



SCOPE

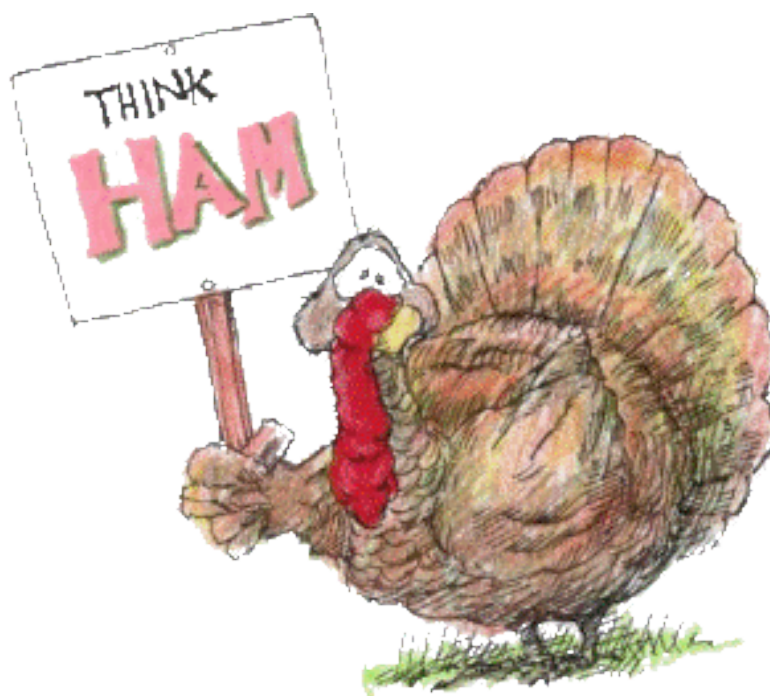
Palomar Amateur Radio Club

November 2017

Inside this issue:

Editorial	2
President's Corner	2
Board Members & Committee Chairs	3
Treasurers Report	4
Meeting Program & Upcoming Events	5
PARC Auction	6
Repeater Report	7
Repeater Status	8
ATV Status	9
Let's Go T-Hunting	10
By Laws Amendment	14
Membership Report	15
Jamboree on the Air-T Hunt	16
Maker Faire Report	18
Board Positions Available	20
Echo Link Change	21
Back Page Fun	22

HAPPY



THANKSGIVING

It Appears By Spears



October has been a very busy month for PARC. Our annual auction was huge success. Lots of money was raised and lots of stuff found new homes.

We participated in the Maker Faire at Balboa Park. Thanks to DEFCON .for sharing their booth. Thanks To Glen for helping me out.

We finished out the month by helping Kevin and the Boy Scouts with the 60th annual Jamboree on the air. There articles with pictures for all these events.

This months issue has a great article on T-Hunting. I had the opportunity to work with the San Diego T-Hunters at the

Jamboree on the Air. It was a very fun land learning experience.

Wishing all you veterans a happy Veterans Day and everyone a happy Thanksgiving.

73 de KM6CXW
Keith Spears
Editor

“We are going to have a vote of the membership to include the Webmaster as a standing committee member”



Presidents Corner

Greetings fellow HAMs! As we go into the year-end holiday season, I hope everyone is getting enough chances to operate.

The club will be having a work party the Saturday after the general meeting, a trip up to the site to make sure everything is in

order before snow starts falling. If you've never been to the site and want to get a look at how we've got everything set up, please contact Mark Raptis about coming along.

As a reminder, we will be voting on both the slate for next year's

board, as well as the bylaws amendment, at the December meeting, so be sure to get that on your calendar! As Thanks and 73 de K6JPE!



Board Members and Committee Chairs

Board of Directors

President	Joe Peterson, K6JPE	(619) 630-8283
Vice President	Michael Gottlieb, KB6D	(858) 212-4646 Text Welcome
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 Kuivinen, WB6IQS	(760) 727-3876
Membership Chair	Glen Christensen, AI6RR	(858) 735-1144
Repeater Technical Chair	Mark Raptis, KF6WTN	
Scope Editor	Keith Spears, KM6CXW	(858) 472-8442 Text Welcome

