



January Club Events

Treasurer's Report for December 2005

Assets

Cash and Bank Accounts

BoA checking	1,606.66	CD	2,759.68
CD	3,484.38	CD	2,915.28
CD	2,403.71	Post office	99.10

Savings SDCCU 50.00

Total Assets 13,318.81

Liabilities & Equity

Pre-Paid Dues	6,398.00	Property Ins.	2,400.00
Total Liabilities	8,798.00	Equity	4,520.81

Total Liabilities & Equity 13,318.81

Ride Needed

Mr. Peter DelMonte KC2CYR would like to get a ride to the meeting. He lives at 4490 Mesa Drive in Oceanside. APT 234W phone (760) 721-7045. He has 90 years of life experience, and has worked as a machinist. His radio is limited to the Palomar and Red mountain repeaters due to restrictions.

2006 Board Approved

The nominating committee consisting of Art KC6UQH, Harry

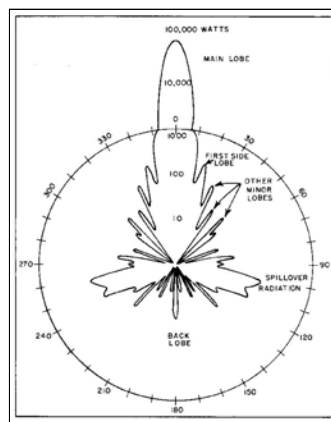
continued on page 2

Of Antennas and Snowflakes

Michelle W5NYV

You might not think antennas and snowflakes have much in common. Snowflakes are made of water and are considered beautiful by almost everyone. Antennas are made of wire or tubing or whatever works and seem to be considered beautiful by almost no one. Snowflakes usually herald winter, holidays, shoveling, and stuck cars. Antennas herald the presence of an amateur radio operator or other communications system, and are rarely used as decorative motifs, and are almost never seen in poetry or art, unlike the snowflake.

However, both are subject to fundamental laws of nature. Both are affected greatly by the weather. Each and every snowflake is unique, just like antenna designs! Take the familiar dipole. The figure-eight-shaped antenna pattern, with its prosaic double lobes, finds a comfortable companion in the plain old water crystal, the basic hexagonal prism. A more complicated antenna pattern, with its main lobe, side lobes, and back lobe, could find a partner in the triangular plate prisms of branching snowflakes.



Plot is of a radar antenna from the collection of National Capital Area Skeptics. The photo is from the collection of Rasmussen&Libbrecht at www.snowcrystals.com. Snow crystal shapes are influenced primary by temperature and humidity. When temperatures are well below freezing, and the air is very dry, simple solid crystals form. When temperatures are between -10°C and -20°C, and the humidity is high, then the dendrites, sector plates, and other more complicated shapes start to form.

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W6YOO, and Paul NN6X brought forth a slate of candidates at the November meeting. Nominations from the floor were opened and closed with no additional candidates. At the December meeting Harry W6YOO conducted the elections. Motion by David KC6YSO to accept the slate of Officers. Second by Conrad KG6JEI. Motion carried.

December Membership Report

New Members Joining PARC:

KI6BIH, WB6UWA, KG6MDO, KI6BJA, KE6HDA.

Please welcome these new members. Four members reinstated their membership. Welcome back!

The participation points for the December meeting (party) have not been entered yet, maybe more people brought delectable goodies than signed up at the goodie table. If you brought treats, and didn't manage to sign in for them, please let me know. It's not too late to get an extra point!

Did you check your label this month? If all goes well with my printing, your e-mail of record will be there. What do we do with the info? If the Post Office returns your SCOPE, and we have an e-mail address, we can often find out why the mail didn't make it. I also phone if this happens. It seems that sometimes SCOPes are returned, even though the address is correct. Please check what is there, and send me a correction if appropriate. If you want your "special" e-mail address kept confidential, let me know, and it will not be printed.

Al W6GNI

December Program Review

Mark Raptis KF6WTN was kind enough to shoot some photos of the December social. Here's a few images from a very enjoyable party! Below: Steve Early AD6VI. ✱



Outgoing Treasurer Jo Ashley KB6NMK. Thank you so very much for your years of service to the club in this position!



We didn't do it! Nobody saw us! You can't prove anything!



PARC Board Members at the Christmas Party. From left to right: Mark Raptis KF6WTN, Al Donlevy W6GNI, Mike Pennington K6MRP, Dennis Baca KD6TUJ, Christy Martin KI6AOL, Bob Birch KG6RGI, Tom Martin KG6RCW, Steve Early AD6VI, Gary Kent W6GDK.

SCOPE CHALLENGE

December's puzzle (There is no such call as NOCALL) was solved by... no one! How appropriately ironic.

January Challenge: Ermanno Signorelli knows that Mary's father has five daughters, four of whom are named Nana, Nene, Nini, and Nono. What is the name of the fifth daughter?

Answer the riddle correctly, and you will be credited in next month's SCOPE! Got a photo to submit for a Photo Challenge? Let us know! scope@palomararc.org ✱

CONTEST CALENDAR

Jan 1 SARTG New Year RTTY Contest
 Jan 1 AGCW Happy New Year Contest
 Jan 1 AGCW VHF/UHF Contest
 Jan 3 ARS Spartan Sprint
 Jan 6 WQF QRP Party
 Jan 7 Midwinter Contest, CW
 Jan 7 Original QRP Contest
 Jan 7 ARRL RTTY Roundup
 Jan 7 EYCW 160 Meter Contest
 Jan 8 Midwinter Contest, Phone
 Jan 8 DARC 10 Meter Contest
 Jan 8 Kid's Day Contest
 Jan 14 Hunting Lions In The Air Contest
 Jan 14 070 Club PSKfest
 Jan 14 MI QRP January CW Contest
 Jan 14 North American QSO Party, CW
 Jan 15 NRAU-Baltic Contest, CW & SSB
 Jan 16 Run for the Bacon QRP Contest
 Jan 19 NAQCC 80m Straight Key/Bug Sprint
 Jan 21 LZ Open Contest
 Jan 21 Hungarian DX Contest
 Jan 21 North American QSO Party, SSB
 Jan 21 ARRL January VHF Sweepstakes
 Jan 28 CQ 160 Meter Contest, CW
 Jan 28 REF Contest, CW
 Jan 28 SARL Youth Day
 Jan 28 BARTG RTTY Sprint
 Jan 28 UBA DX Contest, SSB

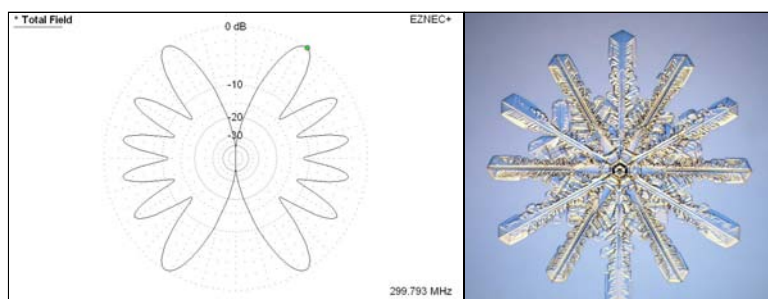
There's enough here to keep most contesters busy with CW, SSB, RTTY, Sprints and 48 hour contests. You can find complete rules in QST, CQ, NCJ, and Worldradio magazines. CU in the contest! 73, Harry

✱

You will not find snowflakes with 4, 5, or 8 sides in nature. You will find antenna patterns with 4 lobes. This is most easily created with a center-fed dipole antenna that is 2 wavelengths long. An 8-lobed pattern is achieved when the dipole is 4 wavelengths long.

Is there an antenna pattern with 5 lobes? Unlike starfish, which have an inherent pentaradial (5-part) symmetry, it's quite difficult to get a 5-sided snowflake. Can you think of an antenna design that has 5 lobes in free space? Maybe a high-gain yagi?

The most number of sides seen in snowflakes is 12. No one really knows what types of weather conditions are best for producing these wheeled wonders. However, with a dipole 6 wavelengths long, a 12-lobed antenna pattern can be created!

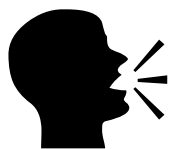


Plot by W5NYV using EZNEC, photo from the collection of Rasmussen&Libbrecht collection at snowcrystals.com. ✱

The Plight of Radio Flight

Undulating heaps of raging solar dunes
 Flare-up in discontent aloud and none too soon
 Convulsed magnetic strands dance coronal tunes
 While spastic plasmonic electrons dance, spin and croon
 Luminal shrieks are broadcast
 To the lonely blackened void
 Chased by a swarm of dissenters cast
 Out from the angry spheroid
 Shocked by a protruding magnetopause
 Snared by magnetic straps
 Flocked by the rising tropopause
 Flared by collisional traps
 These, the terrestrial ether succumbs
 And fade in a dream of shimmering bifrost
 The tricolor auroral curtain becomes
 A legacy of the solar shards once lost.

-by John C. Mannone July 26, 2003. This poem is about a solar burst-particle and radio emission. It was presented at the SARA 2003 Conference in Green Bank, WV July 27-30, 2003 in a talk entitled "Solar Physics With 20 MHz Antennas: Time and Frequency Domain Analysis."



NETS



Regular On-the-Air Nets sponsored by the Palomar Amateur Radio Club.

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sunday	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net	
Monday	2100	146.730	Microwave Net	Kerry B.
Tuesday	1900	147.130	Red Cross Net	Ted tthompson@sdarc.org
Tuesday	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillimek@home.com
Wednesday	2000	146.730	Sailor's Net (stay tuned)	Mace
Thursday	1930	147.075	Young Hams Net (inactive)	
Thursday	2100	146.730	Ham Help (need ops)	David D KC6YSO@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	
Saturday	2000	52.680	6Mtr Emergency Services Net (inactive)	

Other nets that might be of interest to the membership

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
Mon-Fri	2000	28.340	10 Meter Net	Dennie WA9MTP

Net Participation Tracker – A convenient form for participating in PARC nets.

NET	DATE	NOTES

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALOMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-
(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-,

145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220
ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone

License & Class Information

Register 5-7 days in advance for the following test sessions.

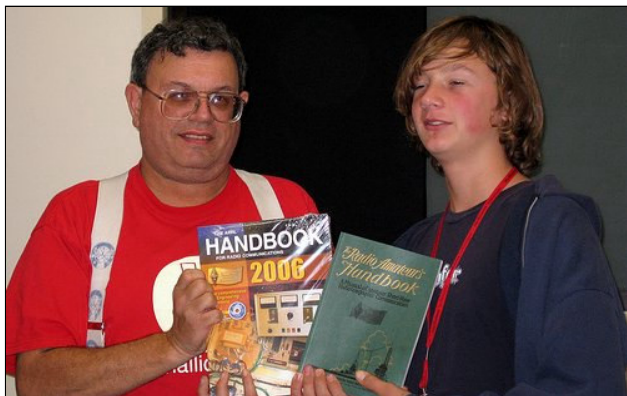
- PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am in the Fire Station at the Carlsbad Safety Center.

Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

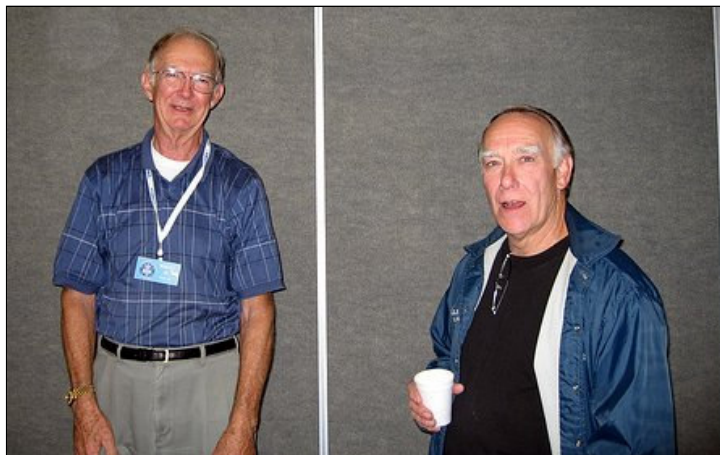
- EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

- "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email ccc@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111. ✱



December Social photos by KF6WTN.



Al Donlevy W6GNI and Mike Pennington K6MRP.

HAM RADIO

H
R
O

OUTLET

Tom KM6K
Ron N6OMW
Jose XE2SJB
Bob KA6EKT

KENWOOD
rf CONCEPTS
DIAMOND
US TOWERS
KANTRONICS
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MFJ, ICOM
BENCHER, Inc.
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COMET
AMERITRON

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Others too
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Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

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Goodie Givers

We'll credit you next month! See Al's membership report on page 2 for details. Thanks to those that brought goodies. ☺



Current Needs

Volunteers are needed for the following club positions.

Billing Chair (handles billing for advertisements in SCOPE).

Del Mar Fair participation Chair.

2006 Field Day Chair.

SCOPE editor.

Publicity Chair.

Ham Help Net Operators.

Assistant southwest division director.

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Some of the positions are irregular or seasonal in schedule (Del Mar Fair), and some of them are consistent in schedule (newsletter, net operators). Regardless of the type of position and the time commitment required, each and every volunteer opportunity is greatly appreciated and makes our club more successful. ✱

PARC 2006 Board

President: Steve Early AD6VI

(619) 461-2818 AD6VI@cox.net

VP: Dennis Baca KD6TUJ

(760) 722-0251 KD6TUJ@amsat.org

Sec: Gary Kent W6GDK

(858) 679-0578 W6GDK@arrl.net

Treas: Bob Birch KG6RGI

rrbirch@cox.net

Dir: Tom Martin KG6RCW

Dir: Mark Raptis KF6WTN

(760) 749-4825 KF6WTN@amsat.org

Site Management:

Mike Pennington K6MRP

K6MRP@amsat.org

Membership: Al Donlevy W6GNI

(760) 630-3096 W6GNI@amsat.org

Site Tech: Mike Doyle AB6QT

(760) 742-1573 AB6QT@amsat.org

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WA6GYG

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An address to remember:

<http://www.rfparts.com/>

e-mail: rpf@rfparts.com

Send for your FREE 2005 Catalog or visit our website.

FOR SALE: Hy Gain - Hy Tower 5 band (80 thru 10) vertical antenna. This is a freestanding antenna that requires a 3-foot square cement base. It has S.S. hardware. I'm asking \$300.00 and you pick up in Fallbrook. The first two sections break down into 10-foot sections and the rest is tubular. **Call Dale (W6IWO) at (760) 728-6800**

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Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(12.6) Wanted: A 500 to 1KW amp for disabled ham. Please phone (760-724-0049) or e mail (sstires@cox.net) for details. Thank you...WA5ACE

(10.25) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built in. With Chgr.

\$40.00. Galaxy Electronics Phone Patch PR-550, \$20.00. Texas Instrument TI-2000 Slim Line Laptop w/3.5 disc drive, 20 MB HD w/ac adaptor (ideal for Portable Packet). \$20.00. Epson C60 Ink Jet Printer, New/Unopened, \$40.00. Avenger 4000 Commercial Alarm System, w/8 PIR's, keypad, 2 sirens, 1 sonic, \$100.00 OBO, 13 Inch Sony Industrial Video Color monitor Model PVM-1390, \$30.00 OBO, International Audio/Video Color Processor w/ac adaptor \$30.00 OBO. 54" Oak Roll Top Desk, excellent Condx \$350.00, Sentry Fire Proof Combination Safe, \$50.00. Heath SWR Meter Model HM-102 (needs meter cover) \$10.00. IBM Clone Pentium II clone, 350 Mhz, 6 GB HD, \$50.00 OBO. 250 Laser Movies, \$7.00/ea List available, first come first served. Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com

(9.13) Ham-friendly property FOR

SALE. www.pettus.us

(9.12) FOR SALE Cubic Astro 150A fix or mobile 10-80m SSB 100w PEP with DS and Manual \$250.00. Kenwood 2m transceiver Model #TR-7330 5-25w w/auto patch mic MC-46, ARX 2m ant, manual \$150.00. Astro PS7A w/manual \$25.00. Cubex 4 el Quad 30' boom w/Quad arms, fiberglass spreaders, instruction manual \$100.00. Shure mic w/stand ptt \$20.00. Heathkit phone patch model #HD 15 w/manual \$25.00.

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See catalog at www.Palomar-Engineers.com
Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.

Remote ant SW motor driven 6-position coax w/control box \$100.00 Dummy load 1kw +/- \$10.00. Fluke multimeter model #77 w/manual \$65.00. Brak-D-Lay for Hy-Gain rotor w/instructions \$15.00. Contact Kris W6KTE (760) 941-3555

(9.10) WANTED: for the Crest Radio Museum. BOATANCHORS!!! Also need a Heathkit SB-101/102, RX-1/TX-1, VF-1 and DX-100. Operating condx not a problem. Desperately need the following 2-meter radios to complete the collection: Icom IC-20, Trio TR-2E & TX-26, Sonar CD-2, WRL Techciever, Robert Dollar 2M, Kenwood TR-2300 & TR-7100, Tempo FMA Anyone have these and would like to part with them? Contact WA6MHZ at wa6mhz@arrl.org or Landline (619) 593-1111

(8.1) WTB a 40'+ pushup pole in good condition... Please contact me: cstein6@cox.net or (858)349-9919 Charles KG6VVM

(7.17) (1) Hy-Gain Dynamic Microphone Model #610 \$30.00 OBO. (1) Realistic Stereo AMP. Model #SA-10. \$15.00 OBO. (1) Frequency-Counter Model #711 115 VAC or 12 VDC \$35.00 OBO. Please call Bayard K6GAO (858) 755-5507. Thank you.

(7.15) Wanted: CQ Magazine for May 1959. Beg, Borrow, or Buy. Would consider entire year of '59 and possible older issues. Bob Byrnes KE6MTT email rbyrnes@pacbell.net

(6.27) 300 Laser Movies, email for a list, first come first sold, \$7.00/each. Contact Dennis K7DCG, (858)748-9046 or email K7DCG@AOL.com.

Committee Chairpersons

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	
BK6EBYDAT@Gerry.Palomar.caltech.edu		
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	needed!	K6GVM@arrl.net
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	needed!	
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day	needed!	
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KG6TUJ@amsat.org
New Member	filled!	TBA
Nets	PARC	Board@palomararc.org
Newsletter	needed!	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KG6TUJ@amsat.org
Publicity	needed!	
QSL Cards	needed!	
RACES Info	Jo A.	KB6NMK@amsat.org
RED Flag	Steve	AD6VI@amsat.org
Repeater Site	Michelle	W5NYV@amsat.org
Repeater Tech	Mike D.	AB6QT@amsat.org
SANDARC	Jin/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Repeater Site Reports

On 12/10/05, Dennis, kd6tuj; Mark, kf6wtm & Jessica; Dave, kd6eby and Mike, k6mrp, dug a ditch and ran conduit from the hut to the storage shed. We finished running conduit into the generator and sunken buildings. All the ditches were covered and the ground leveled. I fastened the ribbon cable to the buildings. Dennis worked on the auto patch and said it is now working. The weather was nice on the mountain but got a little cool at late afternoon.

On 12-06-05, Mike, k6mrp and Steve, kd6zst installed lap cement and 90 lb mineral felt. Also installed some of the insulation in attic and one of the end vents before we were over taken by darkness. The building is now secure from winter storms.

On 12-03-05, Michelle W5NYV represented Palomar Amateur Radio Club at the inaugural meeting of the Palomar Communications Committee. Mike AB6QT also attended, representing Palomar Observatory as well as PARC.

On 12-02-05, Mike, k6mrp and Steve, kd6zst installed the soffit boards, end fascia, painted all fascias, installed drip edge metal, mastic and 30 lb felt. We also witnessed a real great sunset through the incoming clouds from the ocean.

On 11-29-05, Mike, k6mrp installed plywood and side fascia on the freezer building. In the afternoon Mike, ab6qt helped me install the end panels on the building.

On 11-27-05, Mike, k6mrp installed ac distribution panel and connected wiring from inverter output.

On 11-15-05, Mike, k6mrp and Steve, kd6zst, ran conduit and wiring from the ac to dc inverters to the distribution panels in the hut. Also connected inverter 0 to dc input power.

On 11-13-05 met Art kc6uqh at site to help with ATV. I later installed fuse panel in the new inverter rack for fusing the inverters with 48vdc. I also finished up the overhead ironwork for the inverter rack. On 11-15-05 went to site and re-strapped batteries to locate negative terminal and cabling next to buss bar. Checked the torque on all battery terminals, shortened excessive length cabling and re-terminated.

On 11-12-05 I with the help of Michelle, w5nyv mounted the inverter rack in the block building. Then with the help of John, wb6iqs and Mark, kf6wtm we installed the inverters in the rack.



January Program Preview

Software Defined Radios – a definition decoded

Michelle W5NYV

This article is intended to introduce January's program presentation on Software Defined Radios (SDR) by Brian Comer KF6C. Let's start with a working definition of an SDR. From the American National Standard T1.523.2001 *Telecom Glossary 2000*, it is "A radio consisting of a receiver and/or a transmitter, where each has the following properties, respectively: (a) the received signal is digitized and then processed using software-programmable digital signal processing techniques (digitization may occur at the rf, IF, or baseband); (b) the modulated signal to be transmitted is generated as a digital signal using software-programmable digital signal processing techniques; the digital signal is then converted to an analog signal for transmission (the conversion to analog may occur at baseband, IF, or rf); and (c) a key element of these radios is that software programmability allows easy changes of the radio's fundamental characteristics such as modulation types, operating frequencies, bandwidths, multiple access schemes, source and channel coding /decoding methods, frequency spreading/despreading techniques and encryption/decryption algorithms."

Well, let's decode this definition. We should all be familiar with what a receiver is. The antenna of a receiver collects RF waveforms which are often downconverted to an intermediate frequency and then downconverted again to a baseband frequency. There may be several stages of filtering along the way. The definition states that digitization may occur at any of these stages. Digitization is a process where the "real world" analog signal is translated into the ones and zeroes that a computer can manipulate. Analog to digital converters (ADCs) are the key component of digitization.

As you might imagine, the decision on what stage the digitization occurs is directly influenced by ADC performance. Digitizing at the RF stage means that you are sampling the highest frequency signal in your system. A fundamental law of sampling is that the sampling rate must be at least twice the bandwidth of the sampled signal. This is called the Nyquist theorem. If your sampling rate is lower than the Nyquist rate, your digital data can be faulty.

Digitizing the entire bandwidth while maintaining sufficient dynamic range requires a very powerful ADC. Most commercially available ADCs simply can't handle the bandwidth and processing requirements. This is why the vast majority of SDRs do not currently digitize at the RF stage. The

benefits do not outweigh the costs (such as power consumption, processing requirements, and device cost) for typical applications. If you could digitize at the RF stage, your radio would be quite the device. Imagine being generally unlimited by frequency band! In practice, the RF stage in an SDR is a traditional and familiar implementation that is designed for a particular frequency band. Or, alternatively, an RF band's dynamic range ratio is defined in a way that available ADCs can handle the job. This is the case in some satellite applications. The next stage down the receiver chain, the IF stage, is where many SDRs have their ADC. After downconversion, the frequency and bandwidths of the IF signals are low enough to where ADCs can digitize without losing critical signal information. Digitizing here allows replacement of IF and baseband hardware components. Digitizing at the baseband is quite common. Even with a traditional RF and IF stage, the advantages are well worth the relatively low cost ADCs and processors that are designed to replace baseband hardware components.

