Meeting Report

The San Diego Amateur Radio Council, or SANDARC, is the club of clubs for amateur radio in San Diego County. Delegates from each club, including PARC, meet quarterly to coordinate multi-club activities, especially the Volunteer Exam program for licensing and the ARRL Southwestern Division convention when it rotates to San Diego every few years. PARC's delegates to SANDARC are currently John Walker AC7GK and me, Paul Williamson KB5MU, with Michelle Thompson W5NYV as an alternate. Besides the delegate meetings, SANDARC also has an Executive Board, consisting of SANDARC's four officers and two club delegates. Here's what happened at the delegate meeting on April 28.

April's quarterly meeting is designated the annual meeting of the corporation, so the annual budget was presented for debate and approval. Actually it had been emailed out in advance, and there was little controversy, so there was no debate and the budget (see page 37) was quickly approved by a show of hands. It's similar to last year's budget, except that two expense items were reduced to match actual expenditures. The Treasurer's bond amount was reduced to match the current bank account balance, and the line item for accounting costs (which mainly pays for audits) was reduced to match the actual cost of the last audit.

At the previous meeting, as reported in the February Scope, Greg Smith N6NYX, the chairman of SANDARC-VEC (the volunteer exam coordinator sponsored by SANDARC) had proposed a budget that involved raising the exam fee from \$5 to \$10 to cover theoretical transportation expenses that were not actually being paid by the VEC. This budget was approved 13-4 by the delegates at that meeting, but questions were raised about its propriety. Between delegate meetings, the SANDARC Board reconsidered the issues. The current year's actual expenditures were just \$301, and the VEC account balance stands at about \$7000, so the VEC could fund many years of operation with no income at all. The President said that it had not been able to get N6NYX to attend Board meetings held just to discuss VEC issues, and he was not present at this meeting. The Board's ruling is that instead of increasing the exam fee, the exam fee shall be reduced to ZERO, effective immediately. This is in accord with SANDARC's mission to promote amateur radio, and eliminates any risk of trouble due to a questionable expense reimbursement policy. One delegate stated that a change in exam fee requires a vote of the delegates, but the President didn't agree, saying that the bylaws authorize the Board to "conduct, manage, and control the affairs and business of the Corporation". No vote was taken.

SANDARC keeps a list of the officers of all member clubs, as well as the designated delegates to SANDARC from each club. The President urged each club to send updates to the board when there's a change.

At the previous meeting, a delegate had asked if a new audit was required, since SANDARC has a new Treasurer. The President answered at the time that an audit was not needed because one had just been done. At this meeting, the President reported that the previous audit was actually a year before, and so a new audit was in fact needed. The audit has already been done, and at a reduced cost of \$250.

The chairman of the web site advisory committee asked that any errors found on the web site be reported to wac@sandarc.org.

The chairman of the bylaws committee presented a proposed amendment (shown on the next page) to bring the election provisions of the bylaws in line with the new quarterly meeting schedule. This amendment will be voted on at the July meeting of the delegates. Each club gets one vote, and a two-thirds majority is required to pass the amendment.

A feasibility study for the upcoming convention is under way, including a survey sent to member clubs in January. The committee chairman was not prepared to present results at the meeting, but will email out a summary soon.

The new Section Manager for the San Diego Section of ARRL was introduced: Dave Kaltenborn N8KBC. He gave a quick rundown of upcoming events: Operating Day at Fry's the following Saturday, an ARES hospital drill, the swap meet at HRO on the same day as the swap meets at Santee and Chula Vista, and the Dayton Hamvention.

The Lakeside Amateur Radio Club delegate passed out a flyer (elsewhere in this issue) for the San Diego Hamfest 2016, to be held at the Lakeside Rodeo Grounds on October 1. This is the second annual hamfest.

There was no other new business, so the meeting was wrapped up in record time after just 28 minutes.



The San Diego County Amateur Radio Council (SANDARC) was formed to encourage the interest in Amateur Radio as well as advance the art of communication by radio (SANDARC Articles of Incorporation). SANDARC implemented a Volunteer Exam program to assist with the advancement of amateur Radio in our community.

The SANDARC Board and SANDARC VEC (Volunteer Exam Coordinator) is responsible for establishing a realistic and fiscally responsible annual budget.

Based on the Mission of the Corporation and the comprehensive analysis of our current finances the SANDARC Board has unanimously decided to immediately suspend all examination fees related to our VEC testing program. All tests including first time, retesting, and upgrade examinations will be provided to the community at no cost.

The SANDARC Board recognizes and appreciates the efforts of everyone associated with the Volunteer Examination Program.

Joe Acevedo, N6SIX
Chairman
SANDARC, Inc
www.sandarc.org

Article VIII

Elections

Section 1. Election of Officers

Election of officers shall be held at the **April** Annual Meeting of the **delegates Corporation, in an election year**. Balloting will be by written secret ballot and shall require a majority vote of the persons present and voting to elect. ~~All nominees must have expressed, either in person or in writing, a willingness to serve in the position for which nominated if elected.~~

Section 2. Nominations

Nomination of candidates for officers of the Corporation shall be made by the three (3) members Nominating Committee appointed by the Chairman at the **February** regular meeting **preceding the Annual Meeting of delegates the Corporation**. The **Nominating Committee** will present a slate of nominees at ~~the March regular~~ a **Special** meeting **one month prior to the Annual Meeting**. **That Special Meeting will be held for the sole purpose of completing the nominations process**. In addition to this slate, nominations may be made from the floor at the **March Special Meeting** by any person eligible to vote at the **April** Annual Meeting. The presiding officer shall make three distinct calls for nominations from the floor ~~and after for~~ each nomination ~~to be sure everyone has a fair chance~~. Nominations need no second. Nominations shall be closed at the conclusion of the final call for nominations at the **March Special Meeting**. The presiding officer will ~~so~~ announce **the results at the conclusion of the nominations process**. All nominees must have expressed, ~~either in person or in writing,~~ **either in writing to the Nominating Committee or in person at a Board meeting or the Special Meeting**, a willingness to serve in the position for which nominated, if elected. If the slate is incomplete, those that are nominated will be voted on **at the Annual Meeting, including any nominations from the floor**, and the unfilled slots will be filled as provided in Art. VI. Sec. 10.

PROPOSED SANDARC BUDGET FOR MAY 1, 2016 TO APRIL 30, 2017

Business Registration Fees	\$ 40.00
Liability Insurance	\$350.00
Post Office Box Rent	\$100.00
Treasurer Bonding	\$250.00
Web Hosting & Domain Registration	\$150.00
Facilities & Equipment	\$250.00
Accounting (including audit)	\$300.00
Miscellaneous Expenses	\$400.00
<hr/>	
Total Budget	\$1,840.00

Notes:

Treasurer Bonding reduced by \$250, due to decreased liability.

Estimated accounting cost reduced by \$100. Last audit was only \$250.

Total reduction to proposed budget over the current budget is \$550.

SCOPE
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PERIODICALS

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You can join or renew your membership, find a repeater listing, find contact information for the board all on the club's web site <http://www.palomararc.org>

Editor: Michelle Thompson W5NYV

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

Featured Program:

At 7:30pm on 4 May 2016, Palomar Amateur Radio Club will have a program about APRS given by Eric J. Goforth N6GOF.

Come at 7pm to socialize. We look forward to seeing you at the Carlsbad Safety Center, 2560 Orion Way, Carlsbad, CA.

Sign up for the PARC Email Lists:

<http://www.palomararc.org/mailman/listinfo>