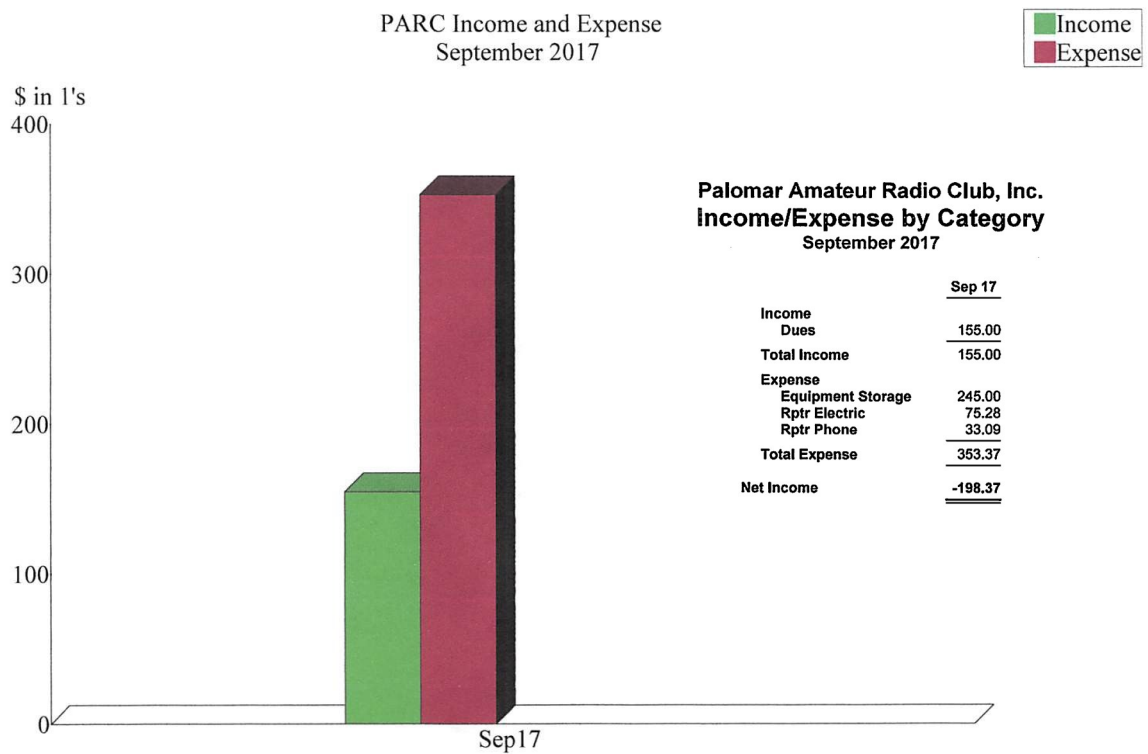
Not on Board

Repeater Site Chair	Mark Raptis, KF6WTN	(Acting)
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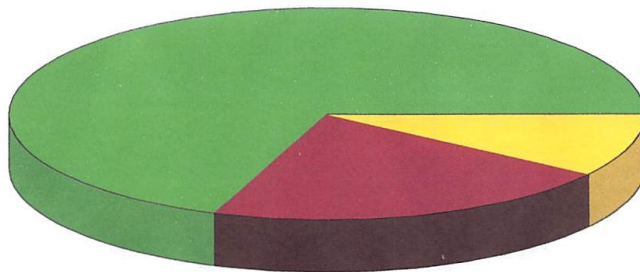
Committee Chairs

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	Tom Martin K6RCW	k6rcw@amsat.org
SANDARC Representative	John Walker AC7GK	ac7gkjohn@gmail.com
SANDARC Representative	Paul Williamson KB5MU	kb5mu@amsat.org
SD Microwave Group Liaison	Kerry Banke N6IZW	kbanke@sbcglobal.net

For Sale: Generac 5.5 KW continuous, 8.5 KW peak generator. With Briggs & Stratton 10 HP gasoline engine. 120 / 240 VAC output. Easy pull start. Model is Wheelhouse Genpower 305. With large wheels and removable gas tank. Enough power to run lights and a refrigerator at the same time. \$400 OBO. Contact WB6IQS@att.net, 760-727-3876, Vista

PARC Income and Expense
September 2017Expense Summary
September 2017

Equipment Storage	\$245.00
Rptr Electric	75.28
Rptr Phone	33.09
Total	\$353.37



By Account

November Program—Operating a Station Remotely is Easy

In 1965 Howard, KY6LA begin working on projects around the world as well as operating Ham Stations from more then 100 countries and collecting more than 45 foreign call signs and DXCC many times along the way.

It was HARD WORK. Equipment was heavy, parts were never available, coax was heavy or the wrong characteristics. Local authorities we re an expensive PIA and even he once was arrested for being a possible spy in Australia because of the presence of transmitters.

Once you got on the air.. It was a miracle—instant pileups even with less then 10W and crappy verticals. Great way to meet lost of locals and share many adult beverages

By 2000 the airlines had become the enemy. They enforced ridged expensive weight limits, they lost or broke equipment. Plus once you worked from over 100 countries, the fun of being on the end of a pileup every time was gone.

There had to be a better way.. Operating the base station in the USA remotely!

By 2017 Howard, KY6LA has now operated KY6LA in La Jolla remotely from 28 different countries, working 1,1000's of QSO'S.