Software programmability requires a processor of some sort. The ADC provides the data, but the processor is where the power of the SDR resides. The processor might be something called a Digital Signal Processor (DSP), a processor designed specifically for processing digital signals, or it might be a general-purpose processor, much like the one in your PC. Software programming allows for easy changes to modulation schemes, operating frequencies, bandwidths, source coding, channel coding, authentication protocols, encryption algorithms, and more within the SDR. Imagine an SDR that could allow, in the case of emergencies, all members of a particular agency or team to speak with almost any other group over the air. Imagine being able to define an encryption protocol that protected your wireless data that never went out of date. With quality software programming, complementary devices to the radio can be leveraged in surprisingly efficient ways. For example, any computer peripheral device can now become an extension to the radio. Other advantages include greatly increased power and spectral efficiency. Manufacturability can be improved. RF devices are sometimes quite difficult to standardize and develop. Reducing the number of custom RF devices on a bill of materials is significant win for any communications manufacturer.

All of these advantages depend on having a corps of skilled software designers that also understand RF design. This would seem to be a completely natural fit for the future of amateur radio! Emphasis on software design skills will be a large part of the future of radio theory and practice. See you at the January meeting! ✱

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About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on January 4th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. Program will be on Software Defined Radios by Brian Comer KF6C. Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

Scope



Volume 33, Issue 2

Tower Rights Issue, February 2006

Treasurer's Report for January 2005

Assets

Cash and Bank Accounts

BoA checking	1,279.23	CD	2,759.68
CD	3,484.38	CD	2,915.28
CD	2,428.21	Post office	99.10
Savings SDCCU	50.00		
Total Assets	13,015.88		

Liabilities & Equity

Pre-Paid Dues	6,168.00	Property Ins.	0.00
Total Liabilities	6,168.00	Equity	6,847.88
Total Liabilities & Equity	13,015.88		

Excerpts from San Diego City Manager's Report on Amateur Radio Antenna Regulations – Discussion and Conclusion

The following excerpt is from an October 27, 2005 report in which the City Manager's staff recommended action to the Committee on Land Use and Housing concerning amateur radio antennas. Full report available at

http://clerkdoc.sannet.gov/RightSite/getcontent/local.pdf?DMW_OBJECTID=09001451800bbfbc

–W5NYV

[There is] a 1985 FCC opinion that notes, “State and local regulations that operate to preclude amateur communications in their communities are in direct conflict with federal objectives and must be preempted.” The opinion goes on further, “antenna height

continued on page 2

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- 3 Attention New Hams! Special Meeting for YOU!
- 4 President's Message, What's a Site Development Permit?
- 5 Repeater and License Info, Text of California PRB-1
- 9 Public Relations & PARC

Losing Your Antenna Rights

A Letter to the Editor by Dr. Howard White KY6LA

Many of you have probably already heard about the Poway City Council Meeting in December. Hams under the leadership of Charlie NN3V tried to get Poway to comply with PRB-1. Basically the Poway City Council said, “We don't care what the law is! We do not believe that antennas are needed for Public Safety. We do not want antennas and no antenna is going to ever be approved.”

It was truly one of the most amazing and eye-opening displays of public official arrogance. Elected Poway public servants literally came out and flagrantly ordered their staff to ignore Federal and State laws. They effectively challenged the ham community to sue them in court betting that amateur radio operators could not afford to sue City Hall.

So much for our Federally and State Protected Antenna Rights.

Unfortunately the practice of banning Ham Antennas is now spreading to San Diego. Uninformed City Politicians listening to well-funded NIMBY (Not In My Backyard) forces have instructed the City of San Diego to draft new restrictive anti-Ham Antenna ordinances which will effectively make it impossible to erect an antenna. (*An excerpt from the report Howard is referring to starts above left. –W5NYV*) They intend to regulate the placement of antennas so that it would practically preclude antennas from fitting on most private properties within the city limits. This will require you to go through an unreasonably expensive Site Development Permit process (*see page 4 column 2 –W5NYV*), which will include a public hearing that you will have to pay for and environmental impact studies that you will have to pay for. So, even if you can afford the antenna be prepared to spend thousand of dollars in fees to apply for the permit.

Before you get too complacent and think that just because you do not live in the City or in Poway that your antennas are protected, remember that most of the areas of San Diego County usually follow the lead of San Diego City. So when San Diego bans antennas you can almost guarantee that the County and virtually every city in San Diego will follow suit.

Yes, Ham Antennas are supposed to be protected by PRB-1 at Both
continued on page 3

restrictions directly affect the effectiveness of amateur communications.” However, the FCC concludes the opinion with “local regulations which involve placement, screening, or height of regulations based on health, safety or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practicable regulation to accomplish the local authority’s legitimate purpose.”

Staff believes that this opinion precludes the City from limiting antennas in any zone or location to a fixed height with no criteria, permit, or processing option to request taller antennas. While the City’s current regulations provides no clear regulation of amateur antenna height or placement, staff does believe that the City would be allowed to add additional regulations that establish under what circumstances the City would allow an antenna to be higher than limits established by the Municipal Code. To further support this position, staff explored the regulations of several California jurisdictions that regulate amateur radio antennas (Attachment No. 3). All of these jurisdictions have height limits for antennas ranging from 25 feet (Burlingame, CA) up to 75 feet (Newport Beach, CA). Many provide location restrictions precluding their placement in front yards and in required yard setbacks. Others require placement on the site to be in the location least visible to the public and nearby residences. Most of these regulations allow antennas through a ministerial (building permit process) if they comply with the height and location restrictions. All but one allow deviations to their regulations through a discretionary permit process such as a Conditional Use Permit (CUP). Staff, therefore, believes the City could also adopt regulations that follow a similar scheme.

Under the City’s Municipal Code, there are currently three vehicles that can be used to request deviations from height limits, a Variance, a Planned Development Permit, and a Site Development Permit. The purpose of a Variance is to provide relief for cases in which, because of special circumstances applicable to the property including size, shape, topography, location, or surroundings, the strict application of the development regulations would deprive the property of privileges enjoyed by other property in the vicinity and under the same land use designation and zone. Because of this, a Variance would not be the appropriate approval process to request an antenna that exceeds the height limit because the findings to support the Variance could not be made. The purpose of the Planned Development Permit (PDP) is to establish a review process for development that allows an applicant to request greater flexibility from the strict application of the regulations than would be allowed through a

Variance process. The PDP is used to encourage imaginative and innovative planning and to assure that the development achieves the purpose and intent of the applicable land use plan. The PDP was also established to create development that would be preferable to what would be achieved by strict conformance with the regulations. While this permit does specifically allow for requests to exceed height limits, the specific findings that would need to be made would not be applicable to antennas and would be difficult for decision makers to justify. The purpose of the Site Development Permit is to establish a review process for proposed development that, because of its site, location, size, or some other characteristic, may have significant impacts on resources or on the surrounding area, even if developed in conformance with all regulations. The intent of these procedures is to apply site-specific conditions as necessary to assure that the development does not adversely affect the applicable land use plan and to help ensure that all regulations are met. Site Development Permits can currently be used to grant height deviations but only for projects that provide affordable housing.

Staff believes that a similar height deviation like that allowed for affordable housing projects could be added to the Site Development Permit process. The purpose of the permit and the analysis that goes along with it are consistent with this approval process. To trigger the permit, amateur radio antennas could be added to each base zone as a limited use. This would direct applicants to development regulations in Chapter 14 of the LDC that establish antenna height requirements, placement criteria, and would identify that deviations may be requested via the Site Development Permit. This would be consistent with how other similar types of development are regulated by the LDC.

CONCLUSION

Staff recommends that LU&H direct staff to prepare draft regulations that allow antennas as a limited use if they comply with specific limitations on height, placement, operation, and proximity to adjacent structures. These regulations would require a Site Development Permit (Process 3 Decision level) when an applicant requested a deviation from these regulations. Specific findings that substantiated the need to deviate for the purpose of promoting amateur radio communication would also be developed. Staff believes that this type of regulatory scheme would be consistent with the FCC opinion and would not preclude amateur radio communication in the City.

Respectfully submitted,

Gary Halbert Development Services Department Director

Approved: Ellen Oppenheim Deputy City Manager

I Have My License... Now What?

If you or anyone you know is interested in Amateur Radio, this is a Golden Opportunity to learn more about the intriguing world of Amateur Radio.

~ Learn More About ~

- The Palomar Amateur Radio Club – PARC
- ARRL San Diego Section
- Amateur Radio Emergency Services- ARES
- Radio Amateur Civil Emergency Service – RACES
- American Red Cross - Amateur Radio & Disaster Services
- QRP and Homebrew
- DX - Worked All States, Islands On The Air, Etc.
- Amateur Television & Satellite
- Digital Modes
- How to use a repeater
- How to use a phone patch
- How to start and join a conversation
- How to make an emergency communications
- What to do in a declared emergency

Please join us March 1st, 2006 at 7:30pm at the

**Carlsbad Safety Center
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Faraday) Carlsbad, CA**

**Listen in on 146.730
Regardless of your level of radio
experience this is a Golden
Opportunity! ♥**

SCOPE Challenge

January Challenge: Ermanno Signorelli knows that Mary's father has five daughters, four of whom are named Nana, Nene, Nini, and Nono. What is the name of the fifth daughter?

Mary

Honorable mention to all that guessed "Nunu"! February's challenge is somewhere in the newsletter. Find it and answer it, and you will be credited in next month's SCOPE! Got a photo to submit for a Photo Challenge? Let us know! scope@palomararc.org ♥

Continued from page 1- Guest Editorial by KY6LA

the Federal and State levels. And yes the Courts have always ruled for the Hams. But these uninformed public servants are trying to find loopholes to make sure that we never put up any antennas. Remember the NIMBYs vote and have money to influence politicians.

The only way we can protect our communities is by organizing such as we are doing on the San Diego Bio-terrorism and Disaster Defense Council. We must raise funds to hire lawyers and fight the well-funded NIMBY forces. Not only by informing elected officials as to how important our antennas are for public safety, but also by showing that we are a strong and well-organized force ourselves.

San Diego Bio-Terrorism and Disaster Defense Council was organized to protect our Neighbors from Bio-Terrorism and Disasters by ensuring that Emergency Preparedness is not compromised by well-meaning but uninformed individuals and groups that propose legislation counter to the operational needs of Emergency Preparedness.

The most immediate threat to our Emergency Preparedness Programs are the attempts to restrict Amateur Antennas in our communities. Our well-funded opponents rely on "Junk" science and misinformation rather than documented and substantiated facts to support their positions, which for the most part are invalid under PRB-1.

This Council is dedicated to overcoming obstacles to our providing for our community's safety by education of our elected officials and neighborhoods. You can join the efforts to protect your antennas and our communities by sending an email to:

SDDisasterDefense-subscribe@yahoogroups.com

Currently this Council is attempting to become part of the SANDARC Legislative Oversight Committee under the chairmanship of Steve Early. ♥

Club Membership Report

New Members Joining PARC:

KI6BPM, KI6BLH, in addition, 2 members reinstated their membership, which had lapsed. Thanks to all!

We need new members. I notice a number of hams attended our January meeting that are not current members. We hope some of them will join. You may be interested to know that our Christmas meeting in 2004 had 58 in attendance, and last Christmas, we had 57 sign in. The January meeting of 2005, 62 signed in, in 2006, 52 were present.

Al

W6GNI

♥

President's Message for February 2006

Steve Early AD6VI

PARC President 2006

The year has had a good start. In January, we had a good presentation on Software Defined Radio, by Brian Comer, KF6C.

This month's program is the PARC Birthday Party, 70 years young and going! The presentation will be a PARC History Lesson, followed by cake and possibly ice cream.

This is an opportunity to hear the stories of how PARC became the club that it is. Bring a HAM friend and an appetite.

One enduring aspect of PARC has been service to both the Amateur Radio Community and local Communities at large. We (amateur operators) have a long and proven record of Public Service, by providing communications during both Emergencies and Public Events. One of the fundamental purposes of the Amateur Radio Service is to provide Emergency Communications (see Part 97).

In the past few month's, we (the amateur radio community) have seen a concerted effort by some of our shortsighted neighbors (and people across town, too) to end our rights to erect reasonably effective antenna systems at our homes. While there are valid arguments for and against both sides of this issue, we must work together to protect both the assets we already have and the assets that we would like to develop.

Please get involved in your community planning process and encourage your local planning departments and elected officials to help protect our ability to communicate, regardless of local conditions.

To this end, PARC will be working through the San Diego County Amateur Radio Council (SANDARC) to educate our elected officials and community planners as to our needs and wants. Please stay tuned, as this issue is likely to dominate discussions this year.

On March 1st, the presentation will be geared towards new and returning HAM's, titled: "I have my license, now what..."

This is an opportunity to call on friends that have just received their licenses, or have not been on the air in a long time. It is also an opportunity to meet HAMS that are looking for advice. The presentation will cover such things HAM etiquette, resources, GOTA, Amateur Programs and available training. Bring a new ham. Again, bring a friend to the PARC Birthday party.

See you there,
Steve Early, AD6VI

What is a Site Development Permit?

Michelle W5NYV

Site Development Permits are mentioned in the report to the city manager on Amateur Radio Antenna Regulations (*see page 1 of this issue of SCOPE for excerpts from this report. – W5NYV*). The San Diego Municipal Code explains the purpose of a Site Development Permit (SDP) in Article 6 Division 5.

<http://clerkdoc.sannet.gov/legtrain/mc/MuniCodeChapter12/Ch12Art06Division05>

According to the code (found at the address above), "The purpose of the Site Development Permit procedures is to establish a review process for proposed development that, because of its site, location, size, or some other characteristic, may have significant impacts on resources or on the surrounding area, even if developed in conformance with all regulations. The intent of these procedures is to apply site-specific conditions as necessary to assure that the development does not adversely affect the applicable land use plan and to help ensure that all regulations are met."

An SDP is required when the development is on or adjacent to environmentally sensitive lands, when occurring with certain other types of development, or when historical resources or districts are involved. In order for the SDP to be approved, certain conditions (called findings) must be met. These include things such as complying with regulations with the Land Development Code and making sure the development isn't detrimental to public health. The majority of these findings have to do with protecting the environment and historical resources. However, an important aspect to the discussion is the following sentences from the San Diego City Manager's Report. "Site Development Permits can currently be used to grant height deviations but only for projects that provide affordable housing. Staff believes that a similar height deviation like that allowed for affordable housing projects could be added to the Site Development Permit process."

Study and input is necessary in order to ensure that language allowing reasonable antenna support structures prevails. It would seem that the goal should be that most reasonable antenna support structures be defined as to *not* trigger an SDP, due to the burden that obtaining an SDP incurs on the amateur radio operator. The SDP code, located by following the link in this article, is short enough to read in one sitting, but complicated enough to require some study. It's strongly recommended reading for anyone becoming involved in San Diego Tower Rights as it may be the vehicle of regulation.

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALOMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-
(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-,
145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220
ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone

License & Class Information

Register 5-7 days in advance for the following test sessions.

● PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am in the Carlsbad Safety Center. Test sessions may be cancelled if nobody pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

● EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

● "The ARRL Technician Class Course for Ham Radio Licensing"
Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111. ♥

California's PRB-1

What does it say?

Here is the text of California's PRB-1 law, AB-1228. This law relates directly to the discussion of tower rights in California.

SECTION 1. Section 65850.3 is added to the Government Code, to read:

65850.3. Any ordinance adopted by the legislative body of a city or county that regulates amateur radio station antenna

structures shall allow those structures to be erected at heights and dimensions sufficient to accommodate amateur radio service communications, shall not preclude amateur radio service communications, shall reasonably accommodate amateur radio service communications, and shall constitute the minimum practicable regulation to accomplish the city's or county's legitimate

purpose.

It is the intent of the Legislature in adding this section to the Government Code, to codify in state law the provisions of Section 97.15 of Title 47 of the Code of Federal Regulations, which expresses the Federal Communications Commission's limited preemption of local regulations governing amateur radio station facilities. ♥

HAM RADIO

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Mysterious Interference in the San Diego AM Band

On Wednesday night, January 11, 2006, unidentified wideband interference blanketed the AM broadcast band in San Diego "with peaks all over the dial" according to one report. The interference was heard from 150 kHz to over 5 MHz and obliterated weak out-of-town AM broadcast signals. KNX was said to be 90% covered by static and noise. These observations were made along Highway 52. A second report (this from an

experienced broadcast engineer) noted RFI "from 540 kHz through 5 MHz [that] came on after 6 PM, 1/11, Wed evening. In the morning the hash was gone and [the] band was back to normal Thursday night... The RFI could NOT be nulled out and was as strong OUTSIDE as inside a house. This is using battery portables with circuit breakers on the house pulled. It was also noticed on several radios and driving in [a] car. Pretty widespread. So strong a slight hash was heard under KOGO." We could be dealing with military interference, spurs from a powerful broadcast transmitter or some peculiar kind of in- power-line device or devices. The FCC has been notified. – Bob Gonsett W6VR♥

Dec Meeting Goodie Givers W6YOO

Harry, KD6RHD John, W6GNI Al, KE6ZLY Glenn, KB6NMK Jo, W6ASP Preston, KE9SP Jukka, WB6BFG Bill, N6UWW Ellen, KG6WLF Amy

Jan Meeting Goodie Givers KG6RCW

Tom, KI6AOL Christy, WB6BFG Bill, N6UWW Ellen

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(10.25) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built in. With Chgr. \$40.00. Galaxy Electronics Phone Patch PR-550, \$20.00. Texas Instrument TI-2000 Slim Line Laptop w/3.5 disc drive, 20 MB HD w/ac adaptor (ideal for Portable Packet). \$20.00, Epson C60 Ink Jet Printer, New/Unopened, \$40.00. Avenger 4000 Commercial Alarm System, w/8 PIR's, keypad, 2 sirens, 1 sonic, \$100.00 OBO, 13 Inch Sony Industrial Video Color monitor Model PVM-1390, \$30.00 OBO, International Audio/Video Color Processor w/ac adaptor \$30.00 OBO. 54" Oak Roll Top Desk, excellent Condx \$350.00, Sentry Fire Proof Combination Safe, \$50.00. Heath SWR Meter Model HM-102 (needs meter cover) \$10.00. IBM Clone Pentium II clone, 350 Mhz, 6 GB HD, \$50.00 OBO. 250 Laser Movies, \$7.00/ea List available, first come first served. Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com
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BALUN KITS

Ferrites slip over coax. Shrink tubing holds them in place. Works from 3.5-60 MHz (Use two kits for 160m).

Model BA-58 (for RG58, RG8X & similar cables up to 1/4" dia. \$7.50+tax+\$6 S&H/order

Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

TUNER-TUNER

Tune your tuner without transmitting. Save that rig! Just listen to the Tuner-Tuner's noise with your receiver. Adjust your tuner for a null and presto! You have a 1:1 SWR.

Model PT-340 \$99.95+tax+\$6 S&H

See catalog at www.Palomar-Engineers.com
Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.



FOR SALE: Hy Gain - Hy Tower 5 band (80 thru 10) vertical antenna. This is a freestanding antenna that requires a 3-foot square cement base. It has S.S. hardware. I'm asking \$300.00 and you pick up in Fallbrook. The first two sections break down into 10-foot sections and the rest is tubular. **Call Dale (W6IWO) at (760) 728-6800**

(9.1) Congratulations! You have found the February Challenge. Here it is:

In North Africa, they say a fellow can buy a fifth of champagne for just a few pennies. Ah - but here's the catch! You gotta pay for the bottle - and bottles cost plenty there.

A bottle filled with champagne costs \$1.05. But the bottle costs \$1 more than the contents.

How much does the champagne cost?

<http://www.ac6v.com/>

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127 countries have visited www.ac6v.com. It's been in operation since 1997 and is highly praised by visitors. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites - the dreaded 404 Page Not Found. Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community!

Committee Chairpersons

ARES Info	Tony	KC6YSP
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Inventory	Dennis B.	KG6TUJ@amsat.org
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Newsletter	needed!	W5NYV@amsat.org
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Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
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Solar Cycles part 2

Michelle W5NYV

You'll recall from the December 2005 SCOPE that we talked about Smoothed Sunspot Numbers (SSN). High SSNs are better for high frequencies, and low SSNs are better for low frequencies. We're currently near the bottom of solar cycle 23. It all sounds so simple. Nice pretty graph, reasonably predictable behavior, let's get on the air! However, SSNs are only the beginning of the ways the sun affects propagation. Let's look at another big influence on the radio environment. Solar flares!

Solar flares burst out from the sun because of the collapse of magnetic gradients. This is analogous to the creation of violent storms here on earth that are due to the collapse of pressure gradients. A cold front crashes into a warm front, pressure builds up, air rushes through, a supercell forms, and SKYWARN activates their warning system. On the sun, magnetic fields form around developing sunspots. When there is a collapse, tremendous amounts of energy are released, and NOAA (National Oceanographic & Atmospheric Administration) activates their warning system. Want to know something that solar flares do to the sun that terrestrial storms do not do to the earth? They can cause sunquakes, the sun equivalent to our earthquakes.

Solar flares are like Hollywood Explosions. They're enormous, dramatic, and make great photographic stills. They are also Big Trouble for HF communications. Earth-facing solar flares that produce large numbers of protons can induce unexpected high currents in earthbound pipelines, cables, and transmission lines. They have knocked out communications, affected satellites, and made compass needles act whacky.

It only takes eight minutes for the cloud of Pure Proton Power to reach the earth from the sun, so being able to measure and predict damaging solar flares will only become more important with our increasing reliance on communications. The solar flare of March 6, 1989 was the largest ever recorded. It lasted for 10 hours, which is a very long time compared to the more typical 15 to 30 minutes that most flares last. The history of solar flare measurement indicates that that flare will hardly be the last one we experience.

When researching solar flares, look for representations of the intensity given by letters. The letter A stands for the lowest intensity flare. Going up in intensity, flares are rated as follows: B, C, M, and X. ♥

Public Relations & PARC

Michelle W5NYV

As long as I have been a member of the Palomar Amateur Radio Club, the position of Public Relations or Publicity Chair has remained unfilled. This is one position among many that the club has had some trouble keeping staffed. This isn't an uncommon problem in groups such as ours. Volunteers are a commodity in short supply, and it is easier to fill some positions than others. Whole books (e.g. *Bowling Alone: The Collapse and Revival of American Community* by Robert D. Putnam, New York: Simon & Schuster, 2000) have been written about how we as a society are becoming more isolated from each other, with membership in almost all types of groups and organizations declining.

In general, we as Californians belong to fewer organizations that regularly meet, know fewer of our neighbors, go out with friends less frequently, and even socialize with our families less often than even a few short years ago. A very interesting statistic from the book referenced above is that "Americans are bowling more than ever before, but they are not bowling in leagues." In other words, it's not just a catchy title. People really are bowling alone.

The reasons for these changes in our community and civic life are several. Demographic and technological changes have exerted tremendous pressure on the way we spend time together as well as the way we spend time separately. The rise of the internet, widespread availability of computer games, explosion of television channels, changes in family structure, evolving social roles, increases in the average number of hours worked per week, and a shift in where people tend to live are only the beginning of the influences that shape our social pursuits. Much like bowling, amateur radio is an individual pursuit that is traditional done in a social setting. However, our clubs and organizations are at risk for some of the very same reasons that bowling leagues are. Palomar Amateur Radio Club is approximately half the size that it was at its high-water mark. There is no one explanation for the decline in membership over the years. Perhaps the needs of amateur radio operators have changed in San Diego County. Although we like to think we've kept up with the changes, maybe we haven't done all we can to be the best organization we can be. Perhaps our current size is even ideal!

