

SCOPE

Inside this issue:

It Appears by Spears	2
Board Members & Committee Chairs	3
Treasurers Report	4
Meeting Program & Upcoming Events	5
Scholarship Committee Report	5
Repeater Status	6
Repeater Chart	7
ATV Status	8
Membership	9
Packet Repeater Replacement	10
EARS Auction	12
International DX Convention	14
T-Hunt	15
Back Page Fun	16



Someone Suggested that Bunny Ears would Improve his reception!

It Appears By Spears

It's April the month of Easter and Taxes!

In this issue on Page 10 we have another article by John about the replacement of the packet repeater.

There are a lot of activities coming up in the next couple of months.

For all you DXers the International DX Convention is in Visalia this month. There is more information on page 14.. EARS is having their annual auction on April 6th, more information is on page 12. And finally there will be T-Hunting in May,. See the flyer on Page 15 for the full story.

As always I am looking for articles, photos etc. for the Scope.

Will Rogers once said "The income tax has made more liars out of the American people than golf has"

Keith Spears, KM6CXW



Board Members and Committee Chairs

Board of Directors

President	Joe Peterson, K6JPE	(619) 630-8283
Vice President	Charlie Ristorcelli, NN3V	(619) 368-7617
Treasurer	Tom Ellett, W0NI	(858) 546-1148
Secretary	Tony Zuppero, K5TZ	
Director 1	John Kuivinen, WB6IQS	(760) 727-3876
Director 2	Greg Gibbs, K16RXX	(760) 583-9668
Membership Chair	Glen Christensen, AI6RR	(858) 735-1144
Repeater Technical Chair	Mark Raptis, KF6WTN	
Scope Editor	Keith Spears, KM6CXW	(858) 472-8442 Text Welcome

Non Voting Members

Repeater Site Chair	Mark Raptis, KF6WTN	(Acting)
Webmaster	Guido Sansonia, NO6I	(760)-224-6824
Trustee	Michelle Thompson, W5NYV	mountain.michelle@gmail.com

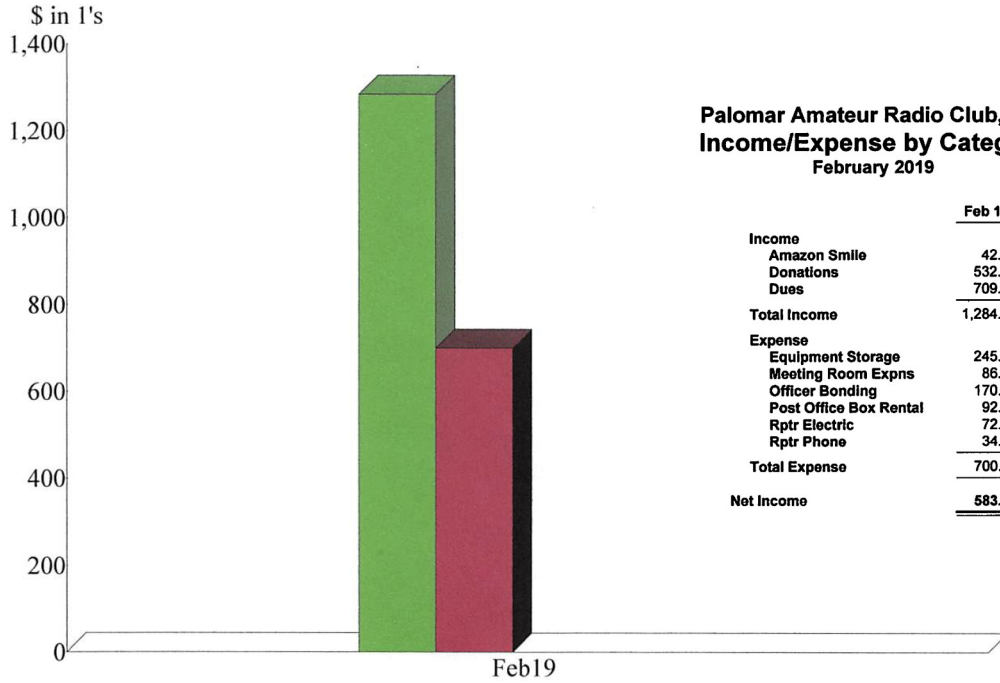
Committee Chairs

Boy Scouts	Michael Palugod	mpalugod@yahoo.com
Digital ATV	Michelle Thompson, W5NYV	mountain.michelle@gmail.com
Echo Link	Bernie Lafreniere N6FN	N6FN@niftyaccessories.com
HF Remote	HF Remote SIG	hfremote@palomararc.org
Mesh Networking	Michelle Thompson, W5NYV	mountain.michelle@gmail.com
Operating Day		