This presentation will describe how it ahs become so EASY to operate a modern station remotely and will include a couple of live demonstrations of remove stations located in other countries

Don't miss this informative and interesting presentation.

Upcoming Events

Wednesday, November 1st	7:30	PARC Meeting	Carlsbad Safety Center
Wednesday, November 8th	7:00	PARC Board Meeting	Poway Fire Station #3
Wednesday, December 6th	7:30	PARC Meeting	Carlsbad Safety Center
Wednesday, December 13th	7:00	PARC Board Meeting	Poway Fire Station #3
Wednesday, January 3rd	7:30	PARC Meeting	Carlsbad Safety Center
Wednesday, January 10th	7:00	PARC Board Meeting	Poway Fire Station #3



Checking out the treasures

PARC AUCTION!



Joe adding up the take!



Auctioner Mark,

Repeater Status

This list includes W6NWG repeaters operated by PARC and other repeaters open to use by PARC members. All W6NWG repeaters are located on Palomar Mountain and are open to all amateurs.

Frequency	TX	Tone	Call sign	Remarks
52.680	-	107.2	W6NWG	Back on the air
146.730	-	107.2	W6NWG	System Fusion enabled. See Note 1
147.075	+	107.2	W6NWG	System Fusion enabled. See Note 1
147.130	+	107.2	W6NWG	System Fusion enabled. See Note 1
447.000	-	107.2	W6NWG	FM only for EchoLink Call Sign N6FN-R
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	W6NWG-1	Packet node; linked to metro 9600 net 1
146.700	-	N/A	W6NWG-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.

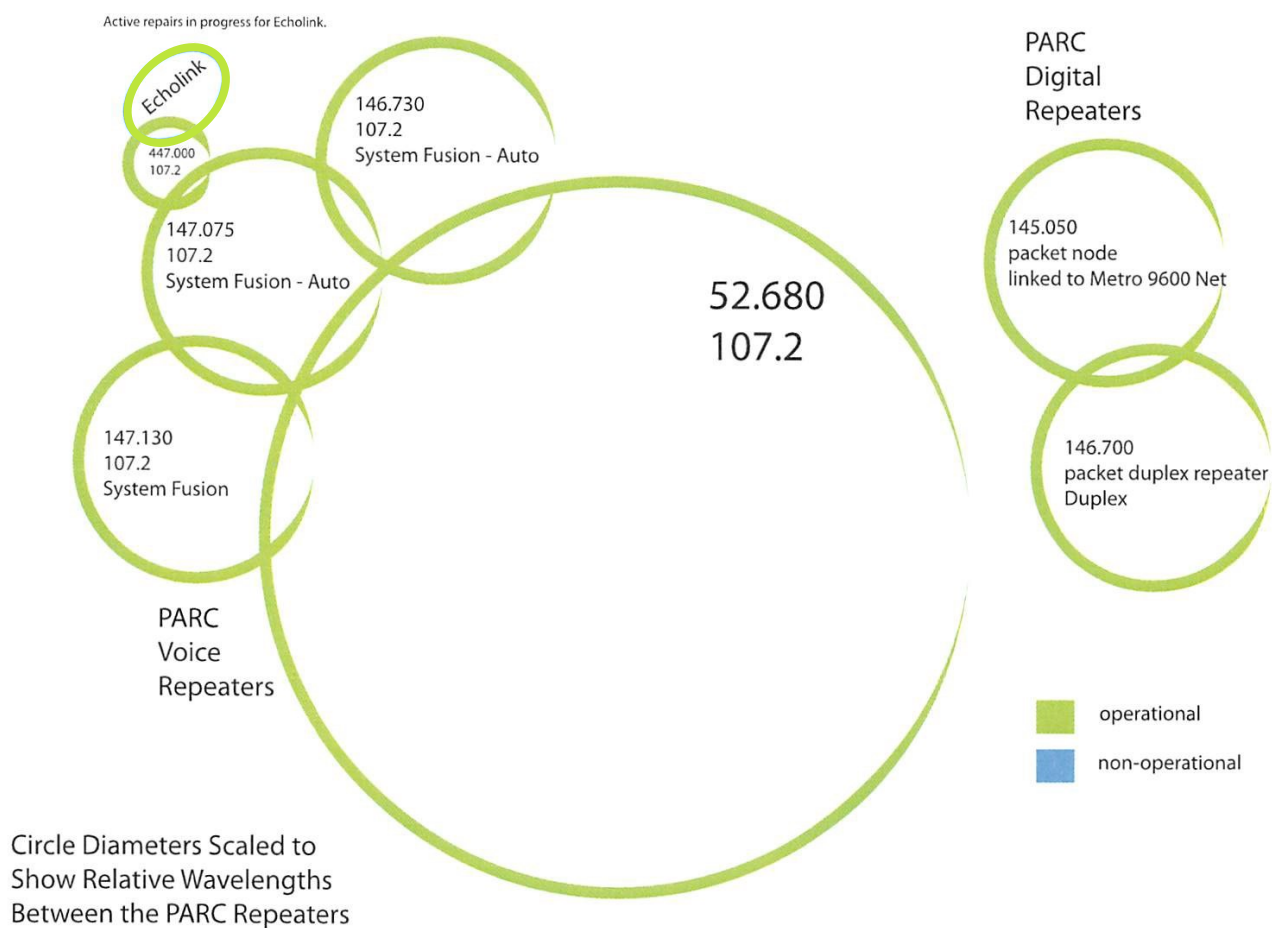
- ATV in: 915 MHz WBFM audio subcarrier 5.8 MHz
- ATV in 2441.5 MHz WBFM, audio subcarrier 6.0 MHz
- Intercom: 146.415 MHz NBFM simplex (tone 79.7). Currently not working.
- ATV out: 1241.25 MHz VSB, NTSC Standard