However, one of the many downsides to declining membership and lack of organization is the unfortunate effect it has on our rights to pursue our hobby. Although regulations exist protecting our right to have a reasonable type of antenna

support structure (*see page 5*), without an organized and public presence, these rights lack a powerful advocacy that cannot be adequately recreated by individuals acting alone.

Successful Public Relations has a powerful membership creation effect. Membership doesn't increase in an organization simply by repeating, "gosh we need more members" amongst ourselves. People are attracted to groups and organizations for many different reasons (primarily fun reasons). People find out about groups through personal contact with members, by initiating a search for a group based on individual interest, and often through noticing publicity generated by the group's activities.

We can rely on the vast majority of our members to be on the lookout for anyone that expresses an interest in joining. I've noticed that's pretty much a given in PARC. We have a very nicely done website that shows up in internet searches, and we have fliers that are periodically placed around town at locations that amateur radio operators might frequent. It's the last category – active and organized publicity – that we seem to be falling a bit short on these days. Let's fix that!

Public Relations, in addition to indirectly protecting the hobby by increasing the number of organized people that practice it, can also directly contribute to the promotion of the hobby by developing regular contact with elected and appointed public officials. This aspect is vital during times like the one we're facing now. Namely, when a government begins to examine issues such as tower ordinances that may or may not excessively restrict our ability to have an antenna of any reasonable type. You can read about Dr. Howard White's efforts to organize a special-interest group to educate and effect change as the process begins here in San Diego starting on the first page of this newsletter. Based on the efforts being made towards influencing what will be a very important phase of antenna regulation debate, I would suggest that it is time for Palomar Amateur Radio Club to renew our commitment to the Public half of the term "Public Service", and update our goals for publicity for and advocacy of our hobby at the local level. **This necessarily includes Public Relations leadership.** Please consider volunteering. Better yet, volunteer someone else that you know would do a good job! ☺

Good government, like charity, begins at home. Regardless of the amount of time or money you possess, every one of us is capable of doing two very important things. First, by educating ourselves on the basics of the issues at hand. Second, by contacting our elected officials to politely and competently express ourselves concerning issues such as antenna ordinances. ♥

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We're on the web! Find us at www.palomararc.org. See the newsletter in COLOR! Check out sets of PHOTOS!

About our Newsletter

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Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on February 1st, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be the celebration of the 70th anniversary of PARC! Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

March Club Reports

Treasurer's Report for February 2005

Total cash and Bank Accounts - \$13,015.88
Pre-paid dues \$6168.00, Prepaid Postage \$99.10, Equity \$6847.88,
Total Liabilities \$6168.00. One CD comes due on January 12.

Membership

Al Donlevy reports membership is down three to 388.

February Meeting Goodie Givers

KG6RCW Tom, KE6ZLY Glenn, KG6JEI Conrad, W6ASP
Preston, WB6BFG Bill, N6UWW Ellen, KF6WTN Mark

February Meeting Program Review

Our February Meeting was a celebration of the 70th birthday of the Palomar Amateur Radio Club. Members gathered at the Carlsbad Safety Center at 7pm on February 1st, 2006, to hear Dennis Baca speak about the early history of PARC as described in original club documents and paperwork. Next, John Kuivinen gave a speech on the origin of the repeater site property as well as some of equipment at the site over the years. After the presentation, cake and other treats were enjoyed by all. An audio recording of the presentation along with photos can be found in the photos section at our club website <http://www.palomararc.org/>.

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- 1 Echolink and PARC Repeaters, by NN3V
- 2 March Program Schedule, President's Report
- 3 Contest Calendar, SCOPE Challenge
- 5 Repeater, License, and Class Information
- 7 Club Classified Advertisements
- 8 Reading Propagation Reports

Echolink and PARC Repeaters

Charlie Ristorcelli, NN3V

Over the past two years, PARC members expressed interest in getting Echolink implemented on a PARC repeater. This article will explain the rudiments of Echolink, and give a status of that effort.

Echolink is a web-based application that uses Voice Over Internet Protocol (VoIP). Using VoIP, Echolink extends the reach of amateur radio to any place on the planet where there is an IP address. Every computer on the Internet has an IP address. Think of your desktop or laptop as having a worldwide known (to the rest of the internet) "mailbox address". Echolink is the extension of your computer's address to VoIP services over the Internet.

VoIP is an increasingly popular communications capability that allows you to communicate by voice using your computer. Many of you have heard of the cable-based telephone service being offered by some cable providers (Time Warner for example). What they are doing is using the VoIP protocol to send digital voice packets around the Internet from properly configured IP address to properly configured IP address (or addresses since more than two people can communicate simultaneously in a single conversation). See page 5 for a technical brief on VOIP.

Echolink simply extends that service to licensed amateur radio operators.

Echolink software is available free on the Internet. For PCs, go to <http://www.echolink.org/>. If you have a Macintosh (OS X), go to <http://www.dogparksoftware.com/EchoMac.html>.

Those of you who download the software will find that it is totally self-installing. Developed, programmed, and perfected by ham radio operators, this software is built the way all of us wish the gurus in Redmond built software. Installation is flawless, and you have to try real hard to make it fail on the installation!

Just because you download the software and install it does not mean you get to use it. Through use of Public Key Cryptography, the hams who wrote Echolink devised a foolproof way of certifying that someone who is trying to use the software is indeed a licensed amateur radio operator. This is totally transparent to you when you decide to use the software, but is worth understanding and is the

Continued on page 2, right-hand column

March Program Preview

"I Got My License... Now What?" Program Schedule

1. Palomar Amateur Radio Club, Steve Early AD6VI
2. ARRL San Diego Section, Pat Bunsold WA6MHZ
3. Amateur Radio Emergency Services, Tuck Miller NZ6
4. Races, Terry Runyon K3PXX
5. Public Service Events, David Doan KC6YSO
6. QRP, Jim Cooper NE6O
7. Home Brew, Pat Bunsold WA6MHZ
8. DX, IOTA, WAS, Harry Hodges W6YOO
9. ATV, Satellites, Art McBride KC6UQH
10. Digital Modes-PSK31, RTTY, Packet, Rod Dinkins AC6V
11. 6m and 6m DX, Rod Dinkins AC6V
12. Mobile Radios, Don Johnson WD6FWE
13. Programming a Radio (Generic), Bernie Lafreniere N6FN
14. How to use a Repeater Guide, Steve Early AD6VI
15. How to join a NORMAL conversation, David Doan KC6YSO
16. Red Cross and Amateur Radio, Ted Thompson
17. CERT and Amateur Radio, Mike Brown N6GEM
18. How to make an Emergency Communication, Gary Kent W6GDK
19. What to do in a Declared Emergency, Gary Kent W6GDK

President's Report

Well, PARC is now 70 years young and still striving to serve that local amateur community.

March is the month that we reach out to new Amateur Radio Operators. Typically, several Technician License classes are taught around the county in January and February. This year is no exception. As I write this, there is a class underway in Mira Mesa and one beginning in Alpine. There are often other classes through out the year, as well as individuals that self study for their license.

Missing from many of these classes is the big picture of the many facets of Amateur Radio.

To attempt to provide this picture last year, PARC provided a program titled: "I have my license...Now what?"

Those that attended last March, told us that we ought to do it again, so the March 1st, 2006 Program is:

"I have my license...Now what?"

We are covering subjects from Public Service, to DX, to how to join a "on the air" conversation.

Continued on page 9, bottom right-hand column

Continued from page 1, "Echolink and PARC Repeaters"

subject of a later discussion. If you are a licensed ham, read on.

To use Echolink, all you need is the soundcard on your computer, a microphone into the soundcard, speakers out of the soundcard, and in Internet connection (dial up or broadband) to communicate anywhere in the world with amateur radio operators who are also Echolink users. As I write these notes, my Echolink display tells me there are 2975 amateur radio stations logged on to Echolink at this moment. As a small example, there is one in Antigua-Barbuda, 12 in Saudi Arabia, 6 in China, 2 in Iraq, 1291 in the United States, 165 in Russia, etc. And all I have to do is hover my mouse cursor over their call sign, double click, and I am connected with him or her (or with the repeater for which they are a node), and I can chat to my heart's content. Sorry folks, Echolink contacts do not count for DX!

(However, CQ Magazine sponsors the CQ iDX Award, which encourages the use of internet-linked repeater networks such as IRLP and Echolink. Note that computer-to-computer QSOs will not count for the award. For more information see the June CQ Magazine or their website at <http://www.cq-amateur-radio.com> -W5NYV)

For some time, PARC members have been interested in establishing an Echolink node for PARC. The PARC Board decided last year to allow placing the PARC Echolink node on the 447 MHz repeater. So, you ask, what good would that be?

Well, imagine in your mind's eye that instead of a speaker and microphone going in and out of the soundcard in your computer, you connect the sound card of your computer to the microphone input and output audio of a radio. What happens then? Say the radio is tuned to our 447.000 MHz repeater. What happens?

Well, imagine that the radio in question above belongs to NN3V. If another ham radio operator out there in cyberspace "connects through the internet" with NN3V, when they speak, they will be transmitting on NN3V's radio that is set up on the 447.000 MHz repeater. Everyone within receive range of 447.000 MHz repeater will hear the ham (who may be calling through the internet while she is in Moscow)!

Isn't that neat! Wow!! But wait, what happens if you answer her call from Moscow, using your radio on the 447.000 MHz repeater?

Continued on page 3, right-hand column

SCOPE CHALLENGE

February Challenge Answer: Champagne is two and a half cents. Bottle is one dollar and two and a half cents (one dollar more than the champagne). Correct solution was calculated by Carl, W6VDC. Good work, Carl!

March's challenge is somewhere in the newsletter. Find it and answer it, and you will be credited in next month's SCOPE! Got a photo to submit for a Photo Challenge? Let us know! scope@palomararc.org •••••

CONTEST CALENDAR

Mar 4	ARRL DX Contest, SSB
Mar 4	Wake-Up QRP Sprint
Mar 4	Ukraine RTTY Championship
Mar 5	DARC 10-Meter Digital Contest
Mar 6	RSGB 80m Championship
Mar 7	ARS Spartan Sprint
Mar 7	AGCW YL-CW Party
Mar 9	Pesky Texan Armadillo Chase
Mar 11	RSGB Commonwealth Contest
Mar 11	Idaho QSO Party
Mar 11	AGCW QRP Contest
Mar 11	Oklahoma QSO Party
Mar 12	NA Sprint, RTTY
Mar 12	UBA Spring Contest, CW
Mar 12	NSARA Contest
Mar 12	Wisconsin QSO Party
Mar 15	RSGB 80M Championship, CW
Mar 17	SARL VHF/UHF Contest
Mar 18	10-10 Int'l Mobile Contest
Mar 18	BARTG Spring RTTY Contest
Mar 18	Russian DX Contest
Mar 18	AGCW VHF/UHF Contest
Mar 18	CLARA and Family HF Contest
Mar 18	Virginia QSO Party
Mar 19	UBA Spring Contest, 6 Meter
Mar 19	9K 15 Meter Contest
Mar 20	Run for the Bacon QRP Contest
Mar 23	RSGB 80M Championship, SSB
Mar 25	CQ WW WPX Contest, SSB
Mar 26	UBA Spring Contest, 2 Meter
Mar 26	Spring QRP Homebrewer Sprint

CU in the Contests! Harry/W6YOO

Continued from page 2, "Echolink and PARC Repeaters"

Well, just what you would expect. Your transmission through the repeater will be received by NN3V's radio and relayed through the web to the station in Moscow. Isn't that sexy? DX without a tower!! (Well, sort of DX. But hey, it's the thrill of it all).

So how do you use this lash-up with your radio? That is, assuming you are walking along the beach in Carlsbad, with your handy talkie. What can you do on Echolink? Well, it is real easy.

If you know the "node number" of a ham who has Echolink on their computer, or know of a repeater that is linked through Echolink, you are ready to connect to that station over the PARC repeater!

The node number is the key!

To access any Echolink station over our 447.000 MHz repeater, all you have to do is enter the node number as a transmission on your DTMF keypad.

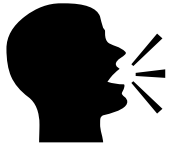
You enter the node number to access the other node. You transmit the pound sign # to knock the link down!

So, when you are done talking with the ham operator located in Rangun, remember to knock the link down.

Idiosyncrasies of Repeater Echolink Node Use

1. Your tones have to be loud and clear. If there is any RF path noise or distortion between your DTMF pad and the receiver input at NN3V's radio, you may not bring the link up.
2. When you connect, the Echolink system will tell you that you connected. For example, W8TVC-R is an Echolink repeater node in Traverse City Michigan. Some of you may have heard me talking with the IOOK gang in Traverse City. The node number for W8TVC-R is 56464. If you enter that node number on the system, and all goes well, you will hear "Connected to W8TVC".
3. When you are finished, remember to transmit #. The system will tell you when you succeed in bringing the link down by telling you "W8TVC disconnected". If you do not get that message, keep transmitting # until it knocks down. There is no danger, but there is no point in tying the node up for nothing.
4. **BY ALL MEANS BE PATIENT AND COURTEOUS!** You cannot just use the system like a single repeater contact. There is the W6NWG 447.000 MHz squelch tail, the time delay through the web, other squelch tails at the other end, and in some cases multiple node hops by distant repeaters. So if you start jabbering away the moment you connect, you can wind up talking to yourself without anyone being able to respond. **BE PATIENT. LISTEN BEFORE YOU TRANSMIT.**

Continued on page 9



NETS



Regular On-the-Air Nets sponsored by the Palomar Amateur Radio Club.

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sunday	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net	
Monday	2100	146.730	Microwave Net	Kerry B.
Tuesday	1900	147.130	Red Cross Net	Ted tthompson@sdarc.org
Tuesday	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillimek@home.com
Wednesday	2000	146.730	Sailor's Net (stay tuned)	Mace
Thursday	1930	147.075	Young Hams Net (inactive)	
Thursday	2100	146.730	Ham Help (need ops)	David D KC6YSO@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	
Saturday	2000	52.680	6Mtr Emergency Services Net (inactive)	

Other nets that might be of interest to the membership

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
Mon-Fri	2000	28.340	10 Meter Net	Dennie WA9MTP

Net Participation Tracker – A convenient form for participating in PARC nets.

NET	DATE	NOTES

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALOMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-

(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-

145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220

ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone

License & Class Information

Register 5-7 days in advance for the following test sessions.

- PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

- EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025. Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

- "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

VOIP Basics

Michelle W5NYV

Traditional Internet protocols were challenged when it came to transferring real-time application data such as voice or video. Jitter, delay, echo cancellation, quality of service and security were all big problems that made audio and video quality hard to ensure. While reliability is the most important aspect for transport of data (you want your electronically submitted tax return to be 100% accurate) retransmitting a lost or erroneous real-

time voice or video packet doesn't make any sense. Once the moment has passed, then it's too late to signal the server to send packet #85934 again. The voice conversation moves on and delivering correct information at a later time doesn't add anything to the intelligibility of the received audio.

Newer implementations of Internet Protocol (IP) and new protocol specifications such as H.323 or SIP were developed to bridge between IP and traditional telecom processes that were

designed for real-time audio. This process of developing IP-based protocol definitions for multimedia communications became known as Voice over IP (VOIP).

Minimizing one-way, end-to-end delay over the network is key. If there is too long a delay in voice packet delivery, speech will be unrecognizable. An acceptable delay is less than 200 milliseconds. Advancements in methods of encoding data have reduced much of the handling delay, leading to improved VOIP performance.

HAM RADIO

H
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Ron N6OMW
Jose XE2SJB
Bob KA6EKT

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Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

www.ac6v.com/

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127 countries have visited www.ac6v.com.

www.ac6v.com has been in operation since 1997 and is highly praised by visitors. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community!

Current Needs

Volunteers are needed for the following club positions.

Del Mar Fair participation Chair.
2006 Field Day Chair.
Ham Help Net Operators.
Assistant southwest division director.

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Some of the positions are irregular or seasonal in schedule (Del Mar Fair), and some of them are consistent in schedule (newsletter, net operators). Regardless of the type of position and the time commitment required, each and every volunteer opportunity is greatly appreciated and makes our club more successful.

PARC 2006 Board

President: Steve Early AD6VI
(619) 461-2818 AD6VI@cox.net
VP: Dennis Baca KD6TUJ
(760) 722-0251 KD6TUJ@amsat.org
Sec: Gary Kent W6GDK
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rrbirch@cox.net
Dir: Tom Martin KG6RCW
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(760) 749-4825 KF6WTN@amsat.org
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Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(2.2) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built w/charger \$40.00, Galaxy Electronics Phone Patch PR-550 \$10.00, Avenger 4000 Commercial Alarm System, w/8 PIR's, keypad, 2 sirens, 1 sonic \$80.00 OBO, 13 Inch Sony Industrial Video Monitor Model PVM-1390 \$20.00 OBO, 54" Oak Roll Top Desk, excellent Condx \$350.00 OBO, Sentry Fireproof Combo Safe \$30.00 OBO, Heath SWR meter model HM-102 (needs meter cover) w/remote pickup \$10.00 OBO, IBM Clone Desktop 350 Mhz Pentium II computer 6 Ghz HD \$30.00 OBO, International Video/Audio signal processor/distribution Amp w/full studio controls \$40.00 OBO, VHF/UHF Conical Monopole Vertical \$10.00, Panasonic KX-F50 Phone answering machine/FAX \$10.00, Computer Desk w/wheels \$20.00 OBO, Kerosene Heater w/extra wicks \$30.00, Many Panasonic Video accessories, 200 Laser Movies Contact for List \$5.00 each, Some collector Directors cuts, Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com

(12.6) Wanted: A 500 to 1KW amp for disabled ham. Please phone (760-724-0049) or e mail (sstires@cox.net) for details.

Thank you...WA5ACE

(9.13) Ham-friendly property FOR SALE. www.pettus.us

(2.19) Coronado Hills Property for Sale see <http://www.kf6c.com/SanMarcosProperty.htm>

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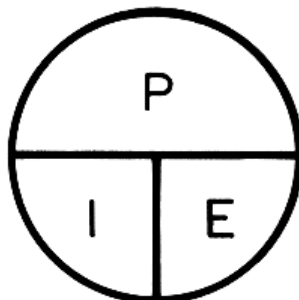
Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

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See catalog at www.Palomar-Engineers.com
Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.



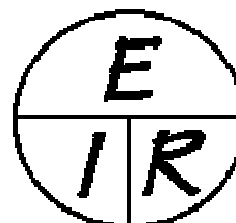
FOR SALE: Hy Gain - Hy Tower 5 band (80 thru 10) vertical antenna. This is a freestanding antenna that requires a 3-foot square cement base. It has S.S. hardware. I'm asking \$300.00 and you pick up in Fallbrook. The first two sections break down into 10-foot sections and the rest is tubular. **Call Dale (W6IWO) at (760) 728-6800**

City Council Update

As reported in the February 2006 SCOPE, the San Diego City Manager's Report on Amateur Radio Antenna Regulations mentions a need for developing guidelines and regulations for amateur radio antennas that may impact how easily we can participate on the air.

The Land Use and Housing Committee does not have the issue docketed in the near future. However, according to Jaymie Bradford, a consultant for the Land Use and Housing Committee, Development Services is trying to include it in their Overall Work Program (OWP) which is tentatively scheduled to be heard before committee on March 29, 2006.

The issue will be continuously monitored by PARC board members. Legislative action will be taken when necessary by the SANDARC Legislative Oversight Committee.



March Newsletter Challenge: What do the round symbols above and to the left mean?

Committee Chairpersons

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	
BK6EBYDAT@Gerry.Palomar.caltech.edu		
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	needed!	
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day	needed!	
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KD6TUJ@amsat.org
New Member	Christy M.	KI6AOL
Nets	PARC	Board@palomararc.org
Newsletter	Filled!	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KD6TUJ@amsat.org
Publicity	Terry R.	K3PXX
QSL Cards	Harry H.	W6YOO@cox.net
RACES Info	Jo A.	KB6NMK@amsat.org
RED Flag	Steve	AD6VI@amsat.org
Repeater Site	Mike P.	K6MRP@amsat.org
Repeater Tech	Mike D.	AB6QT@amsat.org
SANDARC	Jin/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Reading Propagation Reports

Michelle W5NYV

We've covered Smoothed Sunspot Numbers (SSNs) and learned that high SSNs are good for high frequency (HF) operation and that low SSNs are better for low frequency (LF) operation. We've learned that solar flares are generally bad for HF, and have intensities indicated by letters. For today, let's read an ARRL propagation report and see what else we need to know to use it. The following paragraph is an excerpt from the February 3rd ARRL propagation report.

Sunspot numbers for January 26 through February 1 were 24, 29, 11, 0, 0, 0 and 0 with a mean of 9.1. 10.7 cm flux was 86.9, 83.5, 80, 79.5, 78.8, 77.6, and 77.6, with a mean of 80.6. Estimated planetary A indices were 29, 8, 6, 3, 1, 2 and 4 with a mean of 7.6. Estimated mid-latitude A indices were 15, 7, 4, 1, 0, 1 and 3, with a mean of 4.4.

Right off, we see daily sunspot numbers. Notice how they tailed off and dropped to zero as the sunspots rotated out of view. These daily sunspot numbers are averaged over time to become our SSNs. The next measurement in the report is solar flux. "10.7 cm Solar Flux" is the amount of solar noise that is emitted by the sun at 10.7 cm (2800 MHz) wavelengths. Solar Flux numbers range from 50 to 300. Higher numbers mean that HF and DX operation should be improved. Lower numbers mean a lower maximum useable frequency. DX work at HF may therefore be limited. The final numbers are "A indices". Lots of different observatories all over the world each take geomagnetic activity measurements several times a day. The planetary A index is a global average of these geomagnetic measurements. The mid-latitude A index is the measure of geomagnetic disturbance that is tuned for mid-latitudes. The higher the A index, the worse it is for HF propagation. The K index is essentially the same measurement as the A index, however it is on a different scale.

If the sunspot numbers are sufficiently high, if 10.7cm solar flux remains above about 150 for a few days and if the A index stays below 7 (or the K index stays below 2), then be sure to check the bands for good DX because conditions should be right.

Now that you're ready to read propagation reports, where do you find them? They're broadcast weekly on W1AW, posted weekly on the ARRL website, and available each week as an email subscription from ARRL. Most observatories also publish their numbers themselves, so you can go directly to the primary source material! ♦♦♦♦♦

Continued from page 3, "Echolink and PARC Repeaters"

5. The easiest way to get the "feel" for Echolink repeater use is to connect to the Echolink Test Server (node # 9999). What follows can serve you as a guide to making your first Echolink transmission on the repeater.

a. Tune to 447.000 MHz repeater and announce your presence on the repeater. For example, I would say, "NN3V listening". If I do not hear anyone reply, I will then say "NN3V connecting to Echolink"

b. I then hold the mike key down and transmit 9999. If successful, I will hear "Connected to the Echolink test server. This server listens to your transmissions and plays them back to allow you to set your audio levels. Feel free to use the test server as often as you like".

c. From that moment on, anything I transmit into the repeater (or any other signal that enters the NN3V radio input) will be recorded by the test server and played back when the input goes quiet. Remember, listen and be patient!

d. When done testing I would simply Enter #. The system will alert me with "Echolink Test Server Disconnected"

e. I would then announce "NN3V returning the repeater to normal use" Well, that's it in a nutshell! I usually talk with many friends on the East Coast and in Europe as I drive to work in the morning. Beats the lack of DX in the downturn of the propagation cycle!