SD Microwave Group Liaison Kerry Banke N6IZW kbanke@sbcglobal.net

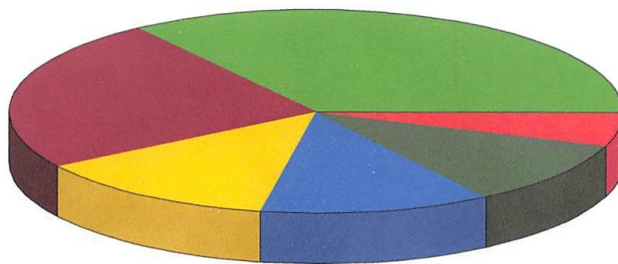
Palomar Amateur Radio Club, Inc.
February 2019

Income
Expense



Expense Summary
February 2019

Equipment Storage	\$245.00
Officer Bonding	170.10
Post Office Box Rental	92.00
Meeting Room Expns	86.00
Rptr Electric	72.89
Rptr Phone	34.44
Total	\$700.43



By Account

April Program

The April meeting program will be a presentation by W8KFJ (Dave Kennett) on Software Designed Radio Technology. The history of SDR development, including a clear contrast of the stages of radio reception and transmission as it was performed in the "old" super het era, and how SDR revolutionizes the ability to communicate will be covered in detail.

This will not be an arm waving discussion. This will delve into the stages of communication processing in a friendly and understandable manner.

For Sale

HP 2764 power supply. Maximum 60VDC variable at 15 Amperes continuous, 900 Watt, Rack Mount Power Supply: Electronically regulated, current limited. Dual meters. With service manual. 120 VAC operation. \$75, Very Heavy, Works OK.

Heathkit bench style 300 Watt Regulated Power Supply: Model IP-2760, 10 - 16 VDC, 25 Amperes. Dual meters, "Battery Eliminator". \$50, works OK.

Prices negotiable. See WB6IQS@cox.net. 760-727-3876.

Scholarship Committee Report

Thanks to the incredible work by Gayle KG60, Michelle W5NYV, and Charlie NN3V we have funded a scholarship with ARRL Foundation under the Palomar Amateur Radio Club name! We will have further information on how your interested family and friends may apply, what the requirements are, and how the decision is made in the coming months. The first scholarship will be available for the 2018-2019 school year! We are still pushing for some additional funds to create a second scholarship, but that will be for the 2019-2020 school year. Keep an eye out for further information later in the year, and remember us when you're preparing your tax write-offs for 2019!

Upcoming Events

April 3	7:30	PARC Meeting	Pine Ave. Community Center
April 10	7:00	PARC Board Meeting	Poway Fire Station #3
April 12-14	All Day	International. DX Convention	Visalia, CA
May 1	7:30	PARC Meeting	Pine Ave. Community Center
May 1	7:00	PARC Board Meeting	Poway Fire Station #3

Repeater Status

This list includes W6NWX repeaters operated by PARC and other repeaters open to use by PARC members. All W6NWX repeaters are located on Palomar Mountain and are open to all amateurs.