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.

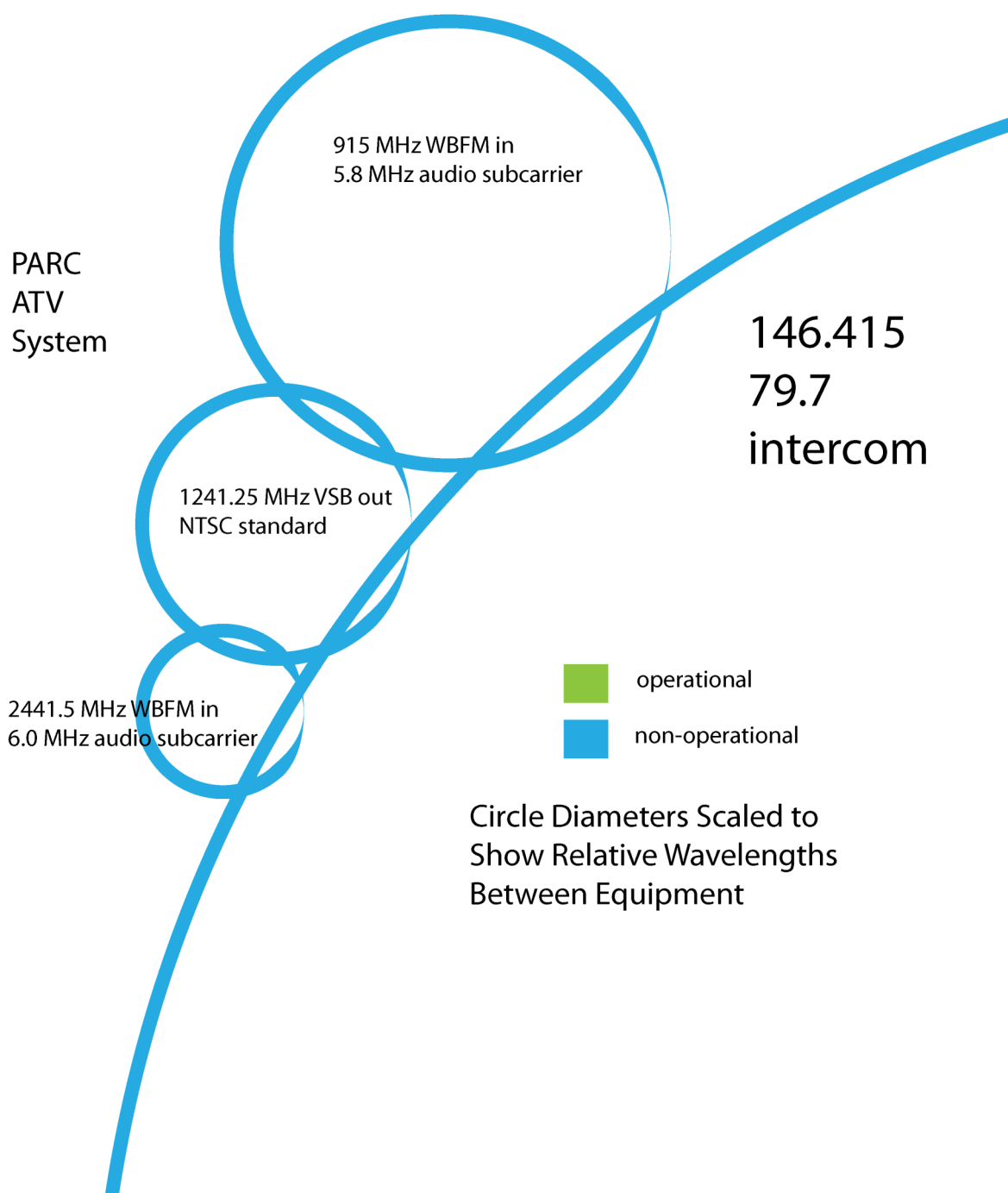
Note 2: PARC no longer operates an autopatch or packet BBS

Reported Repeater Status



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

Reported ATV Status



Let's Go T-Hunting—Joe Moell, K0OV

Here is an introduction to RDF contesting in southern California, updated from a paper originally submitted for Proceedings of the West Coast VHF/UHF Conference. Put this article in your ham club newsletter to encourage members to try T-hunting. (See the copyright notice at the end.)