Some neat nodes:

Call Sign	Node#	Location
W8TVC-R	54646	
7Z1UG	218150	SAUDIA ARABIA
JA3YAA	245977	TOKYO
JA6NKA	4601	KAGOSHIMA REPEATER
S21RB-L	68569	BANGLADESH
VK2IAU	98979	AUSTRALIA
VK2TVZ-R	264410	COOMA RPTR, AUSTRALIA
VK3JED-R	62214	VK EmComm
RD3AE	214348	MOSCOW

So where are we as far as getting the service established on the 447 MHz repeater?

Well, at the moment we have a few kinks to work out. Preliminary tests show the Echolink node is not working well through our repeaters. There are several possibilities.

It may be that there is some non-linearity in the repeaters, such that when a tone is transmitted into the repeater, the output tone is distorted. Echolink is very touchy on the quality of the tones.

If we have any non-linearity, then the tones will not work properly to connect through Echolink.

There is also a possibility that the autopatch system is set up (correctly) to prevent unexpected or "bogus" tones from bringing up the autopatch (something we do not want).

If that is the case, then modifications will be needed. There may be several ways to correct this, and in some of the ways, the autopatch system and Echolink can coexist.

The bottom line is that if you, the PARC members, want this to be a working system, you have to show interest, and raise this as a matter worth fixing.

Meanwhile, if you are driving through Poway (such as driving down I-15 around Rancho Bernardo road) feel free to try the NN3V Echolink node. It is on 146.415 MHz simplex. All you have to do is follow the above procedures. •••••

Continued from Page 2, President's Report

If you are, or someone you know is, new to amateur radio, this is a great opportunity to see many of the opportunities and ways to participate, Such as Microwave, Amateur Television (ATV), Long Distance (DX), Low Power (QRP) and Homebrew (build it yourself).

If you want to get into Amateur Radio Public Service, this is a good opportunity to meet representatives of most of the major players, such as Amateur Radio Emergency Services (ARES), American Red Cross (ARC), Community Emergency Response Team (CERT), Radio Amateur Civil Emergency Service (RACES). We are providing this program to help HAM's to prepare for upcoming Public Service events (like the SURF Lake Hodges 50K Run on March 11th and the Special Olympics, Contests like "Field Day" (June 23rd-25th), and Emergencies (like wild fires, etc.).

Bring a friend and learn something new. Speaking of Field Day, the Palomar Amateur Radio Club is looking for several new volunteers to help out on June 23, 24th and 25th. Chef Le Marc (KF6WTN) has reported that, due to circumstance beyond his control, he will not be able to participate in Field Day this year. So, we are looking for help at the Road Kill Cafe. It will be hard to approach the standard that Mark has set, but we must try. Additional opportunities are likely to be identified as we approach June, so keep an eye on The Scope.

See you March 1st, 7:30PM, at the Carlsbad Safety Center.

Steve Early, President

Palomar Amateur Radio Club, Inc.

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About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

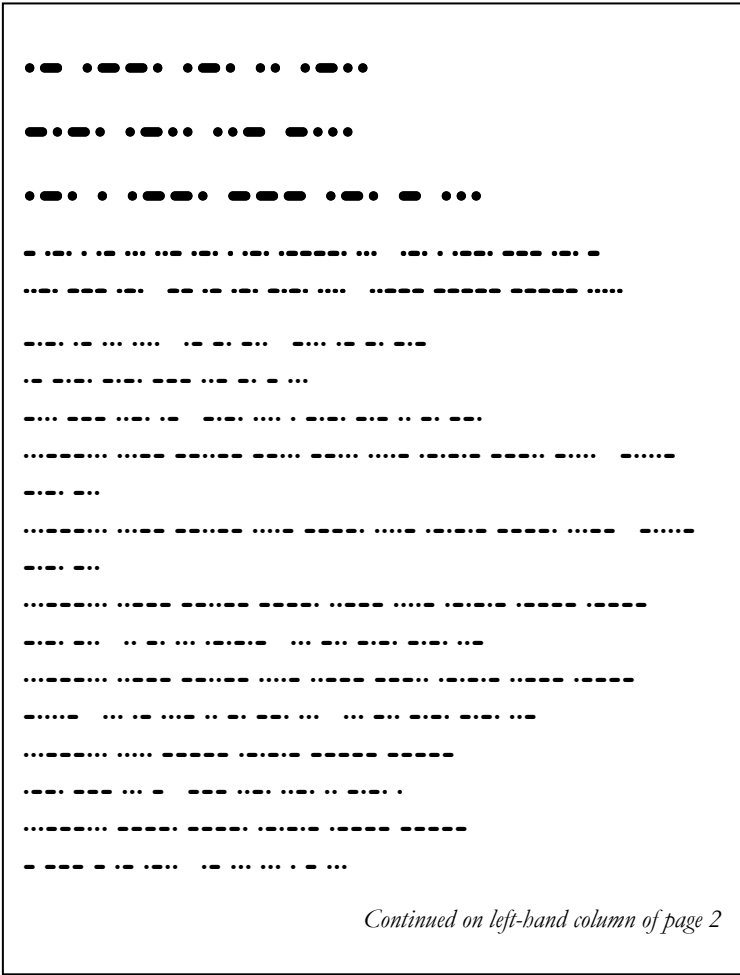
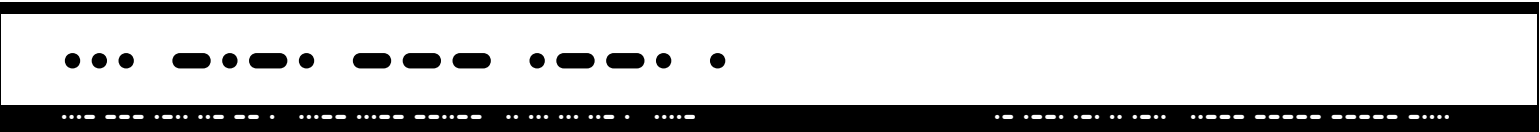
About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on March 1st, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be "I Have My License... Now What?" Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!



Continued on left-hand column of page 2

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- 2 Club Events
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- 7 Club Classified Advertisements
- 8 Wetlands Status for Club Member's QTH!
- 9 Del Mar Fair Booth, What to do about Interference

Yellowstone and Palomar

Michelle W5NYV

National Geographic News reports "Much of Yellowstone National Park lies in the crater of a massive volcano, formed in a landscape-altering eruption 640,000 years ago. The crater, or caldera, measures some 28 miles wide by 47 miles long. But the precise relationship between volcanic activity deep underground and Yellowstone's well-known network of geysers and other geothermal features has long been a puzzle for geologists.

Now a study by scientists with the U. S. Geological Survey (USGS) and the Yellowstone Volcano Observatory attributes changes in both surface terrain and geyser behavior to flows of magma, or molten rock, 9 miles below the Earth's surface.

"We're not sure yet if this is a normal episode or not," said Charles Wicks, a geologist at the USGS Western Region headquarters in Menlo Park, California."

The March issue of the journal Nature published a paper by YVO scientist Charles Wicks and colleagues about a period of uplift in the northern part of the Yellowstone caldera (Wicks, et al., 2006). It describes an uplift of 5 inches that occurred between 1997 and 2003, at a time when other changes were occurring in the Pacific Peninsular Palomar Mountain Range, located far to the southwest in Southern California.

Despite the distance between the two geologic formations, fumaroles in the Anza Borrego desert have steadily migrated towards the Palomar Mountain Range. The current theory, as proposed by Dr. Shellie Forbis of the Smith Volcano Institute in San Diego, is that the fumaroles are important harbingers of concurrent geologic activity.

"This type of volcanic activity may lead to an observation of increased 2m interference. This includes what appears to be tropospheric ducting, but is actually fumaroles gases interacting in places where nothing works good, producing radio effects."

The recommendation from the Volcano Institute is to continue to monitor seismic activity at the repeater site.

"The only way to prevent an eruption," Dr. Forbis concluded "Is to continue to increase the number of wetlands on the mountain."



[illegible]

Thank you very much to everyone who helped with this class, including Pam Thompson at the Observatory, Palomar Mountain resident Chris Kusek, and PMVFD Fire Chief George Lucia. Without their support, classes like this don't happen.

ARRL has useful tools to help instructors. If you register with ARRL to become one of the over 2000 ARRL Registered Volunteer Instructors, then you will receive brochures and handouts along with other services especially designed for instructors. An instructor's manual and guidance on planning classes is another benefit of registering.

Phone service on the mountain was also disrupted, and traffic problems with thousands of visitors flocking to see the snow created transportation challenges for fire, police, and repair crews. For photos of the repeater site on 12 March 2006 see the PARC website at www.palamararc.org.

W5NYV

CONTEST CALENDAR

Apr 1	Kids Roundup
Apr 1	Polish DX Contest
Apr 1	Spain RTTY Contest
Apr 1	QCWA Spring QSO Party
Apr 1	Missouri QSO Party
Apr 2	RSGB 80m Contest, CW
Apr 3	ARS Spartan Sprint
Apr 4	YLRL DX Contest, CW
Apr 4	144 MHz Spring Sprint
Apr 6	SARL 80m QSO Party
Apr 8	JIDX CW Contest
Apr 8	ARCI Spring QSO Party
Apr 8	Europe Spring Sprint, cW
Apr 8	Georgia QSO Party
Apr 8	Montana QSO Party
Apr 9	UBA Spring Contest, SSB
Apr 11	YLRL DX Contest, SSB
Apr 12	222MHz Spring Sprint
Apr 12	RSGB 80m Contest, SSB
Apr 15	ARLHS QSO Party
Apr 15	Estonia Open HF Contest
Apr 15	Europe Spring Sprint, SSB
Apr 15	Michigan QSO Party
Apr 15	Spain QRP CW Contest
Apr 15	Ontario QSO Party
Apr 15	Yugoslavia DX Contest
Apr 17	Run for the Bacon QRP Contest
Apr 17	Low Power Spring Sprint
Apr 20	432 MHz Spring Sprint
Apr 20	RSGB 80m Contest, Data
Apr 22	Colombian Int'l Contest
Apr 23	Polish RTTY Contest
Apr 23	Florida QSO Party
Apr 29	Helvetia Contest

An interesting mix of contests this month. All modes are represented. Toss in a Couple of state QSO parties and you have a mix to satisfy anyone. CU in the contest! 73 de Harry, W6YOO

President's Address

Steve Early AD6VI

President, Palomar Amateur Radio Club, Inc 2006

The March Program: "I have got my license...Now what?" is behind us. This program was well attended and covered a lot of territory. We had a number of new HAMs and first time visitors in attendance. This program is only a part of our ongoing efforts to support the local amateur radio community and all new HAMs.

The April 5th Program will be: "Restoring Vintage Radios" by Pat Bunsold. Pat will be covering many of the techniques used to recondition and then breathe new life into "Vintage" radios and the "Crest Radio Museum".

Looking down the road....

PARC tradition has several annual events, including Field Day (June 23-25), the Annual Picnic (August/September) and the PARC Auction.


Field Day: The Palomar Amateur Radio Club is looking for several new volunteers to help out on June 23, 24th and 25th. There are several needs that must be met.

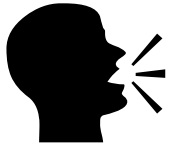
- 1) Volunteers to publicize/promote our Field Day event:
- 2) Volunteers for Set-Up.
- 3) Operators
- 4) Volunteers for Operator Support
- 5) Volunteers for Tear-down
- 6) Road Kill Cafe - Chef Le Mark (KF6WTN) has reported that, due to circumstance beyond his control, he will likely not be able to participate this year. A new Chef has been identified, but we are looking for additional Chef's In Training, to maintain the standard that Mark has set at the Road Kill Cafe.

Additional Field Day opportunities are likely to be identified as we approach June, so keep an eye on The Scope.

We will talk more about the picnic and auction, after Field Day

This year, the 2006 ARRL Southwestern Division Convention is also in town. The 2006 Southwestern Division Convention will be held in Mission Valley on September 22nd, 23rd and 24th. This annual event lands in San Diego only every fourth year. This is a great chance for local HAMs to see the latest tools and, equipment, and attend presentations (Forums) on many Amateur Radio topics. PARC has a tradition of supporting this convention by encouraging Member Attendance and Volunteer Participation. Opportunities to help are many. Please contact myself, ad6vi@cox.net, or see www.sandarc-conv2006.org/ for more information

See you on April 5th, at 7:30PM, in the Carlsbad Safety Center. 



NETS



Regular On-the-Air Nets sponsored by the Palomar Amateur Radio Club.

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sunday	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net	
Monday	2100	146.730	Microwave Net	Kerry B.
Tuesday	1900	147.130	Red Cross Net	Ted tthompson@sdarc.org
Tuesday	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillmek@home.com
Wednesday	2000	146.730	Sailor's Net (stay tuned)	Mace
Thursday	1930	147.075	Young Hams Net (inactive)	
Thursday	2100	146.730	Ham Help (need ops)	David D KC6YSO@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	
Saturday	2000	52.680	6Mtr Emergency Services Net (inactive)	

Other nets that might be of interest to the membership

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
Mon-Fri	2000	28.340	10 Meter Net	Dennie WA9MTP

Net Participation Tracker – A convenient form for participating in PARC nets.

NET	DATE	NOTES

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALOMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-

(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-

145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220

ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone

SCOPE Challenge

March Challenge Answers:

POWER is as easy as PIE. $P=IE$. 1 watt = 1 amp * 1 volt.

Ohm's law "The eagle sees the Indian by the rock."
 $E=IR$. 1 volt = 1 amp * 1 ohm.

Correct answers submitted by Marvin WB6PKK.
Also, February Challenge was also correctly
answered by Howard WB6AKM. Congratulations
Marvin and Howard!

License & Class Information

Register 5-7 days in advance for the following test sessions.

- PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

- EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025. Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

- "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

Escondido Amateur Radio Society Annual Auction

Thursday, April 13, 2006

Salvation Army Facility,

1301 Las Villas Way,

Escondido, California

6:00 p.m. Seller Registration

6:30 p.m. Buyer Registration

7:00 p.m. Auction Begins

Here is your opportunity to sell off your classic radio and electronic gear and to acquire something new for your shack. Art McBride will be Our Auctioneer. Come join in the fun!

HAM RADIO

Tom KM6K
Ron N6OMW
Jose XE2SJB
Bob KA6EKT

H
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Cushcraft
And
Others too
Numerous to
Mention!

Drop in to see our display of working equipment. Find out about Pkt location determining equipment (APRS). Check our complete line of magazines, ARRL books, license manuals, and Bulletin Board with all sorts of Goodies listed.

Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

www.ac6v.com

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127 countries have visited www.ac6v.com which been in operation since 1997. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community! 




Current Needs

Volunteers are needed for the following club positions.

Del Mar Fair VOLUNTEERS
2006 Field Day Chair.
Ham Help Net Operators.
Assistant southwest division director.

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Each and every volunteer is greatly appreciated and makes our club more successful. 

PARC 2006 Board

President: Steve Early AD6VI
(619) 461-2818 AD6VI@cox.net
VP: Dennis Baca KD6TUJ
(760) 722-0251 KD6TUJ@amsat.org
Sec: Gary Kent W6GDK
(858) 679-0578 W6GDK@arrl.net
Treas: Bob Birch KG6RGI
rrbirch@cox.net
Dir: Tom Martin KG6RCW
Dir: Mark Raptis KF6WTN
(760) 749-4825 KF6WTN@amsat.org
Site Management:
Mike Pennington K6MRP
K6MRP@amsat.org
Membership: Al Donlevy W6GNI
(760) 630-3096 W6GNI@amsat.org
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WA6GYG

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FOR SALE

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to

SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(2.2) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built w/charger \$40.00, Galaxy Electronics Phone Patch PR-550 \$10.00, Avenger 4000 Commercial Alarm System, w/8 PIR's, keypad, 2 sirens, 1 sonic \$80.00 OBO, 13 Inch Sony Industrial Video Monitor Model PVM-1390 \$20.00 OBO, 54" Oak Roll Top Desk, excellent Condx \$350.00 OBO, Sentry Fireproof Combo Safe \$30.00 OBO, Heath SWR meter model HM-102 (needs meter cover) w/remote pickup \$10.00 OBO, IBM Clone Desktop 350 Mhz Pentium II computer 6 Ghz HD \$30.00 OBO, International Video/Audio signal processor/distribution Amp w/full studio controls \$40.00 OBO, VHF/UHF Conical Monopole Vertical \$10.00, Panasonic KX-F50 Phone answering machine/FAX \$10.00, Computer Desk w/wheels \$20.00 OBO, Kerosene Heater w/extra wicks \$30.00, Many Panasonic Video accessories, 200 Laser Movies Contact for List \$5.00 each, Some collector Directors cuts, Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com

(12.6) Wanted: A 500 to 1KW amp for disabled ham. Please phone (760-724-0049) or e mail (sstires@cox.net) for details.

Thank you...WA5ACE

(9.13) Ham-friendly property FOR SALE. www.pettus.us

(2.19) Coronado Hills Property for Sale see <http://www.kf6c.com/SanMarcosProperty.htm>

(3.13) For Sale: Yaesu FL 2100B linear amp

with manual. Checks out good on 80 thru 15, a bit unstable on 10. Ask \$350 or interesting trade. Ron K2RP

436-8109 K2RP@ARRL.NET.

(3.13) Wanted: YAESU FP-707 power supply. Would also consider purchasing other accessories for FT-707 rig.

Contact Jack Jennings KG6RWI,

(760) 749-4572 or kg6rwi@aol.com

FOR SALE: Hy Gain - Hy Tower 5 band (80 thru 10) vertical antenna. This is a freestanding antenna that requires a 3-foot square cement base. It has S.S. hardware. I'm asking \$300.00 and you pick up in Fallbrook. The first two sections break down into 10-foot sections and the rest is tubular. **Call Dale (W6IWO) at (760) 728-6800**

PALOMAR ENGINEERS

Box 462222, Escondido, CA 92046

TOROID CORES

Palomar stocks a wide variety of cores and beads. Our RFI Tip Sheet is free on request.

Our RFI kit keeps RF out of your telephones, TVs, stereo, etc. **Model RFI-4 \$25 +tax+\$6 to ship.**

BALUN KITS

Ferrites slip over coax. Shrink tubing holds them in place. Works from 3.5-60 MHz (Use two kits for 160m).

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Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

TUNER-TUNER

Tune your tuner without transmitting. Save that rig! Just listen to the Tuner-Tuner's noise with your receiver. Adjust your tuner for a null and presto! You have a 1:1 SWR.

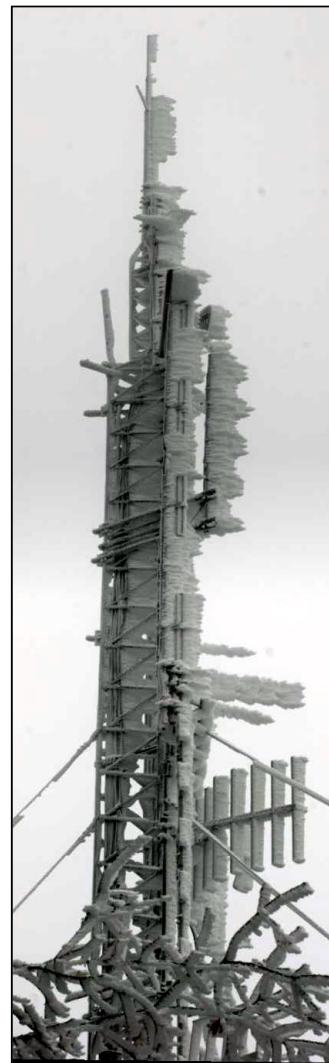
Model PT-340 \$99.95+tax+\$6 S&H

See catalog at www.Palomar-Engineers.com

Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.

SCOPE Challenge:

A woman shoots her husband. Then she holds him under water for over 5 minutes. Finally, she hangs him. But 5 minutes later they both go out together and enjoy a wonderful dinner together. How can this be? Send your solution to scope@palomararc.org!



W6NWG on 12 March 2006

Photo by W5NYV

Committee Chairpersons

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	
BK6EBYDAT@Gerry.Palomar.caltech.edu		
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	Jim Cooper	NE6O@amsat.org
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day	needed!	
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KD6TUJ@amsat.org
New Member	Christy M.	KI6AOL
Nets	PARC	Board@palomararc.org
Newsletter	Filled!	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KD6TUJ@amsat.org
Publicity	Terry R.	K3PXX
QSL Cards	Harry H.	W6YOO@cox.net
RACES Info	Jo A.	KB6NMK@amsat.org
RED Flag	Steve	AD6VI@amsat.org
Repeater Site	Mike P.	K6MRP@amsat.org
Repeater Tech	Mike D.	AB6QT@amsat.org
SANDARC	Jin/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Field Day

June 24-25, 2006

Always the Fourth Full Weekend In June


KB5MU Granted Wetlands Status

Michelle W5NYV

We're pleased to hear that KB5MU's QTH on Palomar Mountain is the newest coastal zone! (see California Code of Regulations 14 CCR 13577 for details) In a routine inspection, both hydric soils and extensive growth of hydrophytes were observed in what appeared to be an old swimming pool. Some of these hydrophytes were an extremely endangered species (*Codjor iratus*) that only exists in the presence of strong RF fields.

Even though vegetation was lacking and soil was poorly developed, the presence of surface water or saturated substrate at some time during the previous ten years had been continuously recorded by various government agents that have made, to date, almost 300 helicopter surveys of his location.

A source with the state, who wished to remain anonymous, sketched out plans for the newest coastal zone.

"Soon we will move in to the site in order to evaluate the exact type of wetland. Is it seasonal or perennial or permanent? This makes a difference on the forms. Is it a marine, estuarine, lacustrine, riverine, or a palustrine wetland? The owner will probably want to proudly install signage that indicates the classification and type of wetland! I know I would. I've been working on developing a palustrine wetland in my sink for about four years. It's a lot of work, and KB5MU needs to be commended for his environmental achievement! It's especially important given that wetlands help prevent volcanic eruptions, and we all know what a mess an eruption would be." 



Del Mar Fair HAM BOOTH

Jim Cooper NE6O

We need operators to man the Amateur Radio Booth at the San Diego County/Del Mar Fair! Please contact NE6O to volunteer.

The Fair runs from June 15, 2006 to July 4, 2006. Volunteer for any time slot you want and I will check to see if it is available. Volunteer early to make sure you get a chance!

There will be two shifts per day, 10am to 2pm, and 2pm to 6pm. We need two people per shift.

The Palomar Club has committed to staffing the booth on Thursday, Friday, and Saturday June 15-17. We will try to fill this time slot first.

I will start assigning times in the next month or so. If you want a specific shift, let me know as soon as possible before someone else takes it!

There is a very professional-looking booth. It will have VHF and HF equipment (courtesy of HRO) and antennas to match. This is a good chance to try out some new modes and see what you like.

Working at the booth is quite an experience. Last year I had several kids playing with code practice oscillators until their parents pulled them away to go to the Fun Zone! (This is for real!) Just show your enthusiasm and the rest is easy.