Frequency	TX	Tone	Call sign	Remarks
52.680	-	107.2	W6NWX	Back on the air
146.730	-	107.2	W6NWX	System Fusion enabled. See Note 1
147.075	+	107.2	W6NWX	System Fusion enabled. See Note 1
147.130	+	107.2	W6NWX	System Fusion enabled. See Note 1
447.000	-	107.2	W6NWX	FM only for EchoLink Call Sign W6NWX
224.900	-	107.2	WD6HFR	Convair/220 ARC
224.380	-	107.2	KK6KD	HARS Hispanic Amateur Radio Society Open
224.940	-	107.2	KK6KD	HARS: Sharp Chula Vista Hospital, Open
145.260	-	107.2	KK6KD	HARS: San Diego Open
147.945	-	107.2	KK6KD	HARS: System Fusion Mt. Miguel Open
448.460	-	151.4	KK6KD	HARS: Mt. Miguel, San Diego Open
145.460	-	110.9	XE2DXA	HARS: Tijuana, Mexico Open
146.970	-	107.2	KA3AJM	Vista-Sponsored by MetroNET
146.175	+	107.2	N6FQ	Fallbrook ARC; linked to 445.600
445.600	-	107.2	N6FQ	Fallbrook ARC; linked to 146.175
145.050	s	N/A	W6NWX-1	Packet node; linked to metro 9600 net 1
146.700	-	N/A	W6NWX-3	Packet duplex repeater; Duplex 3

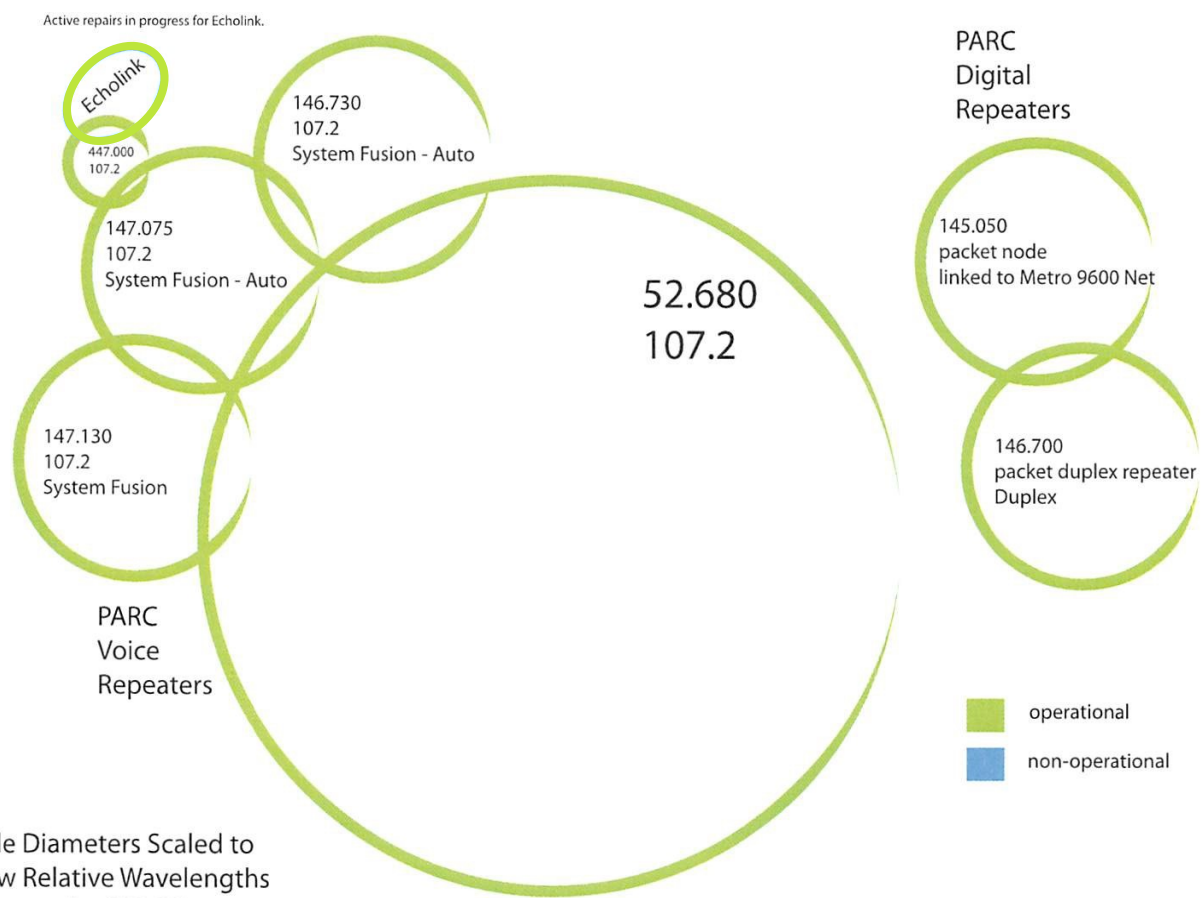
PARC operates an armature fast-scan television repeater. It's currently off the air. Currently there are not links to other ATV sites.