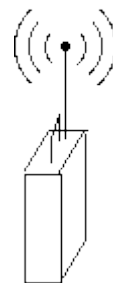
VHF/UHF enthusiasts often install yagis and quads at their home stations. Many take them out on camping trips and use them on public service events. But did you know that some enjoy flying the freeways and beating the back roads with one hand on the steering wheel and the other on a rotating antenna mast?

Perhaps you have seen these hams on weekends, intently driving and turning their beams. What are they doing? They are competing in hidden transmitter hunts.

If you've never experienced one of these mobile radio direction finding (RDF) contests, you have missed some of the greatest excitement a ham can have. While there are several names for it such as "fox-hunting" and "bunny chasing," in southern California this sport is almost always referred to as "T-hunting."

Transmitter hunting seems to be one of the best kept secrets in ham radio, even though dozens of hams here consider themselves to be regular hunters. They range in age from the teens to the eighties. Besides keeping the coordinated two-meter hunt frequency (146.565 MHz FM) hopping, some hunters love to hash over their exploits by the hour on their favorite repeaters.

The idea is simple: One or two hams take a transmitter, antenna, and some sort of distinctive audio source to an carefully selected spot, then make continuous or intermittent transmissions. Usually they remain stationary, though mobile "bunnies" are popular with some groups. Sometimes there are more than one "T" to be found. Surplus ammunition cans are often used as hidden transmitter enclosures. The hunters, as individuals or in teams, do their best to home in on the hidden station(s) with their mobile and portable RDF gear.



Fun, But Beneficial

T-hunters think their events are more fun than any other ham contest. You get to meet and socialize with your competitors both before and after the event. Usually, you'll find out your score and how well you placed before you go home. You may encounter your competitors along the way, with opportunities to try to "psych them out" or misdirect them. (Hence the southern California maxim: "Never trust anything said by a T-hunter or hider.")

"Techies" like the thrill of finding the hidden T with gear they made themselves. They relentlessly work to improve their setups. Mystery lovers and dyed-in-the-wool testers love the challenge, because very hunt is a fresh start to a new adventure. Your past performances are forgotten. It's just your team and your equipment against today's hider and the other hunters.

At some point, every ham will find knowledge of RDF techniques useful, because it simplifies such chores as finding a neighborhood source of power line interference or TV cable leakage. T-hunters here frequently are called upon to track down sources of "spurs," intermodulation and noise that can plague amateur (and

Let's Go T-Hunting—Continued

sometimes commercial) repeaters.

RDF plays an important part in Amateur Radio self-policing. In many areas of the country, including southern California, there is an active Amateur Auxiliary organization in contact with ARRL and district FCC offices, permitting volunteer ham RDFers to gather evidence leading to prosecution in serious cases of malicious interference.

There are several competitive hunt opportunities to choose from every month in Los Angeles, Orange, Riverside and Santa Barbara Counties. They are all different in some way, such as time or mileage scoring, day or night start, single or multiple transmitters, intermittent or continuous signal, wide or narrow boundaries. (Or perhaps there are no boundaries at all!)

Most hunts are on two meters with FM signals, but there are occasional FM hunts on the 50, 223, 440 and 1200 MHz bands. There have even been hunts for Amateur Television transmissions on 434 MHz.

Winning Isn't Easy

There are many ways to score mobile T-hunts. Due to traffic problems, "First-In-Wins" hunts are less common than "Low-Mileage-Wins" hunts in southern California. Odometer calibration differences are resolved by requesting hunters to obtain an odometer correction factor by driving a standardized course in advance of the hunt. This correction factor is called the [Crenshaw Factor](#) because the course runs along Crenshaw Boulevard for approximately 9 miles.

T-hunters have become very sophisticated at finding dastardly hiding places. With the right combination of location and antenna, they make it difficult for hunters to get reliable bearings. Like a ventriloquist, a good hider can make the signal appear to be coming from some other location. With careful planning (and a little luck), the signal's characteristics can cause the hunters to approach the transmitter from the most difficult direction, with impassable roads or other obstructions, even though the T may be easily accessible via other routes. Perhaps the hider will camouflage the setup so well that the hunters won't find the transmitter unless they literally trip over it.