For working a shift of 4 hours, you get FREE admission for the whole day.

So far we have 27 volunteers from PARC. THANK YOU. But, we can use more.

If you can help with a shift (or two), please contact me NE6O on the air, at the meetings, by email, or by the old telephone.

73

Jim Cooper NE6O

Ne6o@amsat.org

760-727-8446 home

760-473-1050 cell

760-930-7242 work



Amateur Antenna on Palomar Mountain, located close to W6NWG, 12 March 2006.



Top of W6NWG tower, 12 March 2006.

Interference


What do you do?

The easiest way to stop intentional interference is to ignore it.

Do not talk to or about an interfering station on the air.

Do not mention that a direction-finding team is after him or her.

On occasion, you may be asked to keep an interfering station on the air by talking to him or her. This is a rare request, but it's worthwhile under certain circumstances.

Direction-finding and subsequent investigations are very often successful. The punishment for intentional interference is large. The job of policing the bands falls to all of us, and developing the skill set in handling intentional interference is as important as developing good operating skills and reducing non-human harmful interference. 

Palomar Amateur Radio Club
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We're on the web! Find us at www.palomararc.org. See the newsletter in COLOR! Check out sets of PHOTOS!

About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on April 5th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be "Restoring Vintage Radios". Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Scope

A publication of the Palomar Amateur Radio Club

Vol. 33, No. 5

May 2006

Art KC6UQH has a patent

Our own Art Kc6UQH McBride has long been a person of note locally, and now the Federal Government is officially confirming what we have known for some time.

A patent has been issued to Art and associates which is based on detecting analog position of a handheld switch, by comparing two similar frequencies. Art's unique approach overcomes issues associated with temperature variations, radio frequency interference, and real-time computing restrictions.

A 6 proportional rocker prototype has been in the field for many months and continues to control heavy industrial equipment flawlessly.

Congradulations Art
(hope you're getting royalties
.... ..)

73 wa6til

[.... .. is 'h' 'i' in morse, and is the telegraphic 'laugh'...I think it comes from being unable to control a straight key during a good belly laugh.]

2006 ARRL Southwestern Division Convention

2006 ARRL Southwestern Division Amateur Radio Convention to be held on September 22, 23, and 24, 2006 at the San Diego Marriott in Mission Valley, CA.

The Banquet Speaker will be Gordon West, WB6NOA. His topic is Amateur Radio's Role in Natural Disasters. Some other speakers scheduled to appear: Bob Heil K9EID, Howard Burkhart KB6MYE, Harry Hodges W6YOO, Nate Brightman K6OSC, Joe Madas AE6JM, April Moell WA6OPS, Ned Stearns AA7A, Carl Gardenenias WU6D, Tuck Miller NZ6T, Cathy Gardenenias K6VC, and as seen on The Tonight Show Ken Miller K6CTW.

We will have Exhibitors from all aspects of Amateur Radio, Also scheduled: Swap meet, T-Hunt, Radio Room, Prizes and lots of equipment to check out and buy.

So come and see what everyone is talking about, San Diego's best ARRL Southwestern Division Amateur Radio Convention EVER!

Early Bird Registration deadline is April 30, 2006. If you register prior to April 30, 2006, registration is \$15.00, which includes a convention pin (while supplies last). After April 30, 2006 Pre Registration is \$17.50 and an At Door Pass for the convention will be \$20.00. Reservations at the Marriott, please tell them that you are booking a room for Ham Show 06 and use ASDASDA for the Group Code, so you can receive the Convention rate.

Please visit the convention website at www.sandarc-conv2006.org for details.

Thanks
Paul Rios
Convention 2006
Co-Chair Assistant, Media Chair & Webmaster
KC6QLS@cox.net

2006 ARRL Southwestern Division Amateur Radio Convention September 22, 23 & 24 San Diego, California

San Diego Marriott Mission Valley
8757 Rio San Diego Drive Phone (619) 692-3800



www.sandarc-conv2006.org

HAM Radio
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Registration Form

Please list additional Attendees – ALL ATTENDEES MUST BE REGISTERED

No charge for Children 16 or under when Accompanied by a Registered Adult

How did you find out about the Convention?

☐ Radio ☐ Web search ☐ Ham Club ☐ News Paper ☐ Other _____

Call Sign: _____ Last Name: _____ First Name: _____

Address: _____ City: _____

State: _____ Zip Code: _____ E-mail: _____

Kids Adults Call Sign Name (please print)

_____	_____	_____
_____	_____	_____
_____	_____	_____

Early Bird Dated before April 30, 2006 \$15.00 @ _____ ea. = \$ _____

Convention Pins Incl uded (Limited Supplies)

Pre Registration \$17.50 @ _____ ea. = \$ _____

At Door Pass \$20.00 @ _____ ea. = \$ _____

Accompanied kids under 16 year Free

DX Breakfast \$20.00 @ _____ ea. = \$ _____

Banquet Tickets Dinner ☐ Beef ☐ Chicken 40.00 @ _____ ea. = \$ _____

Convention Lunch 20.00 @ _____ ea. = \$ _____

2006 Convention Pins \$ 5.00 @ _____ ea. = \$ _____

2002 Convention Pins \$ 5.00 @ _____ ea. = \$ _____

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Make Checks payable to: Web Form ver 10.1



SANDARC Convention

C/O R. Boehme W6RHV
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Santee, CA 92071

Staff Use Only

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Date	_____
Amount	_____
Check #	_____
# Pins given	_____
Receipt	_____
Signed up	_____
Other	_____
Other	_____

Presidents Message

The April Program: "Restoring Vintage Radios", by Pat Bunsold" was very entertaining and informative. Pat did an outstanding job of presenting his passion for older radios.

The May 3rd Program will be: 6M and VHF DX, presented by Rod Dinkins, AC6V. This is a program that many HAMs should find very useful, from Techs wanting to experiment with DX, to Emcomm types that just want to get the message through. The techniques, ideas and equipment presented may make all the difference in making contact. I expect it to be both entertaining and informative.

Looking down the road....

PARC tradition has several annual events, including Field Day (June 23-25), the Annual Picnic (August/September) and the PARC Auction.

Field Day: The Palomar Amateur Radio Club is looking for several new volunteers to help out on June 23, 24th and 25th. There are several needs that must be met.

- 1) Volunteers to publicize/promote our Field Day event:
- 2) Volunteers for Set-Up.
- 3) Operators
- 4) Volunteers for Operator Support
- 5) Volunteers for Tear-down

Additional Field Day opportunities are likely to be identified as we approach June, so keep an eye on The Scope.

We will talk more about the picnic and auction, after Field Day

This year, the 2006 ARRL Southwestern Division Convention is also in town.

The 2006 Southwestern Division Convention will be held in Mission Valley on September 22nd, 23rd and 24th. This annual event lands in San Diego only every fourth year. This is a great change for local HAMs to see the latest tools and, equipment, and attend as presentations (Forums) on many Amateur Radio topics. PARC has a tradition of supporting this convention by encouraging Member Attendance and Volunteer Participation. Opportunities to help are many. Please contact myself, ad6vi@cox.net, or see

www.sandarc-conv2006.org

for more information

See you on May 3rd, at 7:30PM, in the Carlsbad Safety Center.

Steve Early
President,
Palomar Amateur Radio Club, Inc.

SANDARC Legislative Oversight

As many of you have heard, the San Diego County Amateur Radio Council (SANDARC) has established a Legislative Oversight Committee for the purpose of championing Amateur Radio with our local Elected Officials and Planning Organizations. Currently, the main focus is proposed and existing Antenna Ordinances. The committee expects to address additional Amateur Radio related legislative issues, as needed.

To support this endeavor, SANDARC has creat-

ed a fund to support Public Relations activities and Legal Council/Representation, as deemed appropriate by SANDARC. Please support this worthy cause by donating to the SANDARC Legislative Oversight fund. Please mail donations to: SANDARC Legislative Oversight, P.O. Box 151531, San Diego, CA 92175-1531.

Thanks,
Steve Early
Chairman, SANDARC Legislative Oversight Committee

Committee Chairs

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	BK6EBYDAT@Gerry.Palomar.cal-tech.edu
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	Jim Cooper	NE6O@amsat.org
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day	needed!	
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KD6TUJ@amsat.org
New Member	Christy M.	KI6AOL
Nets	PARC	Board@palomararc.org
Newsletter	Filled!	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KD6TUJ@amsat.org
Publicity	Terry R.	K3PXX
QSL Cards	Harry H.	W6YOO@cox.net
RACES Info	Jo A.	KB6NMK@amsat.org
RED Flag	Steve	AD6VI@amsat.org
Repeater Site	Mike P.	K6MRP@amsat.org
Repeater Tech	Mike D.	AB6QT@amsat.org
SANDARC	Jin/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

SCOPE Challenge Winners

There were three correct answers to last month's Challenge.

Gene Schonrock W6EAJ
 Paul Rios KC6QLS
 Sheldon Howard (No callsign listed)

FOR SALE

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to

SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(2.2) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built w/charger \$40.00, Galaxy Electronics Phone Patch PR-550 \$10.00, Avenger 4000 Commercial Alarm System, w/8 PIR's , keypad, 2 sirens, 1 sonic \$80.00 OBO, 13 Inch Sony Industrial Video Monitor Model PVM-1390 \$20.00 OBO, 54" Oak Roll Top Desk, excellent Condx \$350.00 OBO, Sentry Fireproof Combo Safe \$30.00 OBO, Heath SWR meter model HM-102 (needs meter cover) w/remote pickup \$10.00 OBO, IBM Clone Desktop 350 Mhz Pentium II computer 6 Ghz HD \$30.00 OBO, International Video/Audio signal processor/distribution Amp w/full studio controls \$40.00 OBO, VHF/UHF Conical Monopole Vertical \$10.00, Panasonic KX-I'50 Phone answering machine/1'AX \$10.00, Computer Desk w/wheels \$20.00 OBO, Kerosene Heater w/extra wicks \$30.00, Many Panasonic Video accessories, 200 Laser Movies Contact for List \$5.00 each, Some collector Directors cuts, Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com

Net Roundup

DAY	TIME	FREQ.	NET NAME	NET MANAGER/CONTACT INFO.
T/R/S	2000	146.730	NTS Traffic Net*	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net*	Dennis K7DCG
Sunday	2045	147.075	MARA ES*	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net*	
Monday	2100	146.730	Microwave Net*	Kerry B.
Tuesday	1900	147.130	Red Cross Net*	Ted tthompdson@sarc.org
Tuesday	2100	146.730	Off-Road Net*	Jerry A. K6PFP jwak6pap@cts.com Dick W. KA7AYT rwillimek@home.com
Wednesday	2000	146.730	Sailor's Net*	Mace
Thursday	1930	147.075	Young Hams Net *	
Thursday	2100	146.730	(inactive) Ham Help*	David D. KC6YSO@amsat.org
Friday	2100	146.730	(Need ops) Hiker's Net*	Ed KF6DXX@juno.com
Nightly	>2200	147.130	Facetious Group*	
Saturday	2000	52.680	6m Emergency Serv.*	
Mon.-Fri.	2000	28.340	(inactive) 10m Net	Dennie WA9MTP

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Others too
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Drop in to see our display of working equipment. Find out about Pkt location determining equipment (APRS). Check our complete line of magazines, ARRL books, license manuals, and Bulletin Board with all sorts of Goodies listed.

Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

Classifieds

(4.20) Cleaning out the shack. Everything (except my S-line) to go. Collecting equipment since 68. HF, and VHF, rigs, amps, towers, antennas, Parts.

All priced to sell and anything not working will be marked.

Location : 2210 Knollwood Ave. Fallbrook. 92028

Right by the Fallbrook High School.

Time: 0700 and please.. NO early check ins.

Larry... WQ6V

(3.13) WANTED: Yaesu FP-707 power supply. Would also consider purchasing other accessories for the FT-707 rig. Contact Jack Jennings KG6RWI, 760-749-4572 or kg6rwi@aol.com

(3.13) FOR SALE: Yaesu FL 2100B linear amp with manual. Checks out good on 80 thru 15, a bit unstable on 10. Ask \$350 or interesting trade. Ron K2RP 436-8109 or K2RP@arrl.net

April Meeting Goodie Givers

K6ISS Fred
KG6RCW Tom

Last Month's Fold & Staple Crew

KR6BT Merle
KB6YHZ Art
KB6NMK Jo
WA5ACE Sonny
W6GNI Al & Kathy
W6YOO Harry



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PARC Trustee: AB6QT
 52.680 W6NWG -0.5MHz
 Autopatches:
 146.730-, 147.075+, *147.130+, 447.000-
 Pkt: 145.050s (PALOMAR/W6NWG-1)
 146.700- (Duplex Pkt)
 PALBBS/EMG use 145.070/146.700-
 ATV Input: 915 wbfm, 2441.25 wbfm
 ATV Output: 1241.25 MHz am
 Intercom: 146.415 PL 79.7 nbfm
 Affiliated: 224.380-, 224.940 KK6KD
 (HARS) 447.050-, 145.260 KK6KD
 (HARS)
 146.175+ N6FQ (Fallbrook ARC)
 Linked to: 445.600-, 224.900- WD6HFR
 (Corvair/220 ARC), 446.140- WB6FMT
 (123.0) Vista

* 107.2 Hz PL Tone

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Ferrites slip over coax. Shrink tubing holds them in place. Works from 3.5-60 MHz (Use two kits for 160m).

Model BA-58 (for RG58, RG8X & similar cables up to 1/4" dia. \$7.50+tax+\$6 S&H/order

Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

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Please check our complete ads in **QST**, **73**,

CQ, and **World Radio** magazines.

QSL Card Delivered 50 Years Later

Reprinted from ARRL Website

NEWINGTON, CT -

George Hitz, W1DA, of Sudbury, Massachusetts, can finally account for one of his QSL cards, one he sent back in 1956.

When Hitz was just a teenager on his EF Johnson Viking Adventurer transmitter he built from a kit, he made contact with KN6MSI, a man he only knew as "Chief Operator Dave." This turned out to be David Leaven, later W16J, who became a Silent Key in 2003.

"In 1956, I was just a novice operator with a primitive station and even more primitive operating skills," Hitz told an ARRL staff member. "Back then, with my radio built from a kit and my BC348 World War II Army Air Corps surplus receiver and a 60 foot long wire antenna that was 15 feet high, California was like a whole other country! And I needed that California QSL!"

Like a good operator, Hitz sent off a QSL card, addressed only to Chief Operator Dave, Address Unknown, Riverdale, Calif. "I was 14, and like me, Dave was a new ham, and he wasn't in the call sign book," he said. "I hoped there would be someone at the Riverdale post office that would know who Dave was, and it would get to him." But Hitz made one mistake -- he addressed the card to Riverdale, instead of Dave's town of Riverside. Because of that simple mistake, the QSL card from 1956 sat in QSL limbo -- until now.

In addressing his card, Hitz had put his return address on it; he was living in DeLand, Florida at the time. And 50 years later, the card was returned to that same DeLand address on Monday, April 13, but someone else was living there.

Mack McCormick now lives in Hitz's childhood home. "The card apparently has been in the twilight zone for 50 years," McCormick said. "It's not wrinkled or anything."



McCormick offered to return the card to Hitz, but Hitz declined. "What would I do with it?" he said, when asked why he did not want it. "I understand the guy who found it is going to frame it and place it on his coffee table!"

Hitz has received world-wide attention because of this QSL card. "The press has run wild with this. I heard this story has been in newspapers in India, Iceland, Ireland -- all over the world, over 100 countries! It's almost like I could have DXCC from all the countries that have reported it."

-- *Khrystyne Keane, K1SFA; tnx to all who brought the article to our attention.*

The Scope

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We're on the web! Find us at <http://www.palomararc.org>.

About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club, 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Eric Hutchins, K7ELH.

Submissions: scope@palomararc.org

Questions? Comments? W6NWG@amsat.org

About our Organization

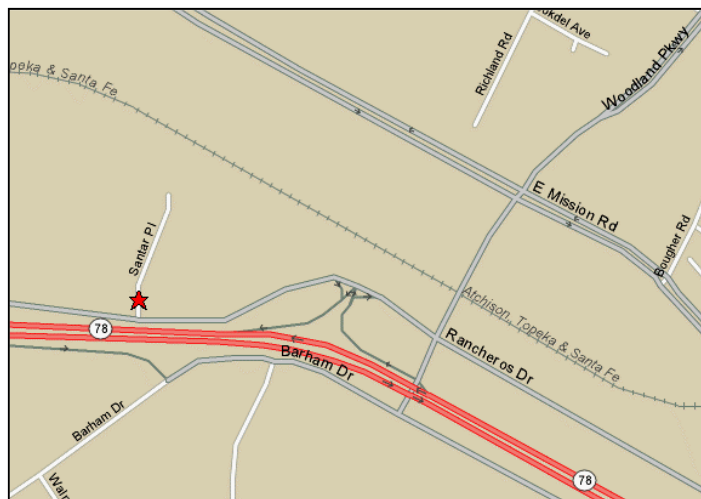
The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communication nets (RACES-ARES-MARA).

Meeting Location and Time

This month's meeting will be held on May 3rd, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be 6m DXing presented by Rod AC6V. Talk-in on 146.730 MHz repeater. Meeting starts at 1930 (7:30pm). Ridesharing and coordinating for dinner beforehand often occurs on Wednesday afternoons. Everyone is welcome!



Field Day Site 2006



New Website for San Diego ARES In order to make information easily available for the EMS drills on Tuesday, San Diego ARES have activated www.sdgares.org as the new fully operation informational site for San Diego ARES.

Instructors Needed A need for teachers and mentors for all levels of amateur radio classes exists in San Diego County. If you like talking about amateur radio, then you already have what it takes to be an instructor!
Continued on left-hand column of page 2

President's Address

Steve Early AD6VI

President, Palomar Amateur Radio Club, Inc 2006

At the May meeting, Rod Dinkins, AC6V provided a very good program on 6 Meter DX.

June: June is a busy month!

On June 7th, the PARC General Meeting is coming up at the Carlsbad Safety Center, and of course, will be related to Field Day.

The San Diego County Fair (Del Mar Fair) is coming up and SANDARC, the San Diego County Amateur Radio Council, needs our help to staff the Amateur Radio booth at the Fair. There are two shifts each day (four hours only) to choose from. Please contact Jim Cooper, NE6O, at ne6o@amsat.org or 760 727-8446 for more information.

Field Day: This year, as last year, PARCs' Field Day Site is freeway close. It will be on the corner of Rancheros Road and Santar Pl in San Marcos, adjacent to Highway 78. From Highway 78, exit Barham Drive/Woodland Parkway. You cannot miss it. For on-line direction, use 182 Santar Pl, San Marcos, CA, 92069.

Last year, PARC secured this site on very short notice (Got Site?), but still had over 100 members and visitors in that participated. This was more than in recent memory. It is our goal to get more PARC Members and their friends to visit and Get On The Air (GOTA) with us.

There is a GOTA Station for non-hams and those without HF privileges, so you do not need a license to participate.

Set-up starts around 4PM on Friday, June 23. Official Operations Start at 11:00 AM on Saturday, June 24th and end at 11:00AM on Sunday, June 25th.

I hope to see you all on Wednesday, June 7th, 7:30 PM, at the Carlsbad Safety Center for our regular June Meeting, then again at Field Day in San Marcos.

There are opportunities for all, so bring a friend!!!

-Steve Early, AD6VI

INSIDE THIS ISSUE

- 1 Field Day Site, President's Address
- 3 Contest Calendar
- 5 Repeater, License/Class Information
- 7 Club Classified Advertisements
- 8 Committee Chairs, Field Day 2006
- 9 Del Mar Fair Booth, What to do about Interference

Continued from left-hand column of page 1

ARRL has useful tools to help instructors. If you register with ARRL to become one of the over 2000 ARRL Registered Volunteer Instructors, then you will receive brochures and handouts along with other services especially designed for instructors. An instructor's manual and guidance on planning classes is another benefit of registering.

Repeater Site Report for 6 May 2006 Mike AB6QT, John WB6IQS and Dan K6NKC all went to the site on May 6 and the following things were accomplished. Mike finished the repairs of the 147.130 that he removed from service about 6 months ago. In order to find the problem he had to reverse engineer (draw the schematic) of the interface circuit that ties the repeater to the controller. Somehow the schematic disappeared and so he had to re-create what someone else built a few years ago. So the original KA6UAI repeater is back OUT and the Motorola from 6 months ago is back IN including AUTO PATCH. John worked on the Packet system and replaced a power supply to restore proper operation. He also checked output power, frequency and deviation. Dan assisted John with the Packet repairs. When Dan was finished helping John he climbed the tower to do some maintenance. An old unused antenna had broken off and was interfering with the control receiver functions. That antenna is now removed. He also straightened the reflector element on the 447 antenna. It had evidently been hit with some ice this last winter. The next things on the list include power, frequency, deviation, and SWR testing and tower work. Thanks John and Dan for a job well done! de AB6QT

Donation to School Equipment Fund With the help of PARC member Peter Shintani, KG6YDB and his gracious employer, Sony Corporation of Rancho Bernardo, a Henry Radio commercial amplifier was donated to the PARC School Equipment Fund committee headed up by Dennis Vernacchia N6KI.

The amp will be checked out by Loren, AD6ZJ and will be used to help with San Diego County amateur radio school classroom programs.

Special thanks to Bill, PIG and Fred, 6ISS for helping transport the amp.

Silent Key I am sorry to report that Jim, K6ML became a Silent Key yesterday, May 13th 2006. Jim had a stroke in December of 2004, which left him with short term memory problems. Until then, Jim was active on UHF checking into a SSB net on 1296, ATV, VHF, and HF. He was a member of SBMS, San Gabriel ARC Palomar ARC, ARRL, and attended the San Diego Microwave Group meetings for a few years after he moved ↗

to Vista, Ca. from Arcadia, CA.

Jim was an avid builder, and retired Electronic Engineer. He was well versed in both Tubes and Transistors. He will be missed by all of us. -Art, KC6UQH

Birth Announcement

Rose Thérèse Easton
born 4 May 2006
to Ken Easton and
Michelle Thompson, W5NYV.



April Meeting Goodie Givers

K6ISS	Fred
KG6RCW	Tom

May Meeting Goodie Givers

KG6RCW	Tom
KG6JEI	Conrad
W6ASP	Preston
K6ISS	Fred

Fold and Staple Crew

KR6BT Merle		W6YOO Harry
W6GNI Al	&	Kathy
KB6NMK Jo	&	Toby

Membership Report

New Members Joining PARC:

March: KI6BUP And 23 members reinstated their membership (That "expired" in 2005).

April: KI6CSZ, KI6DER, KI6BXU, and Derek Gregg (No call yet) And 7 members reinstated their membership (That "expired" in 2005). May: KI6DKL, KI6DKP, KI6DJB, N6TWO, KE6NWM.

And we had 3 "old" members reinstate their membership. Welcome back!

Be sure to check your label next issue, your "participation points" will be printed there. Zero's are not printed. Come to the monthly club meeting, get 1 point, bring something for the Goodie Table, get another. Field day is a great way to earn points, setup, operate, help, tear down, etc. Be sure to sign the sign in sheets! Participation points are exchangeable for prize drawing tickets at the Annual Club Picnic. (Max 20 tickets per person. Several have 20 or more points already!)