- ATV in: 915 MHz WBFM audio subcarrier 5.8 MHz
- ATV in 2441.5 MHz WBFM, audio subcarrier 6.0 MHz
- Intercom: 146.415 MHz NBFM simplex (tone 79.7). Currently not working.
- ATV out: 1241.25 MHz VSB, NTSC Standard

The PARC repeater site on Palomar Mountain is located at 5560 feet above mean sea level and 2132 above mean terrain. It covers most of San Diego County and beyond into Mexico and out to sea, and is shielded from the North.

Note 1: All Fusion enabled repeaters require a CTCSS tone of 107.2 Hz to access the repeater and also transmit a 107.2 Hz tone. Since the repeater output has a 107.2 tone you can enable CTCSS receive tone squelch on your transceiver which will eliminate interference from spurious noise and other repeaters. Control operators have the capability of setting the Fusion Repeaters to FM only operation. Consequently if you can't bring up the repeater in C4FM digital mode, try using normal FM mode. When in FM mode all Fusion repeaters have a 3 minute maximum transmit time, after which the repeater will cut off transmission until after the received signal drops. To prevent timing out the repeater after someone finishes talking, wait until you hear the courtesy beep which indicates that the 3 minute time has been reset. If a transmit timeout happens the repeater will provide a voice message indicating that the maximum transmit time has been exceeded.