The most challenging of all southern California 2-meter RDF events are the All Day Hunts. Despite their difficulty, many enthusiasts like them best of all. The name is a misnomer, because these marathons often last the entire weekend. The transmitter(s) can be anywhere in the continental USA. The hunt starts in Rancho Palos Verdes. Hiding spots have included locations near Yosemite National Park (California), Las Vegas (Nevada), Yuma (Arizona), and St. George (Utah). The record path distance for a two-meter hidden transmitter signal to be heard at the starting point was set on the St. George hunt, well over 300 miles!

Not every T-hunt is this arduous, of course. Several clubs have sponsored [hunts just especially designed for beginners](#) to get things started. In some cases, the hidere make brief transmissions on a repeater, encouraging hunters to come out and find them. After a while, they give clues to narrow the search area. The idea is to give every participant a good first-time experience, including a story-telling session at a restaurant after the hunt.

Let's Go T-Hunting—Continued

While some hunters prefer to go it alone, most have more success by teaming up. The driver concentrates on handling the vehicle, while the DFer turns the beam and reads the meters. The DFer also handles maps and plotting, unless there is a third team member for that task.

Inexpensive Beams Work Fine

In the Los Angeles basin, most hunters use some sort of beam antenna. Three to five element cubical quads are most popular. Usually they are built in "diamond" form with a PVC pipe or wood boom and elements made of thin wire strung on fiberglass spreaders. Variations include the "stiff wire" version, which is much more tree-resistant. (It can get mashed, but is easily re-shaped and returned to service, as compared to "strung-wire" quads which more readily suffer wire breakage.)

Yagis are second to quads in popularity. Commercial models work fine, provided that the mast is attached at a good balance point. Occasionally you will see some other kind of gain antenna, such as a "ZL special." Small-diameter loops are rarely used for RDF above 54 MHz because of their bidirectional pattern and low sensitivity.

No matter which gain antenna is used, it is important that to allow for quickly changing polarization. Hiders can use any wave polarization on most hunts, so hunters must attempt to determine the correct polarization and hunt with it. Hunting a horizontal signal with a vertically polarized beam, for example, causes the direct signal to be attenuated. Reflections and scattered signals (multipath) from buildings and terrain features are enhanced relative to the direct signal when the wrong polarization is chosen. There are mechanical and electronic ways to select polarization on VHF beams.

Hunters need sensitive mobile RDF setups for events like the All-Day hunts. They achieve it with their long beams, plus GaAsFET preamps, noise-quieting meters, and SSB receivers (even when the hider is transmitting FM).

Homing Sets Sniff Well

Another type of RDF instrument, called the homing or dual-antenna RDF, has its place in the arsenal of the well-equipped hunter. These units have a pair of vertical antennas, a switching circuit, and a direction sensor with some sort of left-right indicator, such as a meter or a pair of LEDs. They are easy to use: When the indicator says LEFT, turn the unit left; when it indicates RIGHT, turn right. There is a sharply defined crossover at which the unit points toward the signal source direction.

There are two types of dual antenna sets. One type is called a switched-pattern set and requires a receiver with AM detection. It is used mostly on the aircraft band. More popular with hams is the

Let's Go T-Hunting—Continued

phase-front detector or Time-Difference-of-Arrival (TDOA) set. It is designed to work with any narrowband FM receiver that covers the frequency of interest. While they could be used in vehicles, these dual-antenna sets are used mostly for on-foot RDF, such as closing in at the end of a hunt ("sniffing") or for wilderness search/rescue work. Be sure to build or buy one with left-right indicators, or you won't know if the signal is coming from ahead of you or behind you.

Dopplers Have Their Place

An ideal RDF system would not require constant manual antenna turning. It would take directional readings hundreds of times per second, and continue to indicate the bearing after the signal leaves the air. Doppler type RDF sets, though far from ideal, fulfill all these wishes. The typical four-whip antenna system can be mounted without drilling holes in the vehicle.

Doppler readouts usually feature a ring of at least 16 LEDs, and may also include a three-digit display in degrees relative to the vehicle. In the clear, a well-installed doppler has about ± 5 degree bearing accuracy. This accuracy is degraded by multipath, just like it is with the homing RDF, but "eyeball averaging" while the vehicle is moving helps counteract this problem.

Although popular in places such as Cincinnati and the San Francisco Bay area, doppler RDF installations have not caught on among most southern California competitive T-hunters due to their lower sensitivity compared to beam setups. Vertically polarized doppler antennas are at an extreme disadvantage if the hider transmits horizontal polarization, especially if the signal is weak and non-direct.

On the other hand, dopplers are a popular choice of jammer hunters, who are usually tracking strong vertically polarized signals. They like the rapid indication update rate and the ability to quickly get bearings on short-duration signals. Occasionally, you may see RDFers using both a beam and a doppler set on the same vehicle.