Yours, Al W6GNI

Font will be CHANGING in July as per requests for easier reading. -w5nyv

CONTEST CALENDAR

Jun 2 Thursday NCCC Sprint Ladder
Jun 3 SEANET Contest
Jun 3 RSGB National Field Day
Jun 3 IARU Region 1 Field Day, CW
Jun 3 QRP TAC Sprint
Jun 5 RSGB 80m Club Championship, DATA
Jun 6 ARS Spartan Sprint
Jun 9 Thursday NCCC Sprint Ladder
Jun 10 ANARTS WW RTTY Contest
Jun 10 Portugal Day Contest
Jun 10 Asia-Pacific Sprint
Jun 10 GACW WWSA CW DX Contest
Jun 10 REF DDFM 6m Contest
Jun 10 ARRL June VHF QSO Party
Jun 14 NAQCC 80m Straight Key/Bug Sprint
Jun 14 RSGB 80m Club Championship, CW
Jun 16 Thursday NCCC Sprint Ladder
Jun 16 SARL Youth Day
Jun 16 Council of Europe 20th Anniversary Challenge
Jun 17 All Asian DX Contest, CW
Jun 17 SMIRK Contest
Jun 17 West Virginia QSO Party
Jun 17 AGCW VHF/UHF Contest
Jun 17 Quebec QSO Party
Jun 17 Kids Day Contest
Jun 18 DIE Contest
Jun 19 Run For The Bacon QRP Contest
Jun 22 RSGB 80m Club Championship, SSB
Jun 23 Thursday NCCC Sprint Ladder
Jun 24 His Maj. King of Spain Contest, SSB
Jun 24 Ukrainian DX DIGI Contest
Jun 24 ARRL Field Day
Jun 24 ARCI Milliwatt Field Day
Jun 30 Thursday NCCC Sprint Ladder


The big event in June is ARRL Field Day; however, there's a plethora of other events from "milliwatts to kilowatts". You may find Complete rules in QST, CQ, NCJ, and Worldradio magazines. See you in the contest. 73, Harry W6YOO

Earthquake, Epidemic Drill

Several hospitals took part in a drill to get ready for the "BIG ONE".

Further details at <http://www.sdgaes.org>

Because the hospital does not have all the needed equipment for an emergency, Daniel Musick as a part of Pacific Coast News . net, donated a \$1000 HF radio and antenna to the hospital to keep on site for use in the event of a real disaster.


Using Ham radios to keep the doctors and nurses in the hospital in touch with each other within their own hospital and between different hospitals was the goal of the drill. 

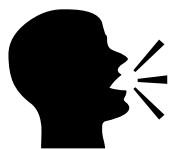
NCVEC Question Pool Committee announces new schedule

Originally posted November 9, 2005 from ARRL -- The National Conference of Volunteer Examiner Coordinators (NCVEC) has announced that the Question Pool Committee (QPC) has adjusted its schedule for revising Amateur Radio examination question pools. This decision was prompted by recent FCC announcements, changes in radio communication technology and recommendations from VECs. "The QPC feels it is imperative to produce a new Technician Class pool now to better position the Amateur Radio Service for growth in the years ahead," the QPC said in a statement released September 9. "The new schedule impacts previously announced release dates for all three question pools."

The Technician class (Element 2) pool now tops the schedule and is due for release in January 1, 2006, effective July 1, 2006. General class (Element 3) pool updates, previously scheduled to become effective on July 1, 2008, will be released December 1, 2006, and become effective July 1, 2007. The Extra class (Element 4) pool originally scheduled for 2005, will be released on December 1, 2007, and will become effective July 1, 2008.

Barring any major rules changes, subsequent updates to all pools will follow the traditional four-year cycle, the QPC said. Selected by representatives of the 12 VECs attending the NCVEC's annual conference, the QPC consists of Chair Jim Wiley, KL7CC, Anchorage VEC; Perry Green, WY1O, ARRL VEC, and Larry Pollock, NB5X, W5YI VEC. A team of associates representing various VEC organizations as well as experts selected from the amateur community will assist the QPC.

Interested persons are encouraged to submit questions to the NCVEC QPC via the NCVEC Web site. 



NETS



Regular On-the-Air Nets sponsored by the Palomar Amateur Radio Club.

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sunday	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net	
Monday	2100	146.730	Microwave Net	Kerry B.
Tuesday	1900	147.130	Red Cross Net	Ted tthompson@sdarc.org
Tuesday	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillmek@home.com
Wednesday	2000	146.730	Sailor's Net (stay tuned)	Mace
Thursday	1930	147.075	Young Hams Net (inactive)	
Thursday	2100	146.730	Ham Help (need ops)	David D KC6YSO@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	
Saturday	2000	52.680	6Mtr Emergency Services Net (inactive)	

Other nets that might be of interest to the membership

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
Mon-Fri	2000	28.340	10 Meter Net	Dennie WA9MTP

Net Participation Tracker – A convenient form for participating in PARC nets.

NET	DATE	NOTES

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALOMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-

(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-

145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220

ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone



Let us know what you are looking for – we run classified advertisements FREE for members of PARC.

License & Class Information

Register 5-7 days in advance for the following test sessions.

- PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

- EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025. Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

- "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

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TEN-TEC
Hy-gain, Tri-EX,
Cushcraft
And
Others too
Numerous to
Mention!

Drop in to see our display of working equipment. Find out about Pkt location determining equipment (APRS). Check our complete line of magazines, ARRL books, license manuals, and Bulletin Board with all sorts of Goodies listed.

Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

www.ac6v.com

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127 countries have visited www.ac6v.com which been in operation since 1997. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community! ☞



Current Needs

Volunteers are needed for the following club positions.

Del Mar Fair Field Day

Ham Help Net Operators.
Assistant southwest division director.

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Each and every volunteer is greatly appreciated and makes our club more successful. ☞

PARC 2006 Board

President: Steve Early AD6VI
(619) 461-2818 AD6VI@cox.net
VP: Dennis Baca KD6TJ
(760) 722-0251 KD6TJ@amsat.org
Sec: Gary Kent W6GDK
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Treas: Bob Birch KG6RGI
rrbirch@cox.net
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(760) 749-4825 KF6WTN@amsat.org
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K6MRP@amsat.org
Membership: Al Donlevy W6GNI
(760) 630-3096 W6GNI@amsat.org
Site Tech: Mike Doyle AB6QT
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FOR SALE

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to

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Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(5.24) For sale: New Icom IC-P7A, VHF/UHF Dual Band HT. Complete in original box with all accessories. Only used benchtop for a week to write one of my Quick Reference guides for it. Price: \$190. Contact: N6FN - Bernie at n6fn@niftyaccessories.com

(5.24) For sale: 38 foot, two section self-supporting, crank-up tower. NEW, Never installed. U.S. Tower HDX – 538, Heavy-Duty, Commercial grade with the TRX – 80 Raising fixture hand crank and cable. Does need second hand crank and tower cable. \$600 takes it all and it is now laying on the ground ready to be moved. Larry, WQ6V Contact person Bob Layton (760) 726-1706 in the Vista area.

(5.24) For sale: For Sale: 40 foot, 4 section light duty tower with KLM KT – 34 Tri-bander. Comes with a HAM II rotator and controller, Two runs of RG-8 @ 100 feet ea. \$300 takes it all and you take it down. Tower is NOT in cement. Easy take down. Larry WQ6V. Contact person Bob Layton (760) 726 – 1706 Vista area.

(5.24) For sale: Collins gray plastic XTAL. Pack is in new mint condition. XTALS. Have mint factory shine Pack comes with the Collins TW-380

xtal puller - New factory smell - All XTALS. (less the 12 normal issue in the rig.) 114 XTALS. Total in the pack 3.8 MHz. to 30.0 MHz \$375 (that's about \$3.28 per xtal.)

Larry WQ6V

wq6v@aol.com (760) 723 - 9912

(5.24) For sale: HIGH SIERRA H.F. Antenna, "platinum package" New in the box with all equipment, mounting bracket and the 6 foot whip. \$375.

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Larry WQ6V

wq6v@aol.com (760) 723-9912

(5.24) Kenwood Base / mobile rig.... 440 SSB : TR- 851A, 25 wat. \$300. Hallicrafters Rcvr. SX – 111 Nice cond. \$175. Swan 250 6M. SSB xcvr. No power cord or mic. \$150. Kenwood TS-130s HF rig 100wat. \$200. Kenwood TR-9130 2M. SSB mobile rig. \$175. Icom IC-730 HF rig. With matching

speaker IC-sp3. \$350. RARE Mizuho 15 M. SSB Hand held , phone and cw, built in key, w/vfo and extra xtal. Exl cond. \$225. Have two Kenwood TH-78a dual band HT's , 2m/440 with all extras. (one has mod) \$175. EA. IC-32 AT 2m/440 HT. with desk chgr and batt. Exl. Cond. \$150 .

QRP... NCG QRP rig. HF, 15m, 40m, 6m. 10 watts out. Runs on built in AC power sply. or 12 VDC. \$175.

Atlas 210x HF with slide in base station. Exl. Cond. \$195.

Larry WQ6V

wq6v@aol.com (760) 723-9912

(2.2) Tempo S-2 (220 Mhz) Handheld with SS32 PL & DTMF built w/charger \$40.00, Galaxy Electronics Phone Patch PR-550 \$10.00, Avenger 4000 Commercial Alarm System, w/8 PIR's , keypad, 2 sirens, 1 sonic \$80.00 OBO, 13 Inch Sony Industrial Video Monitor Model PVM-1390 \$20.00 OBO, 54" Oak Roll Top Desk, excellent Condx \$350.00 OBO, Sentry Fireproof Combo Safe \$30.00 OBO, Heath SWR meter model HM-102 (needs meter cover) w/remote pickup \$10.00 OBO, IBM Clone Desktop 350 Mhz Pentium II computer 6 Ghz HD \$30.00 OBO, International Video/Audio signal processor/distribution Amp w/full studio controls \$40.00 OBO, VHF/UHF Conical Monopole Vertical \$10.00, Panasonic KX-F50 Phone answering machine/FAX \$10.00, Computer Desk w/wheels \$20.00 OBO, Kerosene Heater w/extra wicks \$30.00, Many Panasonic Video accessories, 200 Laser Movies Contact for List \$5.00 each, Some collector Directors cuts, Contact Dennis K7DCG 858-748-9046 or email K7DCG@aol.com

Committee Chairpersons

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	
BK6EYDAT@Gerry.Palomar.caltech.edu		
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	Jim Cooper	NE6O@amsat.org
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day	needed!	
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KD6TUJ@amsat.org
New Member	Christy M.	KI6AOL
Nets	PARC	Board@palomararc.org
Newsletter	Filled!	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KD6TUJ@amsat.org
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Seller Table	John K.	WB6IQS@amsat.org
Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Field Day

June 24-25, 2006

Always the Fourth Full Weekend In June

Field Day 2006

Field Day, as many of us know it, has become a national contest. However, events on the Gulf Coast last summer reminded many of us that the true purpose of Field Day is get our field portable equipment checked out an operational for the upcoming storm season.

While we enjoy a relative lack of severe weather in the San Diego Section, we have occasional severe events called Fires and Earthquakes (remember the Cedar and Paradise fires, or the Northridge earthquake?).

Field Day rules provide a classification for operating at an Emergency Operations Center. PARC has done so for the last several years, first at the Carlsbad Safety Center, and now at the San Marcos Regional Emergency Services Training Center/Sheriff's substation, were we would service the San Marcos EOC.

One major factor that PARC Field Days have in common with real emergencies is that no two are the same.

Last year we had to find a new site.

This year, as in a real disaster, several of our traditional volunteers are not available for this particular event. These seasoned operators will be missed, and hopefully most of them will be able to participate next year.

For the rest of us, this means that opportunities exist for new volunteers to pick up the load and help us maintain our tradition of placing high, if not outright taking our class in the

continued in right-hand column page 9



Del Mar Fair HAM BOOTH

Jim Cooper NE6O

We need operators to man the Amateur Radio Booth at the San Diego County/Del Mar Fair! Please contact NE6O to volunteer.

The Fair runs from June 15, 2006 to July 4, 2006. Volunteer for any time slot you want and I will check to see if it is available. Volunteer early to make sure you get a chance!

There will be two shifts per day, 10am to 2pm, and 2pm to 6pm. We need two people per shift.

The Palomar Club has committed to staffing the booth on Thursday, Friday, and Saturday June 15-17. We will try to fill this time slot first.

I will start assigning times in the next month or so. If you want a specific shift, let me know as soon as possible before someone else takes it!

There is a very professional-looking booth. It will have VHF and HF equipment (courtesy of HRO) and antennas to match. This is a good chance to try out some new modes and see what you like.

Working at the booth is quite an experience. Last year I had several kids playing with code practice oscillators until their parents pulled them away to go to the Fun Zone! (This is for real!) Just show your enthusiasm and the rest is easy.

For working a shift of 4 hours, you get FREE admission for the whole day.

So far we have 27 volunteers from PARC. THANK YOU. But, we can use more.

If you can help with a shift (or two), please contact me NE6O on the air, at the meetings, by email, or by the old telephone.

73

Jim Cooper NE6O

Ne6o@amsat.org

760-727-8446 home

760-473-1050 cell

760-930-7242 work



continued from right-hand column page 8

"points" end of things.

This is a great opportunity for new participants to get on the air and make contacts for us. We are currently looking for Band Captains for 15/40 Meter SSB, 10/80 Meter SSB, and 10 M/VHF.

The beauty of these voice stations is that with a proper Control Operator on site, you do not need to know CW or have personal HF privileges. Even a Technician can operate at any of these stations, under W6NWG control operator supervision.

If you want to see what HF is all about, come on down and participate in our Field Day activities. This year, as last year, PARCs' Field Day Site is freeway close.

It will be on the corner of Rancheros Road and Santar Pl in San Marcos, between Highway 78 and the San Marcos Regional Emergency Services Training Center / Sheriff's Substation.

From Highway 78, exit Barham Drive/Woodland Parkway. You cannot miss it. For on-line direction, use 182 Santar Pl, San Marcos, CA, 92069.

Last year, had over 100 members and visitors participate. This year, our goal is to double that and get more PARC Members and their friends to visit and Get On The Air (GOTA) with us.

Interference

What do you do?

The easiest way to stop intentional interference is to ignore it.

Do not talk to or about an interfering station on the air.

Do not mention that a direction-finding team is after him or her.

On occasion, you may be asked to keep an interfering station on the air by talking to him or her. This is a rare request, but it's worthwhile under certain circumstances.

Direction-finding and subsequent investigations are very often successful. The punishment for intentional interference is large. The job of policing the bands falls to all of us, and developing the skill set in handling intentional interference is as important as developing good operating skills and reducing non-human harmful interference.

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We're on the web! Find us at www.palomararc.org. See the newsletter in COLOR! Check out sets of PHOTOS!

About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on June 7th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be "Field Day". Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

Club Reports

June Meeting Goodie Givers

KG6RCW Tom
KG6JEI Conrad

Fold and Staple Crew

KR6BT Merle, W6YOO Harry, W6JAC Jerry, W6GNI Al,
KB6YHZ Art, KB6NMK Jo & Tyler & Matthew

Membership Report

New Members Joining PARC in March: KI6BUP

And 23 members reinstated their membership (That "expired" in 2005). April: KI6CSZ, KI6DER, KI6BXU, and Derek Gregg (No call yet) And 7 members reinstated their membership (That "expired" in 2005).

May: KI6DKL, KI6DKP, KI6DJB, N6TWO, KE6NWM.

June: W6DM, W6IBF, and AB6OK

And we had 3 "old" members reinstate their membership.
Welcome back!

Be sure to check your label next issue, your "participation points" will be printed there. Zero's are not printed. Come to the monthly club meeting, get 1 point, bring something for the Goodie Table,

Continued left-hand column page 2

President's Address

Steve Early AD6VI

President, Palomar Amateur Radio Club, Inc 2006

June was busy! First we had our General Meeting, regarding Field Day. Then the San Diego County Fair at Del Mar started (it's still going on). Finally Field Day...At this writing, many of us are still recovering from another successful Field Day.

We held it right next to State Route 78 in San Marcos again. We had around 20 visitors that came in off the freeway, just wondering what we were doing. Altogether, we had 90 to 100 participants from Friday afternoon through Sunday. Final numbers will be announced next month. The only downside of this Field Day was the knowledge that we must find another site for next year.

The July meeting program will be on the PARC Repeater Site. John Kuivinen (WB6IQS) will provide the program.

Looking down the road, The PARC picnic is coming up in August and the PARC Auction in October. These are accompanied by the ARRL Southwestern Division Convention (in Mission Valley) in September.

-Steve Early, AD6VI



Above: Cris and Dennis check out an antenna at Field Day.

INSIDE THIS ISSUE

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- 3 Contest Calendar
- 5 Repeater, License/Class Information
- 7 Club Classified Advertisements
- 8 Committee Chairs, Field Day Report
- 9 Del Mar Fair Booth

Continued from lefthand column page 1

get another. Field day is a great way to earn points, setup, operate, help, tear down, etc. Be sure to sign the sign in sheets! Participation points are exchangeable for prize drawing tickets at the Annual Club Picnic. (Max 20 tickets per person. Several have 20 or more points already!) 2006 Field day points have not been added - yet. -Al W6GNI

Repeater Site Report for June 10th, 2006

Al Donlevy W6GNI & Julie, Frank Robbins AB6OK, Ralph Smith AE6SV & Steve, Steve Early AD6Vi and Ben, Conrad Lara KH6JEI, Terry Runyon K3PXX, Jo Ashley KB6NMK

A number of us visited the site to clear foliage for Fire Mitigation. All the big pieces of debris were reduced to workable size and about half of the foliage that needed shredding, was shredded. A big thanks to Al Donlevy (W6GNI), Julie Donlevy, Ralph Smith (AE6SV), Steve Smith, Jo Ashley (KB6NMK), Terry Runyon (K3PXX), Conrad Lara (KG6JEI), Ben Early and Frank Robbins (AB6OK). Thank you to Paul Williamson, KB5MU, for the use of his chipper. Another Work Party will be held in July, weather conditions permitting.



CONTEST CALENDAR

Jul 1	RAC Canada Day Contest
Jul 1	Venezuelan Ind Day Contest
Jul 1	DL-DX RTTY Contest
Jul 1	Original QRP Contest
Jul 2	DARC 10m Digital Contest
Jul 3	RSGB 80m Club Championship, CW
Jul 4	ARS Spartan Sprint
Jul 4	MI QRP July 4th Spring Sprint
Jul 8	VK/Trans Tasman 160m Contest, SSB
Jul 8	IARU HF World Championship
Jul 8	FISTS Summer Sprint
Jul 9	Six Club Contest
Jul 9	ARCI Summer Homebrew Sprint
Jul 12	RSGB 80m Club Championship, SSB
Jul 14	Thursday NCCC Sprint Ladder
Jul 15	CQ WW VHF Contest
Jul 15	North American QSO Party, RTTY
Jul 16	RSGB Low Power Field Day
Jul 17	Run For The Bacon QRP Contest
Jul 20	NAQCC Straight Key/Bug Sprint
Jul 20	RSGB 80m Club Championship, Data
Jul 21	Thursday NCCC Sprint Ladder
Jul 22	VK/Trans/Tasman 160m Contest, CW
Jul 29	RSGB IOTA Contest
Jul 30	ARS Flight of the Bumblebees

A plethora of modes this month: CW, SSB, RTTY and HF through VHF. Something for everyone. For island chasers there is the IOTA contest which is always a lot of fun. Complete rules may be found on the web or in QST, CQ, NCJ and Worldradio magazines. CU in the Contest.

73, Harry

Another Successful Field Day

I would like to take a few minutes to thanks several of those that provided another successful Field Day for PARC. I know I will miss a few of the key players, but that is only because there were so many that I could not track them all.

First, Dennis Baca (KD6TJ), who arranges the site and maintains the majority of PARC Field Day Equipment, year-round. Next, Paul Dorey (WN6K) who pulled another serious shift at the 20/80M CW station. Then Dennis Vernacchia, who went above and beyond the call of duty by not only captaining the 15/40M CW station, but recruiting John Barcroft (K6AM) and Juan Delgado (W6NOW) to run the 15/20/40/80M SSB superstation. John Barcroft, in turn, recruited Bob Brehm (AK6R) for the use of his killer antenna trailer. Brian Comer (KF6C) provided shelter, power and just about everything else for the VHF and GOTA stations. Nick Prodanovich (AD6UK) provided Solar Panels and batteries. Jim Cooper (NE6O) provided the QRP Station, Preston Butler provided the 15/40M CW Shelter. Art McBride (KC6UQH) provided the Amateur Satellite and Amateur Television Stations. Tom Storer (KI6DER) and Dalene Early (KG6GQT) staffed the Road Kill Café.

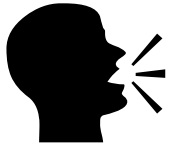
A special thanks goes to Joe Griffith (KI6BUY) and Randall Jones (Cox Cable, Construction Division) for arranging a Bucket Truck to facilitate the safe raising and lowering of our towers.

Again, there are a host of others that worked hard to make this happen. I must thank all of them.

On the other side of the coin, we have been told that next year, a building will be growing at this year's site. This means, of course, that we need to look for another site. A committee is forming for this purpose, and to plan next year's event. This is an opportunity to make a difference for the club and the local amateur Radio Service.

Steve Early, AD6VI





NETS



Regular On-the-Air Nets sponsored by the Palomar Amateur Radio Club.

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sunday	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sunday	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Monday	1915	146.730	RACES Sub-Net	
Monday	2100	146.730	Microwave Net	Kerry B.
Tuesday	1900	147.130	Red Cross Net	Ted tthompson@sdarc.org
Tuesday	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillmek@home.com
Wednesday	2000	146.730	Sailor's Net (stay tuned)	Mace
Thursday	1930	147.075	Young Hams Net (inactive)	
Thursday	2100	146.730	Ham Help (need ops)	David D KC6YSO@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	
Saturday	2000	52.680	6Mtr Emergency Services Net (inactive)	

Other nets that might be of interest to the membership

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
Mon-Fri	2000	28.340	10 Meter Net	Dennie WA9MTP

Net Participation Tracker – A convenient form for participating in PARC nets.

NET	DATE	NOTES

Repeater Information

PARC Trustee: AB6QT

52.680 W6NWG -0.5 MHz

Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALMAR/W6NWG-1) 146.700-

(Duplex Pkt) PALBBS/EMG use 145.070/146.700-

(W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-

145.260 KK6KD (HARS)

146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220

ARC), 446.140- WB6FMT (123.0) Vista

†under repair * 107.2 Hz PL Tone



Looking for something?

Let us know what you are looking for – we run classified advertisements FREE for members of PARC.

License & Class Information

Register 5-7 days in advance for the following test sessions.

- PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

- EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department. The address is 310 North Quince Street, Escondido CA 92025. Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

- "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

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Cushcraft
And
Others too
Numerous to
Mention!**

Drop in to see our display of working equipment. Find out about Pkt location determining equipment (APRS). Check our complete line of magazines, ARRL books, license manuals, and Bulletin Board with all sorts of Goodies listed.

Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

www.ac6v.com

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127 countries have visited www.ac6v.com which been in operation since 1997. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community! 




Current Needs

Volunteers are needed for the following club positions.

2007 Field Day Site Committee
Ham Help Net Operators.
Assistant southwest division director.

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Each and every volunteer is greatly appreciated and makes our club more successful. 