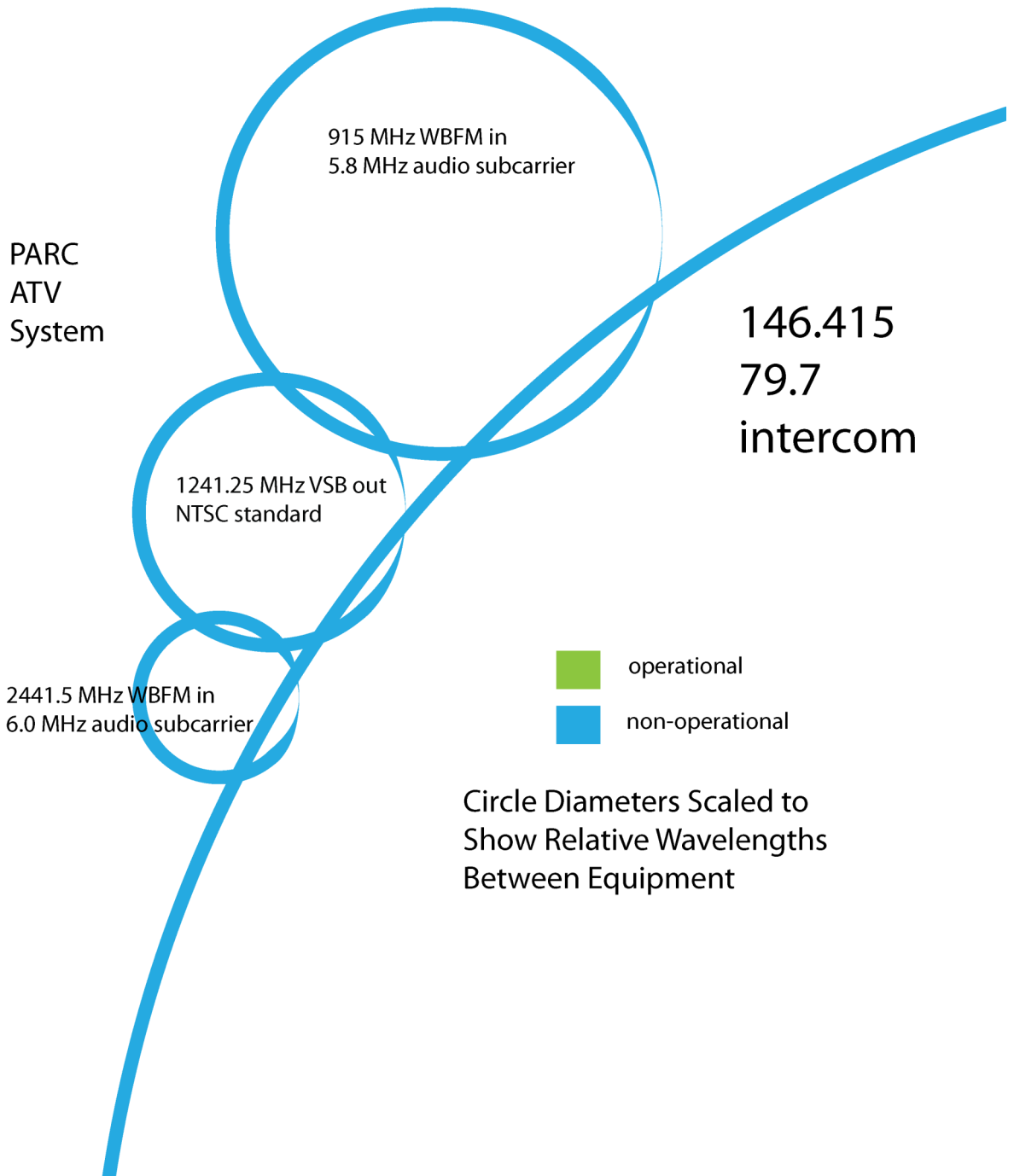
Reported Repeater Status



Circle Diameters Scaled to Show Relative Wavelengths Between the PARC Repeaters

Thanks to Michelle Thompson, W5NYV for the repeater status graphics.

Reported ATV Status



Membership Report

You can check the status of your membership 24/7 at Member List or 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 MembershipChair@palomararc.org.



Check the status of your membership 24/7 at [Member List](#). If you don't find your name and callsign on that page, then your dues have lapsed. If you have questions, send email to MembershipChair@palomararc.org.

Donate to PARC by Shopping at Amazon

As publicized earlier this year, PARC is now a not-for-profit charity, and funds donated to PARC are deductible for income tax purpose if you itemize. PARC also announced

that in cooperation with Amazon, it is now possible to shop on Amazon at NO cost increase, and have Amazon distribute a percentage donation to PARC.

This is done by shopping on www.smile.amazon.com. If you choose to avail yourself of this opportunity, when shopping on www.smile.amazon.com,



Polo Shirts

We're ordering Polo shirts! Some of you already have orders in with me from the last meeting, please be ready to pre-pay for them so we can get the order placed ASAP! We need

20 shirts to get the price I've been quoted. If we end up with 30+ then the price goes down and I'll have a little change for those who have pre-paid once your shirts come in! Base price: \$21.00 includes printing on the front, PARC logo on one

side and your name/callsign over the pocket. Add \$2.00 for 2XL, \$3.50 for 3XL, or \$5.00 for 4XL Add \$5.00 if you also want the logo printed large on the back.

73 de K6JPE



Replacement Simplex Packet Repeater

Background:

Glen AI6RR, Bernie N6FN and myself installed a replacement 145.050 MHz packet simplex repeater at the repeater site. After some initial problems with a bad antenna extension cable it now seems to be working well.

The original Micor radio required a cabinet about 3' tall X 12" deep and 21" wide. It is a two person operation to move it about. The new replacement repeater is only 10" tall and weigh much less.

These radios are physically much smaller than the old Micors and use modern SMT (Surface Mount Technology) rather than thru-hole components. They are easily mounted into 19" standard rack cabinets as they are complete dash mounted radios using a local microphone and 8 Ohm speaker. SMT capacitors are less susceptible to aging problems.

As the 145.050 packet radio is simplex (only receiving or transmitting at any given moment) it is much simpler to interface to an antenna and operates the MFJ 1270B TNC (Terminal Node Controller). The MFJ 1270B is a standard off-the-shelf item except for a Winlink replacement control program PROM (Programmable Read Only Memory).

SCOM 7330 Controller:

A DB-9 data connector sends audio and control signals to the SCOM 7330 controller. The SCOM 7330 controls the identifier PTT (transmitter's Push to Talk) keying, CW identification audio and remote control on/off functions. In a common SCOM 7330 audio repeater application the controller would route audio from several different sources, encode the PL signal and set the repeater's TX audio level. As the MFJ 1270B TNC is in control of most of these functions, the standard control SCOM 7330 program has been "dumbed down" and simplified. The system is a dual control with the MFJ 1270B TNC handling all of the normal packet data functions and the SCOM 7330 handling remote control and CW identification.