How To Learn More

While commercial RDF equipment is available, the majority of southern California T-hunters prefer to build their own gear. All you need to get started is a directional antenna, an attenuator to knock down strong nearby signals, and a receiver with S-meter. You may have it all right now! If so, it will only take a bit of installation work on the family car to get you going.

For equipment information, installation ideas, and hunting techniques, read *TRANSMITTER HUNTING---Radio Direction Finding Simplified* by KØOV and WB6UZZ, published by Tab Books (#2701). This book is available at many electronics and ham radio stores. It is also available by mail from ARRL Bookstore and from the authors.



The December meeting is traditionally our election for the Board of Directors, and that remains the same this year! One change is that we will be voting to adopt a change in who makes up The Board.

The amendment was previously considered as 2016-I, but was not properly announced at the time so we did not vote on it.

That amendment is included below.

2017-A To make the Webmaster an official member of The Board.

Purpose

To recognize the club's webmaster as a standing committee chair, eligible to be designated a board member.

Discussion

The board consists of the four elected officers (President, Vice President, Treasurer, and Secretary), plus two elected directors, plus zero to three (typically three) of the chairs of specific standing committees. Originally, these three committee chairs were fixed: the editor of the newsletter, the membership chair, and the repeater chair. Later, in 1997, the repeater chairman job was split up into a Repeater Technical chair and a Repeater Site chair, and the President was given the power to designate which three of the four chairs would serve on the board, with the approval of the board.

The newsletter is discussed in the bylaws, but the newsletter editor is barely mentioned. The other three jobs are not mentioned at all, except where they are listed as standing committee chairs eligible to be designated to the board. None of them have defined responsibilities. There are potentially lots of committees, and they are all important to the success of the club. Only a few of those committees operate year in and year out, and have a direct impact on most club members. Since these bylaws were written, technology has changed and now it may be seen that the club's web site is in the same category as its newsletter. Both are vital to the club, and the editor of the newsletter and the webmaster of the web site need to keep abreast of a wide variety of club activities so they can report them to the members.

This amendment adds the webmaster to the list of standing committee chairmen who may be designated to serve on the board by the President.

Text of Amendment

In Section 8(t), add the following item to the numbered list:

(5) the Webmaster

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 Membership@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 Membership@palomararc.org.

Jamboree on the Air Report—Kevin Walsh, KK6FRK

Thanks all for your help at JOTA 2017!! This was a historic JOTA - Number 60!

We gave over 200 Cub Scouts and Boy Scouts and their family members a taste of amateur radio and radio science. Yes - we are tired. It was a lot of work, but worth it.

MVP Call Outs to the SD Transmitter Hunters and Brian Comer and his son Andrew. (Andrew built the Elecraft K3 we were using.) Brian had his K3 locally and a remote K3 in New York that we used over the Internet. We made a healthy number of contacts on 20 and 40, and a few on 80 with a number of Scouting units. We made at least one DX contact to Spain.

Special thanks to ARES, ARRL, Palomar Amateur Radio Club, Southwest REACT, Pat and his ultimate go kit, and Erik Johnson up on Roseville who worked a bunch of Scouts over Echolink.

Extra special thanks to Bob Shoemaker, Thurston Watson and Paul Verasio who ran the Radio Merit badge course. Super thanks to Jason who picked up the hot dogs from Costco.

We learned a lot about antenna placement and how to scale for the number of Scouts for an event of this size.

Thanks and Keep the Faith!

Jamboree on the Air T-Hunt—Joe N6SZO & Joe KE6PHB

The S. D. T-Hunt Group's participation at the 60th. Annual Jamboree on the Air at Camp Balboa on October 21st, 2017 consisted of Joe, KE6PHB, Dick, WB6ZAM & Mary Lou, Tom, N2TEN, and his son Daniel, KM6BXP and Joe, N6SZO. We were assisted by two volunteers from the Palomar Amateur Radio Club, Glen, AI6RR and Keith, KM6CXW who had volunteered to help in order to learn a little about T-hunting.



Joe, KE6PHB and I arrived at Camp Balboa about 7:30 with a carload of equipment and began to set things up inside a Hogan. We put up our distinctive S.D. T-Hunt Banner that we had borrowed from Bill, W6ZM. Glen, Joe and I looked at the

compound map and decided how we wanted to space out the 5 different micro-fox T's (numbered T-1 thru T-5) that Joe had programmed for this hunt, all on different 2-M frequencies. Once those were up and running we went back to get sniffers ready for the Scouts to use. We attached some rather bulky rotary attenuators and an assortment of HT's to 4 of the antennas and had a 4-MHZ offset attenuator on the 5th

sniffer. We decided that with one of setup's they would get 2.0 units of PE credit just for being able to carry it around for 10 minutes.