PARC 2006 Board

President: Steve Early AD6VI
(619) 461-2818 AD6VI@cox.net
VP: Dennis Baca KD6TUJ
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Sec: Gary Kent W6GDK
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Treas: Bob Birch KG6RGI
rrbirch@cox.net
Dir: Tom Martin KG6RCW
Dir: Mark Raptis KF6WTN
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Site Management:
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(6.28) WANTED: About 0.6 Farads (600,000 uF) or bigger worth of computer grade capacitors (typically they have 10/32 screws on the top) at 25 VDC or better. For homebrew spot welder to make battery packs. Multiple Capacitors OK. Must be cheap. John, WB6IQS (760) 727-3876

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Contact person Bob Layton
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Pack comes with the Collins TW-380

xtal puller - New factory smell - All XTALS. (less the 12 normal issue in the rig.) 114 XTALS. Total in the pack 3.8 MHz. to 30.0 MHz \$375 (that's about \$3.28 per xtal.)

Larry WQ6V
wq6v@aol.com (760) 723 - 9912

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speaker IC-sp3. \$350. RARE Mizuho 15 M. SSB Hand held, phone and cw, built in key, w/vfo and extra xtal. Exl cond. \$225. Have two Kenwood TH-78a dual band HT's, 2m/440 with all extras. (one has mod) \$175. EA. IC-32 AT 2m/440 HT. with desk chgr and batt. Exl. Cond. \$150.

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Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
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EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
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Inventory	Dennis B.	KD6TUJ@amsat.org
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Patch Electronics	Jerry H.	WB6FMT@amsat.org
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Power AC/DC	Mike P.	K6MRP@amsat.org
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Publicity	Terry R.	K3PXX
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Repeater Tech	Mike D.	AB6QT@amsat.org
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Asst. SWD Dir	needed!	
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org



Field Day Report from W6NOW

I would like to share some of my experiences on field day this weekend (while I can remember them). First of all, special thanks to Bob (AK6R) for giving me the opportunity to use his great trailer/tower setup. Bob, your setup "rocks".

Second, the experience that I had over the weekend would have never been possible if K6AM would have not accepted to take over as Band Captain for 15/20/40/80SSB. More on this later! Third, thanks to N6KI and WN6K and the entire PARC club for setting such a great Field Day (full time chef was available, too).

Back to item number 2 (the one that is still in my dreams). Well, I had heard the concept of SO2R but man I had no idea it was like this. What an experience this was. John had a setup that included 15/20/40/80 SSB with 2S2R (I think that's how you call it, multi-multi 1 tx). Two radios but only one transmits.

We both took over the morning shift until 10pm when the other crew was taking over. It was slow for me at the start since he had good pile-up and I was just S&P and giving him the finger (no, not that one) to get the other station that I had located for him. I logged them and good go get the next one. We got into a good rolled about an hour into the contest and we got our rates at about 160/hour (our goal was 200/hour).

Later during that day, KU6A stopped by and he took the S&P

continued righthand column page 9

FREE TUBES, Club Members ONLY!

The 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, I will pre-check and deliver them to the next club meeting. Contact WB6IQS@amsat.org, -John

Field Day Setup

Paul Williamson KB5MU

These photos are from Friday afternoon during Field Day setup.

Below, W6NOW, WN6K, AK6R, and KG6RCW deploy the antennas from AK6R's tower trailer.



The following photo shows K6KAL, KD6TJ, KG6RCW, and WN6K raising the 20m CW yagi to point straight up for an SWR check before installation.



continued from righthand column page 8

station and I was on the calling station. We worked a few and he left. I too had to get up and get some food/water. Later during the night, at around 7pm I was on the calling radio and 20m was crowded and noisy because of the other stations around calling cq on cw (we had a 15/40cw, 20/80cw, and ours + some GOTA and VHF/UHF/SAT).

I had been on 15m at around 5pm but not much going on. I then made a novice decision to go to 15m at 7pm to go an listen. I guess it was the right call. Well, with a 5-element beam (thanks to Bob) I called cq twice and man what a pile-up I ended up with. I took the rate to 189/hour for about 1.5 hours. I owned the freq the entire time, and it just kept getting bigger and bigger (man, what a rush).

John took over at around 9:30pm to show the other team how to operate the station. He took the rate up to 199/hour I believe.

About John's setup: this is a solid setup. Good job John! Once the other team was good to go, John/I went to take a power nap and got back to FD at around 4:45am. We took over the other team, and the plan was for me to operate from 5am till about 8am. This is when John said to me hey you're running both rigs at the same time (real SO2R).

Well, I was able to manage 20/40m with SO2R calling CQ on both and it worked out pretty good I should say for being my first time. I got the rate up to about 90/hour and stayed solid but I was getting tired. I know, some of you do 24hours straight but I'm still young! ;-). Once 8:30am came around I told John he can take it over. At this point, I think we had worked everything out there from 15-40m.

I'm not sure what our final score was (2500points I think), but man I gotta tell you I'm proud of my team. The effort put into this setup, was well worth it for all of us.

Bob's setup was not difficult at all (thanks to him for making a great piece of engineering work). It took about 6 people and about 2hours for setup. (that 2-element 40m kicked butt). The brake-down was not bad either.

It has been one of the greatest experiences ever, and I can't wait for the next one.

Anyone who needs a hand on a contest/event please let me know.

73 de w6now.

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We're on the web! Find us at www.palomararc.org. See the newsletter in COLOR! Check out sets of PHOTOS!

About our Newsletter

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

About our Organization

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V

Meeting Location and Time

This month's General Meeting will be held on July 5th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be about the repeater site. Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

A newsletter by and for the Palomar Amateur Radio Club of San Diego, CA, USA.

Reminders

Meeting August 2nd
Montenegro DX Festival
ends August 12th
PARC testing August 12th
EARS testing August 26th
PARC picnic August 27th
Southwestern Division
Convention Sept 22-24
CA QSO Party Oct 7-8

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Letter from the President

The July Program: "PARC Repeaters", by John Kuivinen, was very informative and well-received. John provided information and a video covering much of the history of PARCs repeaters.

The August 2 presentation will be on EchoLink, and will be presented by our past President, Charlie Ristorcelli, NN3V.

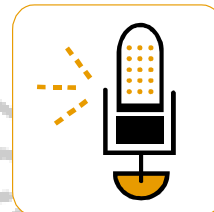
For a year or two, now, Charlie has patiently been trying to bring EchoLink to

the PARC Repeater System. Please come to the meeting to learn about EchoLink as Charlie currently has it configured at his home in Poway.

Looking down the road...

The annual PARC Picnic is coming up on August 27th. Please keep an eye on our web page, www.palomararc.org for details.

Remember, there are prizes awarded at the picnic!



This year, the 2006 ARRL Southwestern Division Convention is n town.

The 2006 Southwestern Division Convention will be held in Mission Valley on September 22nd, 23rd and 24th. This annual event lands in San Diego only every fourth year. This is a great change for local HAMS to see the latest tools and, equipment, and attend as presentations (Forums) on many Amateur Radio topics. PARC has a *continued page 2*

August Program Challenge: EchoLink

EchoLink is a web-based application that uses Voice Over Internet Protocol (VoIP). Using VoIP, EchoLink extends the reach of amateur radio to any place on the planet where there is an IP address. Every computer on the Internet has an IP address. Think of your desktop or laptop as having a worldwide known (to the rest of the internet) "mailbox address". EchoLink is the extension of your computer's address to VoIP services over the Internet.

VoIP is an increasingly popular communications capability that allows you to communicate by voice using your computer. Many of you have heard of the cable-based telephone service being offered by some cable providers (Time Warner for example). What they are doing is using the VoIP protocol to send digital voice packets around the Internet from properly configured IP address to properly configured IP address (or addresses since more than two people can

communicate simultaneously in a single conversation). EchoLink simply extends that service to licensed amateur radio operators.

EchoLink software is available free on the Internet. For PCs, go to <http://www.echolink.org/>. If you have a Macintosh (OS X), go to <http://www.dogparksoftware.com/EchoMac.html>.

Challenge: Download and Install EchoLink software on your PC before the August General Meeting.

"The fold and staple crew needs a couple of new members. We get together on the last Wednesday of the month at noon, and get the SCOPE ready for the Post Office.

The meeting place is in Vista, and takes an hour or so. The regulars have interesting conversations, and get the work done quite quickly.

Please make yourself known to Al (W6GNI) at the Membership Table during a meeting if you want to volunteer for this fun and social activity."

Current Needs

Volunteers are needed for the following club positions.

2007 Field Day Chair.

2007 Del Mar Fair.

Ham Help Net manager.

Assistant southwest division director.

Fold and Staple Crew (see sidebar to your left for details)

We are actively seeking people for these positions. If you or someone you know has expressed interest in getting more active in amateur radio, these positions are excellent ways to fulfill that wish!

Training is provided for all these positions, and the time commitment ranges from low to medium.

Some of the positions are irregular or seasonal in

schedule (Del Mar Fair), and some of them are consistent in schedule (newsletter, net operators).

Regardless of the type of position and the time commitment required, each and every volunteer opportunity is greatly appreciated and makes our club more successful.

PARC Picnic August 27th

The annual club picnic is fast approaching. We have again reserved picnic area number four at the San Dieguito Park. This is the same location we had last year.

The date is Sunday, August 27. After some discussion we've decided to move the time of the picnic to the early evening to get away from some of the heat. We have the picnic area reserved all day, so

come early and enjoy the park for as long as you wish. The organized activities will begin at approximately 3:30 with a transmitter hunt. At approximately 5:30 will begin to serve dinner. The drawing will follow dinner and the park closes at dusk. The Club will provide Hot Dogs, Hamburgers, Chicken, Paper plates, cups and eating utensils. Members whose last names begin with A through H are requested to bring Salads

or Fruit; I through P, Beverages such as Iced tea and soda pop; and Q through Z, desserts or chips or cookies. Bring enough to feed yourself and perhaps another 2 people.

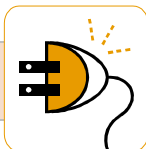
Directions: Take Lomas Santa Fe exit east off the 5. Take Highland Drive north. The entrance to the lower park is at Highland and El Camino Real. Picnic is in area 4.

Letter from the President (con't)

Continued from page 1
tradition of supporting this convention by encouraging Member Attendance and Volunteer Participation. Opportunities to help are many. Please contact myself, ad6vi@cox.net, or see [www.sandarc-](http://www.sandarc-conv2006.org/)

conv2006.org/ for more information. It is also time to begin considering nominations for next years PARC Leadership. PARC programs depend upon the membership to function well and to maintain relevance to the amateur community. Please

consider running for our offices and helping to lead the club to continued prosperity. See you on August 2nd, at 7:30PM, in the Carlsbad Safety Center.
-Steve Early, President PARC



Club Classified Ads

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(7.12) Avenger 4000 commercial alarm system, 8 PIR's, keypad, 2 sirens, \$70.00 OBO, 54" Oak Roll Top desk, replica, excellent condx, \$300.00 OBO, 11 ele Cushcraft 2 meter beam, \$20.00, CDE Rotator w/controller, \$20.00, Panasonic KX-F50 Phone answering machine/Fax Combo \$10.00, Blank, new VHS-C Super VHS Video Tape \$3.00/ea OBO, numerous Panasonic accessories. 3 - Kenwood TM-211 2 meter Transceivers, w/manuals, uses digitally encoded squelch w/SS32 PL's all 3 \$150.00. Contact K7DCG@aol.com or call 858-748-9046.

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New Member	Christy M.	K16AOL
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Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Contest Calendar

Aug 5	TARA Grid Dip Shindig
Aug 5	10-10 Int'l Summer Contest, SSB
Aug 5	European HF Championship
Aug 5	North American QSO Party, CW
Aug 5	ARRL UHF Contest
Aug 6	RSGB RoPoCo 2 Contest
Aug 6	SARL HF Phone Contest
Aug 9	NAQCC Straight Key/Bug Sprint
Aug 12	WAE DX Contest, CW
Aug 12	Maryland/DC QSO Party
Aug 19	SAARTG WW RTTY Contest
Aug 19	ARRL 10 GHz and Up Contest
Aug 19	North American QSO Party, SSB
Aug 19	New Jersey QSO Party
Aug 21	Run for the Bacon QRP Contest
Aug 26	ALARA Contest
Aug 26	Hawaii QSO Party
Aug 26	Keyman's Club of Japan Contest
Aug 26	YO DX HF Contest
Aug 26	SCC RTTY Championship
Aug 26	Ohio QSO Party
Aug 27	SARL HF CW Contest
Aug 27	Kentucky QSO Party

This is a typical August with fewer contests during the month; however, there are some neat one if you are into UHF and above, love RTTY, or chasing WAS. Complete rules on the Web or in QST, CQ, NCJ or Worldradio magazines. CU in the contest!

73, Harry

Repeater Information

52.680 W6NWG -0.5 MHz, Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALMAR/W6NWG-1) 146.700- (Duplex Pkt) PALBBS/EMG use 145.070/146.700- (W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-, 145.260 KK6KD (HARS) 146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220 ARC), 446.140- WB6FMT (123.0) Vista

† under repair * 107.2 Hz PL Tone

2m SSB QSOs with Hawaii Logged

On the evening of June 26th, 2006, Paul Lieb, KH6HME had QSOs with Ed, W6OYJ and with Pat Bunsold, WA6MHZ on 2-meter ssb. Paul has had QSOs with many other stations from as far north as British Columbia, and as far south as the tip of Baja.

The Hawaii Beacons are operated by Paul on the Big Island of Hawaii. The transmitting site is at the 8000 ft level of the Mauna Loa Volcano, where Paul has a commercial communications site. The beacons transmit continuously on the following frequencies, with antennas pointed toward the mainland west coast.

144.170 MHz
432.078 MHz
1296.250 MHz
10368.350 MHz

Occasional summertime ducting conditions allow the beacons to be heard here in California.

If the duct opens up really well, Paul can be talked into driving up the mountain (approx 2 hrs) and then will shut down the beacons and start making contacts with us on upper sideband.

There have been a few occasions when the path was so strong that a handytalkie in San Diego could bring up the KH6EJ

repeater on Mauna Loa, frequency 146.820, minus offset, no PL.

Paul holds the west end of the world 2-way dx records for the microwave bands above 1000 MHz, but so far no 2-way has been made on the 10 GHz band.

This may be the summer!! Chip Angle, N6CA has built and supplied most of the beacons.

If you want to check the web for current reports of signals being heard, go to:

<http://hiloweb.com/kh6foo/bbs/subduct.htm>

73s from Ed Munn, W6OYJ



Tropospheric Ducting is a type of radio propagation.

Temperature inversions change the refractive index of the atmosphere.

This causes signals to be bent.

Temperature inversions occur most frequently along coastal areas bordering large bodies of water, like San Diego.

Tropospheric ducting over water, as is seen between California and Hawaii, can produce VHF reception ranging from 1,000 to 3,000 miles.



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Time for a membership survey.

One of the duties of the PARC Board of Directors, to ensure that the Club maintains relevance to it's membership and to the Amateur Radio Community. This has been at topic at every Board meeting this year. The biggest questions are: What would our membership like is to provide? And what are the best ways to determine this?

One tool to help this process is the old fashioned survey. So here it is! Instructions for submitting the survey are below.

1) What topics would you like presented at next year's meetings?	
2) Would you like to hear meeting announcements on the repeater?	
3) Would you like a voice Identifier on a PARC repeater?	
4) What can we do to see you at our monthly meetings?	
5) Should PARC sponsor a Car Pool Net for club meetings?	
6) Should PARC offer amateur radio-related training, like Contesting Techniques, Emergency Operations, Antennas 101, etc? If yes – name a topic.	
7) How can we improve our repeaters?	
8) Would you like the Scope by e-mail, or by traditional mail?	
9) What question (s) should we be asking of the members?	
10) How would you answer the question we should ask?	

Please take some time to answer these questions and either bring your responses to the August Meeting, or send them to me at ad6vi@cox.net or at 4724 Maple Ave, La Mesa, Ca, 91941.

Thanks,

Steve Early,
President,
Palomar Amateur Radio Club

License and Class Information

Register 5-7 days in advance for the following test sessions.

☑ PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

☑ EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department.

The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

☑ "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.



Are you interested in upgrading your license? Do you work better in small study groups or on your own? Is the code requirement an obstacle?

Let SCOPE know! Certified instructors in PARC are ready and willing to help you. Write to

scope@palomararc.org

with your license goal and study preferences. Possibilities include online study groups, pre-PARC meeting study groups, and weekend study groups.

www.ac6v.com

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127

countries have visited www.ac6v.com which been in operation since 1997. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not

Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community!

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Relive the fun of Field Day again on October 7-8, 2006. We invite you and your friends to participate in the California QSO Party (CQP) ham radio contest. California stations (and California stations only!) will be sought after by the

rest of the ham radio World that weekend. Return to your June Field Day site and set up all over again (if the weather

is nice). You would enter the CQP Multi-Single or Multi-Multi "County Expedition" class of operations. Read about last year's CQP fun at www.cqp.org/results/2005/05cqpcomplete.pdf

Email your questions to cqp@contesting.com.

Club Classified Ads Continued

Continued from page 3

Kenwood TR-9130 2M. SSB mobile rig. \$175. Icom IC-730 HF rig & matching speaker IC-sp3. \$350. RARE Mizuho 15 M. SSB Handheld, phone and cw built in key, w/vfo and extra xtal. Exl cond. \$225. Have two Kenwood TH-78a dual band HT's, 2m/440 with all extras. (one has mod) \$175. EA. IC-32 AT 2m/440 HT. with desktop charger and battery Excellent Condition \$150 QRP NCG QRP rig. HF, 15m, 40m, 6m. 10 watts out. Runs on built in AC power sply. or 12 VDC. \$175. Atlas 210x HF with slide in base station. Exl. Cond. \$195. Larry WQ6V wq6v@aol.com (760) 723-9912

(7.12) **HAM FRIENDLY HOME FOR SALE**

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www.previewfirst.com/viewvirtualtour.do?id=3833 Contact Dennis K7DCG@aol.com or 858-748-9046, tour via appointment Only. No Mellowroose.

New Repeaters

KE6YRU, Bobby Randall, is converting his 446.40MHz (-) (67.0Hz PL) repeater on Palomar Mountain to D-Star (DV-#07) format.

While the data mode maxes out at 4,800 baud on 440MHz, it is a great beginning for a future 1.2GHz - 128K D-Star Winlink ECOMM network and could potentially be very useful for Hospital EMS requirements.

Point Loma ARC is proud to announce that they have two new open repeaters in operation. The first repeater is a two-meter voice repeater on 145.38 (-) PL 107.2.

The second repeater is an Amateur Television repeater that transmits on 1277.5 MHz AM and receives on 434.0 MHz AM. The new repeater is omni-directional in coverage from the top of Point Loma. Since it's on 1.2 GHz you must be line-of-sight to get good quality pictures. For receptions at home, you'll need a small down-converter to get the SHF band converted down to VHF (Ch-7) for your TV. This requires an outside antenna that has line-of-sight to Point Loma.

Please contact Robert, KA4JSR for details. Both of these repeaters are ideal for Coronado, Coronado Cays, and downtown coverage areas

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Model BA-58 (for RG58, RG8X & similar cables up to 1/4" dia. \$7.50+tax+\$6 S&H/order

Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

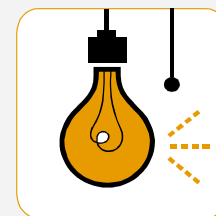
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See catalog at www.Palomar-Engineers.com
Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.

Regular Nets Sponsored by PARC

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sun	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sun	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Mon	1915	146.730	RACES Sub-Net	
Mon	2100	146.730	Microwave Net	Kerry B.
Tues	1900	147.130	Red Cross Net	Ted tthompdson@sdlarc.org
Tues	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillimek@home.com
Thurs	2100	146.730	Ham Help	Manager Needed
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	



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to repair their own

personal equipment. Not

for commercial use or

resale. If we have your

requests, I will pre-check

and deliver them to the

next club meeting.

Contact

WB6IQS@amsat.org, -John

PARC 2006 Board

President: Steve Early AD6VI (619) 461-2818 AD6VI@cox.net

VP: Dennis Baca KD6TUJ (760) 722-0251 KD6TUJ@amsat.org

Secretary: Gary Kent W6GDK (858) 679-0578 W6GDK@arrl.net

Treasurer: Bob Birch KG6RGI rbirch@cox.net

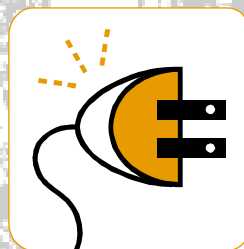
Dir: Tom Martin KG6RCW

Dir: Mark Raptis KF6WTN (760) 749-4825 KF6WTN@amsat.org

Site Management: Mike Pennington K6MRP K6MRP@amsat.org

Membership: Al Donlevy W6GNI (760) 630-3096 W6GNI@amsat.org

Site Tech: Mike Doyle AB6QT (760) 742-1573 AB6QT@amsat.org



Participation Points

Attending or participating in various organized functions of the Palomar Amateur Radio Club earns Participation Points. The "points" are redeemable for tickets for the drawing at the Annual Club Picnic, usually held in September or October each year. There is a maximum of 20 tickets for the drawing that may be claimed by any member of the club in good standing at the time of the picnic. (Or by a member's written proxy). In accordance with the by laws of Palomar Amateur Radio Club, the period for earning points for the year is from August 1 through July 31. Participation points are earned by participating in the following activities (And other activities that the Board of Directors may approve): One point: Attending the Monthly Club Meeting, attending a Board Meeting, bringing "Goodies" to the club meeting, Fold & Staple for SCOPE mailing, Pre Field Day work parties, Field Day setup, Field day activities (Saturday), Field Day take down (Sunday), other Approved Work Parties. Two Points: Repeater site work parties, Picnic (see below for special conditions). Five Points: Committee Chairmen One to Five Points: Net Managers and their recommendations. One to Ten Points: Equipment construction.

Information on a member's participation is collected from sign in sheets at the various organized functions, and also from activities described in the SCOPE. Net Managers and others that wish to recommend point assignments must make their written recommendations prior to the end of July each year. E-mail is considered "written". Even though the picnic is after the cutoff date stated in the bylaws, in order that each member in good standing attending the picnic has an opportunity to participate in the drawing, each member attending will receive a ticket at the picnic, within the limit of 20 tickets. In addition, each member attending the picnic, and signing the attendance record will be credited with a point for the following year. In effect, making the picnic worth two participation points for a person attending and signing the register.

A new ARRL DXCC entity has come into being! As expected, the United Nations admitted the Republic of Montenegro as its 192nd member June 28, and that action automatically makes the tiny Balkan nation the 336th current DXCC entity.

In anticipation of Montenegro's new nation status, the International DX Festival Montenegro, with information on the web at, <http://www.yu6scg.cg.yu/international-dx-festival.html> has been set for July 20 until August 12.



We're on the Web!
See us at:
www.palomararc.org

About Us

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org
Questions? Ideas? Comments? W6NWG@amsat.org

This month's General Meeting will be held on August 2nd, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be about Echolink. Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V (past president of PARC)

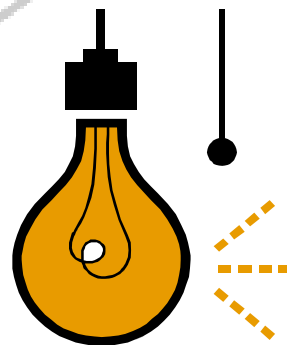
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W6NWG

San Diego County, Ca.