Identification is made only at the end of a packet transmission at the normal FCC repeater identification intervals. Remote control functions include remote on/off control, forced ID (for testing) and varying the TOT (time out timer) duration.

The installation went smoothly and the pre-made cables were the correct lengths.

Replacement Simplex Packet Repeater—Continued



Picture shows Bernie N6FN (back) and Glen AI6RR (front) with initial installation of the rack components and DC power wiring. The 19" equipment rack on the left contains two 48 V to 13.8 VDC switching power supplies, SCOM controller and packet simplex repeater equipment.

The top radio is the 146.700 / .100 duplex packet repeater. It will be finished next month after initial testing of the 145.050 MHz packet digi-peater has been completed. The 8" tall rack panel equipment will replace a 36" tall X 12" deep X 24" wide equipment rack (located behind Bernie on the right) that currently houses a Motorola Micor base station repeater.

John Kuivinen, Vista, CA
WB6IQS@COX.NET



Auction

What: EARS Ham-radio-related annual auction

Cost: Sellers \$2 for first tag, \$1 each additional tag, buyers free

When: Saturday April 6th, 2019. Doors open at 9AM, auction begins at 10:00AM

Where: Escondido First United Methodist Church social hall. 341 S. Kalmia St. Escondido, CA 92025 (4th & Kalmia)

More Info: <http://www.earsclub.org>

Payment: Cash, Check, Paypal.



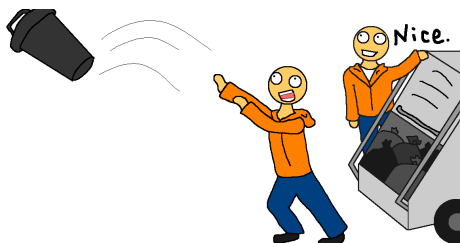


Getting a tax refund is exciting, until you realize it's your money you are getting back!

"The crime of taxation is not in the taking it, it's in the way that it's spent."
Will Rogers



"Worried about an IRS audit? Avoid what's called a red flag. That's something the IRS always looks for. For example, say you have some money left in your bank account after paying taxes. That's a red flag." – Jay Leno



Free Trash Cans!

The club has eight 32 Gallon plastic trash cans with lids that we are willing to give away to a new home.. If you would like one, please let Joe know.

IDXC

70th International DX Convention April 12-14, 2019 Visalia, California

The 70th International DX Convention sponsored by the Northern California DX Club will be held again at the beautiful Visalia Conference Center in downtown Visalia, California from April 12-14, 2019.

If you're a DXer or interested in any aspect of Ham radio, then IDXC is the place to be. Top DX operators (and contesters) from around the world will be there. You'll match those familiar callsigns with new faces, and shake hands with the person you have had a sched with for the past 10 years but never met.

Convention is a full 2.5 Days: Friday (April 12); Saturday (April 13); 1/2 day Sunday (April 14)

- Onsite Registration begins on Thursday afternoon, April 11, 2019 at 3:00 PM local time
- Full day of training on Friday, April 12: Contest Academy
- Full Seminar Track on Friday, April 12; Two Seminar Tracks on Saturday, April 13
- Contest Forum, DX Forum, YL Forum, QSL Card Checking
- 15-20 DX & Technical Seminars
- Large Exhibit Hall - where you can comfortably talk to the people who design and sell ham radio equipment
- Great Raffle Prizes
- Friday Evening Dinner Options: TopBand, IOTA, and Contesting
- Infor at <http://www.dxconvention.com/index.html>



INTERNATIONAL STYLE ON-FOOT T-HUNT

Saturday May 18th, 2019

Guajome Regional Park, Oceanside, CA 92057

Sponsored by the San Diego T-Hunt Group & CQ Magazine World Wide Fox Hunting Weekend