While we were doing that Glenn and Keith set up a log-in sheet so we could get some type of order to the anticipate controlled chaos that we normally experience with Boy Scout events such as this. This turned out to be a very good way to get the Scouts through the process as there were other events happening all over the camp so if they were at our station and all the sniffers were out they could sign in and come back

later when they had time to do the hunt. We had color coded all the hidden T's with different color electrical tape so when they checked out to find the hidden T they had to come back and tell us what color they saw on the transmitter. We also had the sniffers tagged with a number for that particular T and so we knew what color they should be reporting that they found when they returned. This system worked well and we managed to cycle through 50 groups of Scouts (more than 100 in all) from about 9:30 to 5:00.





About the time the first group showed up T-4 seemed to be acting erratic, a carrier but no audio so Joe, KE6PHB went over and replaced it with one of our "Backup T's" designated as T-6. That worked for the rest of the day just fine. We only had two back-ups so we hoped that nothing else failed during the exercise. As usual with the Scouts some would come in to check out a sniffer

and brag that they had all ready found a couple of the T's by seeing other Scouts find them so we had to choose a T that was one that they had not found just to keep them honest! Tom, Daniel, Dick, Joe and I were all assisting groups to get them started. We eventually got Glenn and Keith up to

speed and they were out at times



also. Most of the time we would stay with them until they located the transmitter. A few came back to try again, they really enjoyed this activity. One mom drove her son over late in the day just because she had heard that we were doing this activity. We had a few adults that were interested enough in taking

one of our Tri-Folds for future reference and considering a Ride-a-long on a Saturday night hunt some time.... time will tell if they make good on it?



60th. JOTA is now history.



Maker Faire® San Diego

Keith Spears, KM6CXW

We had a great time at this years Maker Faire. When I arrived at the San Diego Model Railroad Museum I discovered that the table we were going to share with DEFCON was located in the middle of the building with no where to place an antenna. A quick decision with the staff got us moved right by the employee entrance where I had no problem running feed line to an antenna outside. This location had a side benefit of being right next to one of the most popular train layouts so it was a very high traffic area.



After setting up the antenna, turning on the radio and putting out our flyers we went to work talking and promoting our hobby. I spoke to hams, former hams and people interested in being hams. I gave out flyers and invited people to our meetings. I had no luck on the radio but a lot of people stopped to look.

On Sunday, Glen Christensen, A I6RR joined me at our booth and brought an antenna tuner which allowed us to get a better SWR on the antenna. There was a QSO party going on and I did manage one contact with a person in Oregon. Next year we will see if we can put the antenna on the roof!! We should strive to get our new trailer fixed up as this is the perfect place for it. That should give us a good signal. We were so popular that we ran out of flyers. I hope we can continue to participate in this great event!





Masking tape, is not just for packages!



A homemade Wi-Fi detector.



Made from Wood!



My new Minion!



Enter the giraffe!



A burning man!

**Seen at the
Maker Faire**



**I WANT YOU FOR THE PARC BOARD
I NEED YOU TO RUN FOR:
VICE PRESIDENT
SECRETARY
DIRECTOR #2**

**PUT YOUR NAME ON THE SLATE ON
NOEMBER 1 TO SERVE YOUR FELLOW
PARC MEMBERS**

Echo Link Node on 447 has a New Call Sign—Bernie Lafeniére, N6FN

The callsign of the club's EchoLink node on the 447 repeater has been changed from N6FN-R to our club's call sign, W6NWG-R. This ought to make it easier for people to remember.

When using the EchoLink node locally with your HT or mobile rig the change in callsign is of no consequence. Everything operates exactly the same as before. However, when accessing the 447 repeater remotely via your laptop, tablet or cellphone, use the W6NWG-R callsign as the node you wish to access.

As a reminder, you do not need to install software on your computer or have your callsign validated to be able to use EchoLink from DTMF equipped transceivers. However, you do need to have at least a basic understanding of how EchoLink contacts are made over the EchoLink network. If you have never used EchoLink before this is an easy way to get started. A quick Google search will come up with plenty of articles about how to go about it. I've also authored several how-to EchoLink articles in the SCOPE, older issues of which can be found on the club's web page. But perhaps the first place to start is on the EchoLink web page. <http://www.echolink.org/>

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



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, specify Palomar Amateur Radio Club as your charity of choice for donation.



SCOPE
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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 ham radio humor. If you have a joke,



What kind of music did the Pilgrims like?
Plymouth Rock

If April showers bring May flowers, what do May flowers bring?
Pilgrims

Why can't you take a turkey to church?
They use FOWL language.

Why was the Thanksgiving soup so expensive?
It had 24 carrots.

What happened when the turkey got into a fight?
He got the stuffing knocked out of him!

If the Pilgrims were alive today, what would they be most famous for?
Their AGE!