Starting times will be 10:30 AM to 1:30 PM at 5 minute intervals. If you start at 1:30 you will have until 3:00 to complete the course. **NO REGISTRATION FEES!** There will be 5 hidden T's using the MOE-MOI-MOS-MOH-MO5 format. You will be issued a "Punch card" and there will be orange & white flagging tape at each punch located close to the T's which will be concealed. Antennas will all be vertically polarized with approximately the same radiated power from each "T". For information on "International Style Transmitter Hunting" you may go to Joe Moell, k0ov's excellent website..... www.homingin.com/#toc . We will have limited equipment for loan for those that do not have small 2-M beams. Bring a connector to go from your HT antenna connector to a BNC cable (Chinese HT's not recommended). There will be experienced Hams present to demonstrate techniques for those that want to learn about "On-Foot" Amateur Radio Direction Finding (ADRF) and a "Practice T" to experiment with before you start the course. You do not need a Ham Radio License to participate! You will be issued a map of the area with major features delineated. A compass, clipboard and pencil may be handy to plot bearings with. Dress appropriately and plan on taking water with you while hunting. There are several restrooms in the Park.

A BBQ is planned for about 2:00 PM for those interested. We will have burgers & hot dogs, buns, condiments, potato salad, drinks, chips & salsa. BBQ donations can be made on site. If you are staying for BBQ you might want to bring a folding chair. For information contact :

Joe Coronas, N6SZO @ H-858.484.3582, C-858.603.5545, jcoronas@gmail.com OR... ..
Joe Loughlin, KE6PHB @ H-619.461.7845, C-619.403.3149, ke6phb@cox.net

Directions: From Interstate 5 in Oceanside take Hwy 76 east about 6 ½ miles to Guajome Lake Rd., turn right onto Guajome Lake Rd. and Park entrance will be first turn on your right. There is a \$3.00 day use parking charge. If you would like to walk into the Park you will have to pass the Park entrance and go about 300 yards further south for free street parking. We will be located by the restrooms on the right as you enter the Park. Look for signs/banner for T-Hunting. Coordinates are 33 14' 45.71" N, 117 16' 21.03" W.

COME OUT AND EXPERIENCE A DIFFERENT ASPECT OF HAM RADIO



SCOPE
PUBLISHED BY THE
PALOMAR AMATEUR RADIO
CLUB

EDITOR
KEITH SPEARS
KM6CXW

Editorial Policy

The Scope welcomes and encourages members to submit articles, photos, stories, equipment reviews and any other items of interest to ham radio.

The Palomar Amateur Radio Club reserves the right to edit all submissions for content and length.

Please submit documents in MS Word format and photos as JPEG or GIF. Flyers may be submitted in PDF.

All submissions need to be received by the 20th of the month.

Send submissions to:

scope@palomararc.org



Palomar Amateur Radio Club

The Back page is a place for humor. If you have a joke, cartoon or just a fun story about ham radio, please share it with me. Please remember this is a family newsletter:)

Great April fools Pranks in History

"One of the most famous April Fool's Day pranks of all time is **the BBC's famous "spaghetti harvest" segment**. On April 1, 1957, a news broadcaster told his British audience that Ticino, a Swiss town near the Italian border, had had "an exceptionally heavy spaghetti crop" that year. The camera cut to footage of people picking spaghetti off of trees and bushes, then sitting down at a table to eat some of their "real, home-grown spaghetti."

At the time, spaghetti wasn't necessarily a dish that British people would've known about. That doesn't mean that no one realized the segment was a prank—some viewers were upset the BBC had aired a fictional segment during a serious news program. But other viewers reportedly asked about how they could grow their own spaghetti at home.

Caltech has a long history of pranking other schools. One of **its most famous pranks** happened during the 1961 Rose Bowl football game in Pasadena, where Caltech is located. The game was between the University of Washington's Huskies and the University of Minnesota's Golden Gophers. During the game, Washington cheerleaders handed out colored cards to the Huskies' side and told them that if they held the cards up at halftime, the cards would spell "Huskies." But when halftime came and the fans held the cards up, they ended up spelling "Caltech." It was so weird and unexpected (Caltech wasn't even playing in the game!) that the band on the field stopped mid-song.

It later came out that fourteen Caltech students had orchestrated the prank by breaking into the cheerleaders' hotel rooms and switching the instruction sheets for the card stunt.