A newsletter by and for the Palomar Amateur Radio Club of San Diego, CA, USA.

Reminders

Meeting Sept 6

Mass Casualty Exercise
Sept 21

ARRL Southwestern Division
Conference Sept 22-24

Simplex Mapping Sept 23

PARC Auction Oct 4

California QSO Party at the
Field Day site Oct 7-8

Emergency Preparedness
Fair Oct 14



Individual Highlights

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President's Letter

I would like to thank Harry Hodges, W6YOO, for stepping in for our August Meeting Program on DX. I enjoyed it. I learned a lot and suspect that many others did as well. EchoLink was our scheduled program. However, our presenter, Charlie Ristorcelli, NN3V, like myself, has an employer that expects him to travel on short notice. Personally, I am looking forward to Charlie's EchoLink presentation at a future PARC Meeting.

The September 6th presentation will be on RF Safety and will be presented by Tom Storer, KI6DER. Tom is the Radio

Frequency Safety Officer at Miramar Marine Corp Air Station. While many of us studied a little bit about RF Exposure while obtaining our licenses, I suspect that Tom will give us a whole new perspective and appreciation for the concept of RF Safety.

The 2006 Southwestern Division Convention will be held in Mission Valley on September 22nd, 23rd and 24th. This annual event lands in San Diego only every fourth year. Please see www.sandarc-conv2006.org for more information on volunteering at the convention.

It is also time to begin considering nominations for next years PARC Leadership. Club Officer Nominations and Elections are just around the corner. PARC programs depend

upon the membership to function well and to maintain relevance to the amateur community. Please consider running for our offices and helping to lead the club to continued prosperity. I would like to thank our Webmaster, Paul Williamson, KB5MU, for adding an on-line Survey feature to the PARC web site, www.palomararc.org. This is part our ongoing effort to better serve the club. Finally, I would like to thank Michelle Thompson, W5NYV, for once again taking on the task of editing the Scope. Michelle has been juggling a career, a growing family and PARC. Her efforts are greatly appreciated.

See you on September 6th, at 7:30PM, in the Carlsbad Safety Center.

-Steve Early
President, PARC

KF6BFI, and the Need for Platelets

Many of you may remember Captain Ted Wilcox. KF6BFI was very active on the ham radio repeaters here in San Diego until he contracted leukemia in 2003. After a long uphill battle that lasted until September 2004, he finally completed his bone marrow transplant and was pronounced cured. Although he's been a member of the ham radio club and on the repeaters ever sense in a lesser capacity, he now spends most of his off hours fighting for a cure to leukemia. So, it is with great

regret that I must inform you that our friend KF6BFI is back in the hospital with leukemia again. He is now going through all of the chemotherapy procedures again and the outcome is still uncertain. I will include an update next month in the Scope. The one thing that we can all do to help was pointed out the first night he went to the hospital. The doctor looked at his blood cell counts and immediately prescribed an infusion of platelets. But, there were none to be found. There were no platelets available for Ted.

As a result, he went without. Anyone can donate platelets regardless of their blood type. Of course whole blood can always be used also. It seems to be ingrained in the nature of hams the desire to help their fellow man. This appears to be one more case where we can step up and make ourselves known.

If you can, please consider donating blood or platelets.

-Mark Raptis
Director, PARC

Simplex Mapping

The Mercury Amateur Radio Association (MARA), with PARC's permission, will conduct its semi-annual Simplex Mapping Exercise on the 147.075 repeater from approximately 8:00 am to 11:00 am on the morning of Saturday, September 23, 2006. The purpose of this exercise is to map simplex connectivity around San Diego County, in the event a repeater fails during an emergency.

First, you have operators stand by at places that your organization is likely to use during an emergency. Second, you establish a Roll Call Net on the repeater, in which these operators will participate. Third, the net control operator directs each participant (one at a time) to pass the following information through the repeater:

- 1) Call sign
- 2) Approximate location
- 3) Antenna Type (5/8 Mag-mount, Rubber Duck, etc.)
- 4) Transmitter Power Output (5 watts, 40 watts, etc.)
- 5) A "ten-count" (1, 2, 3...9, 10)

Fourth, each of the listening stations records the transmitting stations call-sign, as heard through the repeater, then

See sidebar page 7

PARC Members Needed in Red Cross

By Ted Thompson,
Response Technology
Manager

The American Red Cross relies on volunteers to help us with our mission of providing care and comfort to those in need.

The Palomar Amateur Radio Club has been among the strongest supporters of the San Diego/Imperial Counties Chapter's mission to make our region "America's most prepared communities." The Club's repeater hosts our weekly Net broadcast every Tuesday evening at 7 p.m. Many members are active participants in Red Cross disaster preparedness activities and disaster response training.

As the Response Technology Manager for the San Diego/Imperial Counties Chapter, volunteers trained in the highly technical disciplines including amateur radio operations are critically needed in times of emergency, yet difficult to secure on a moment's notice.

With a long hurricane season predicted for 2006, and a typical hot summer ahead in San Diego and Imperial Counties, the need for disaster relief volunteers is expected to be higher than ever. To ensure the Red Cross can meet the need for disaster relief whenever and wherever help is needed, the San Diego/Imperial Counties

Chapter is recruiting communications volunteers for disaster assistance within San Diego and Imperial Counties, California and Hawaii, and nationally for large disaster such as hurricanes.

When all other forms of communication have collapsed or are overloaded, amateur radio is still the best, most reliable form of message transmission.

Our Communications Committee has worked

to the hurricane affected areas this past year were members of DSHR. You can also volunteer your time just in San Diego County. You must meet basic criteria, which includes completing an enrollment application, health screening, required background check and taking basic disaster training classes according to your skills and interests. "Trained volunteers are the backbone of Red Cross disaster preparedness," said Chapter CEO Jeff Wiemann.



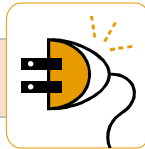
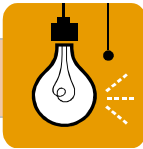
hard to develop our capacity, but we are still short of the trained and knowledgeable personnel we need to effectively serve our community in a time of critical need.

For PARC members to participate, you must be a member of the nationwide Red Cross Disaster Services Human Resources (DSHR) system in order to volunteer your time working within the Red Cross.

All volunteers that deployed from San Diego

"They commit to training and drills, and we count on their field experience to make critical decisions about service delivery during an emergency.

We hope more will join us for the challenging year ahead, especially in critical technical fields such as amateur radio operations," added Wiemann.



Club Classified Ads

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(8.27) MFJ-1664 Manual Screwdriver Antenna, continuously adjustable covering 80 through 6-meters including WARC. Antenna is in its original box and has never been used. Includes both the 10 ft and 4.5 ft telescoping whips. For full specs and various reviews Google "MFJ-1664". Price \$70. Contact: N6FN - Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(8.27) For Sale: Like New Icom IC-20R, Dual Receive Wideband IC-R20 Scanner and CS-R20 Programming Software. In original box with all accessories: antenna, battery charger, belt clip and factory manual. Also comes with the Nifty Accessories Mini-Manual and wallet card reference guides, CS-R20 Cloning software and PC interconnect cable. Price: \$380. Contact: Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(6.28) WANTED: About 0.6 Farads (600,000 uF) or bigger worth of computer grade capacitors (typically they have 10/32 screws on the top) at 25 VDC or better. For homebrew spot welder to make battery packs. Multiple Capacitors OK. Must be cheap. John, WB6IQS (760) 727-3876

(5.24) For sale: 38 foot, two section self-supporting, crank-up tower. NEW, Never installed. U.S Tower HDX - 538, Heavy-Duty, Commercial grade with the TRX - 80 Raising fixture hand crank and cable. Does need second hand crank and tower cable. \$600 takes it all and it is now laying on the ground ready to be moved. Larry, WQ6V Contact person Bob Layton (760) 726-1706 in the Vista area.

(5.24) For sale: For Sale: 40 foot, 4 section light duty tower with KLM KT - 34 Tri-bander. Comes with a HAM II rotator and controller, Two runs of RG-8 @ 100 feet ea. \$300 takes it all and you take it down. Tower is NOT in cement. Easy take down. Larry WQ6V. Contact person Bob Layton (760) 726 - 1706 Vista area.

(5.24) For sale: Collins gray plastic XTAL. Pack is in new mint condition. XTALS. Have mint factory shine. Pack comes with the Collins TW-380 xtal puller - New factory smell - All XTALS. (less the 12 normal issue in the rig.) 114 XTALS. Total in the pack 3.8 MHz. to 30.0 MHz \$375 (that's about \$3.28 per xtal.) Larry WQ6V wq6v@aol.com (760) 723 - 9912

(5.24) For sale: HIGH SIERRA H.F. Antenna, "platinum package" New in the box with all equipment, mounting bracket and the 6 foot whip. \$375. Larry WQ6V wq6v@aol.com (760) 723-9912

HAM RADIO OUTLET

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Committee Chairpersons

ARES Info	Tony	KC6YSP
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Attendance	Al	W6GNI@amsat.org
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Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Contest Calendar

Sep 2	All Asian DX Contest, Phone
Sep 2	Russian RTTY WW Contest
Sep 2	Wake-Up! QRP Sprint
Sep 2	RSGB SSB Field Day
Sep 2	IARU Region 1 Field Day
Sep 2	AGCW Straight Key Party
Sep 3	DARC 10-Meter Digital Contest
Sep 3	MI QRP Labor Day CW Sprint
Sep 4	ARS Spartan Sprint
Sep 8	Int'l G3ZQS Memorial Straight Key Test
Sep 9	WAE DX Contest, SSB
Sep 9	Swiss HTC QRP Sprint
Sep 9	ARRL September VHF QSO Party
Sep 9	SOC Marathon Sprint
Sep 10	North American Sprint, CW
Sep 10	Tennessee QSO Party
Sep 10	ARCI End of Summer Digital Sprint
Sep 12	YLRL Howdy Days
Sep 15	FISTS Get Your Feet Wet Weekend
Sep 15	SARL VHF/UHF Contest
Sep 16	ARRL 10 GHz and UP Contest
Sep 16	Scandinavian Activity Contest, CW
Sep 16	South Carolina QSO Party
Sep 16	QRP Afield
Sep 16	Washington State Salmon Run
Sep 16	QCWA Fall QSO Party
Sep 17	North American Sprint, SSB
Sep 18	Run For The Bacon QRP Contest
Sep 18	144 MHz Fall Spring
Sep 21	NAQCC Straight Key/Bug Sprint
Sep 23	CQ WW DX Contest, RTTY
Sep 23	Scandinavian Activity Contest, SSB
Sep 23	Texas QSO Party
Sep 23	AGCW VHF/UHF Contest
Sep 24	UBA ON Contest, CW
Sep 25	Fall QRP Homebrewer Sprint
Sep 26	222 MHz Fall Sprint
Sep 30	CIS DX Contest
Sep 30	Arkansas QSO Party
Sep 30	FISTS Coast to Coast Contest

Repeater Information

52.680 W6NWG -0.5 MHz, Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALMAR/W6NWG-1) 146.700- (Duplex Pkt) PALBBS/EMG use 145.070/146.700- (W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-, 145.260 KK6KD (HARS) 146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220 ARC), 446.140- WB6FMT (123.0) Vista

† under repair * 107.2 Hz PL Tone

Puzzle Corner Mass Casualty Exercise

"Nice New Jeep," said the Sergeant.

"It has some tall-rolling to do. We have 18,000 miles of driving ahead," said the Private.

These brand-new G.I. tires are rated to last exactly 12,000 miles in this desert terrain.

If we get full mileage out of each tire, how many spares would we need to carry us over the 18,000 miles?

Send in your calculation of the minimum number of tires needed for the journey to SCOPE@palomararc.org

As a result of the exemplary "We Can Do That" pro-active performance by ARES at the 2005 Miramar Air Show, ARES have just been invited to participate in the Miramar Mass Casualty Exercise on Thursday Sept 21st at 1700.

What makes this exercise different this year is that the Hospital EMS systems and Red Cross will also be activated in a Terrorism attack scenario.

Last year we used this as an exercise to test out our mobile communications center (RV) and hospital EMS connections in anticipation of the Miramar Air Show. We need to get our new RV act together for the show, so this will be a very good test.

Also this is an opportunity to activate Hospitals EMS and test out the Phone trees which should be working by then.

For more details of the Terrorism scenario look at:

http://www.sdgaes.org/miramar_mass_casualty_exercise.htm



We need a few new members for the Fold & Staple group that puts the SCOPE together each month. We meet on the last Wednesday of the month in Vista. A good social event, with many subjects to discuss.

If you can make a noon meeting on that Wednesday, please drop in at the "Membership" Table at the back of the room during a meeting, or send e-mail to Al Donlevy (w6gni@amsat.org)

Thanks, Al



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KI6FDN Operational

Palomar Mountain Volunteer Fire Department is now KI6FDN! It has been a busy time on top of ol' Palomar Mountain these last 6 months for the fire department and emergency crews. The great weekend weather has resulted in a considerable amount of motorcycle injuries, several spot fires on Nate Harrison and near the school at Doane Pond, and the seasonal maladies of altitude, low hydration and heat stress injuries.

In addition, we are training 30 firefighters, are working on interdepartmental communications with the County, State, CDF, and Forestry departments, are developing our County and Community Emergency Response plans and building new emergency infrastructure for the mountain.

New Evacuation plans are being drafted with the San Diego County Office of Emergency Services and San Diego Animal Services and the Humane Society are helping to establish safe zones for animal evacuations.

Our CERT program is funded and has begun with 15 selected community members working through the online FEMA CERT introduction for proper training in September. We built a new Emergency Communication Center within the Palomar Mountain Volunteer Fire Station on the mountain.

For this last initiative, I would like to make a request. The Communication Center will be the initial point of communication for a proper Incident Command in time of great emergency, and it is imperative that we have Amateur Radio communications in place and functioning to interface quickly to the Red Cross, ARES, RACES, and off-mountain in time of emergency. The station even has a new "FireCom" Club designation of KI6FDN.

So... we are looking for donations for old equipment, and any assistance you experts can offer. We would like to move the 800MHz RCS Antennas, 168MHz CDF Antennas and scanning antennas along with moving of the radios and installation of any new 'old' equipment. Michelle (W5NYV), Mike (AB6QT), Steve (AD6VI), and Donald (WD6FWE) have already been invaluable, and we are sincerely appreciative.

Specifically, we believe that we still need the following.

- Masts, and Directional Antennas of 2M or other frequency
- 2M, or other frequency Base/Mobile and HT units to match
- Old 2M repeater, or other frequency to match

I can be reached at anytime either by email, or by cell (below) and, of course, all donations to the Volunteer Fire Department are tax deductible. Sincere thanks for any assistance you can give us, and I look forward to meeting many of you.

Christopher Kusek, KI6EHE,
Palomar Mountain Auxiliary Fire Fighter,
PM CERT Chairman,
PM VFD FireCom Trustee (KI6FDN)
714-925-2577,
kckusek@hotmail.com

PARC by Email

Subscribe to SCOPE via email

We have been publishing Scope in PDF form on the PARC web page for a while. Now we've made it easier for you to get the newsletter as soon as it becomes available. You can choose to have the PDF file emailed directly to you as soon as it becomes available, by subscribing to the Scope-PDF mailing list. Or, since the PDF file can be rather large, you can choose to get just a brief email notification whenever a new issue of Scope is posted to the web page, by subscribing to the Scope-notice mailing list. Either way, go to the PARC web page at <http://www.palomararc.org> and click on Newsletter to sign up.

If you find that the online Scope is all you need, you can opt to stop receiving the printed newsletter by mail. To do that, send a note to membership@palomararc.org and let AI know. Please include your callsign, name, and address. For each member who opts out of postal delivery, the club will save money on printing and postage.

Get a Meeting Reminder

Have trouble remembering about the club meeting? Want to get a reminder each month with the latest details about the meeting program? Subscribe to the Meeting-Remind mailing list. You can find this on the Contact Us page.

Need Help?

Most mailing list changes and settings can be handled online at <http://lists.palomararc.org/mailman/listinfo>.

If you run into any trouble with these mailing lists and need help, email webmaster@palomararc.org or kb5mu@amsat.org.

We hope these services will prove useful to you.
-Paul, KB5MU, PARC Webmaster



Wondering what the club was up to on a beautiful August afternoon? Attending the annual picnic, that's what! Photo by W5NYV

License and Class Information

Register 5-7 days in advance for the following test sessions.

☑ PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

☑ EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station # 1 Escondido Fire Department.

The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

☑ "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members.

Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.



2006 PARC Picnic photos by KB5MU. Look at those prizes! That food! Don't you wish you'd been there too?

Continued from sidebar on page 2

switches to the repeater input frequency. The listening station records signal quality, if any, then returns to the repeater output frequency and waits for the next participant to transmit. Note: it is best to turn the squelch off for this exercise, so that you might hear weak stations.

Fifth, the net control operator records all of the data passed of the repeater (call, location, antenna, power,) in addition to what the net control hears on the repeater input. At the conclusion of this roll call, the net control asks for any needed information fills or re-transmission.

Sixth, after the on-air exercise is concluded, all participants send or deliver their recorded data to a single person. That single person is responsible for collating and distributing the finished data to all participants.

The benefit of using a repeater for this exercise is timing. Everyone gets to hear each transmission begin and end, by listening to the repeater output.

The reason for collecting antenna type and power output is to determine if a 50 watts rig and gain antenna is necessary, or if a handheld and rubber duck will do.

This type of exercise can benefit any EmComm or special event organization that regularly uses a repeater.

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The Mercury Amateur Radio Association would like to invite all Amateur Radio Operators, their friends, and their families to visit the MARA display at the **Emergency Preparedness Fair** hosted by the Del Mar Stake of the Church of Jesus Christ of Latter-Day Saints, 1444 Lake Drive, Cardiff, Ca 92007 on (Saturday) October 14, 2006.

The fair will be open from 10 am until 3 pm. Various agencies will be present to answer your questions and provide valuable life-saving information all in one location.

In addition to MARA, other agencies or groups present include: The Red Cross Bloodmobile, the San Diego County Office of Emergency Services, the Consumer Education & Outreach Bureau of the California Department of Insurance, the Encinitas Fire Department, the Encinitas Community Emergency Response Team (CERT), County of San Diego Animal Services, Olivenhain Water District, San Diego Medical Services Enterprises (SDMSE....our paramedic/ambulance service), Master Gardeners, and the Solana Center for Environmental Innovation.

For more information, please contact Mickey Cross at

mickeykc@juno.com



Preparing the grill with... what is that they're holding? Photo by KB5MU.



PARC President Steve Early, AD6VI, draws the final ticket in the prize drawing at the PARC annual picnic. Photo by W5NYV



Pat, WA6MHZ, basks in the warmth of late afternoon crepuscular rays. This year's picnic was held at San Dieguito Park. Photo by W5NYV



Preston, W6ASP, shares a few stories right before dinner at the Picnic. Photo by W5NYV



Al, W6GNI, has all the prize tickets for the drawing in that green can. Photo by W5NYV

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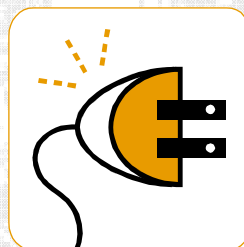
Please check our complete ads in **QST**, **CQ**, and **World Radio** magazines.

Regular Nets Sponsored by PARC

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Marvin KD6YJB kd6yjb@arrl.net
Sun	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sun	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Mon	1915	146.730	RACES Sub-Net	
Mon	2100	146.730	Microwave Net	Kerry B.
Tues	1900	147.130	Red Cross Net	Ted tthompdson@sdark.org
Tues	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com
				Dick W. KA7AYT rwillimek@home.com
Thurs	2100	146.730	Ham Help	Manager Needed
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com
				Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	

PARC 2006 Board

President: Steve Early AD6VI (619) 461-2818 AD6VI@cox.net
 VP: Dennis Baca KD6TUJ (760) 722-0251 KD6TUJ@amsat.org
 Secretary: Gary Kent W6GDK (858) 679-0578 W6GDK@arrl.net
 Treasurer: Bob Birch KG6RGI rrbirch@cox.net
 Dir: Tom Martin KG6RCW
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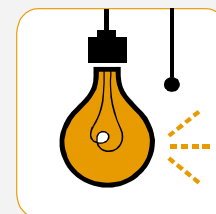
Club Reports

August Meeting Goodie Givers KG6RCW Tom, KD6YJB Marvin

Fold and Staple Crew KR6BT Merle, W6YOO Harry, W6JAC Jerry, W6GNI Al, KB6YHZ Art, KB6NMK Jo & Tyler & Matthew

Membership Report New Members Joining PARC: KI6DIZ, KI6EHE, KI6EHF, KD6IDE, KI6EHG, K6DEX, W6AEN, Thank you! Just a reminder, according to the bylaws, everyone starts all over again collecting "Participation Points", starting July 1, 2006. Those that attended the picnic picked up a point for this year (2006 - 2007). Please be sure to check your SCOPE mailing label each month. Avoid the dreaded red "Last Issue" on your label. "Last Issue" means your membership expires in a few days, OR has expired as you received the SCOPE in the mail.

We get a number of new members that download the membership application form from the club web site. This is great, and the web site is a good way to tell potential members about the club. Do you know our web address? Palomararc.org Think - Palomar A-mateur R-adio C-lub dot Org.



FREE TUBES

Club Members ONLY! The

PARC has a tube bank

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personal equipment. Not

for commercial use or

resale. If we have your

requests, I will pre-check

and deliver them to the

next club meeting.

Contact

WB6IQS@amsat.org, -John

About Us

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org
 Questions? Ideas? Comments? W6NWG@amsat.org

This month's General Meeting will be held on September 6th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be about RF Safety, Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V (past president of PARC)

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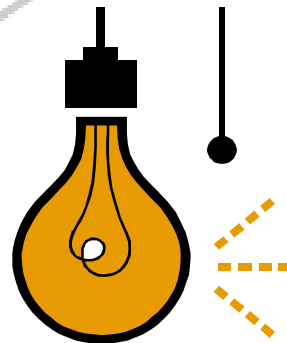
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A newsletter by and for the Palomar Amateur Radio Club of San Diego, CA, USA.

Reminders

PARC Auction Oct 4

California QSO Party at the
Field Day site Oct 7-8

Emergency Preparedness
Fair Oct 14



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President's Letter

For our September meeting, we had an excellent and informative presentation on RF Safety, from the perspective of Tom Storer, KI6DER, who is the RF Safety Officer at the Marine Corp Air Station, Miramar. Tom gave us a whole new understanding of the hazards that exist daily in a Military Environment. Such an understanding is essential for anyone attending and participating with ARES/EMS and RACES at this year's Miramar Air Show.

Our October Program is the annual PARC Auction.

This is a prime opportunity

to get that rare find, to get a bargain, and to make room in the HAM shack for the new toys you just acquired at the 2006 ARRL Southwestern Division Convention.

The door opens for sellers at 6:00 PM, so that they may haul in, prepare and tag each lot that is to be auctioned.

The door opens for Buyers at 6:30 PM, to allow inspection of items to be sold.

The PARC Auction starts at 7:00 PM.

We are looking for volunteers to help tag for sale items and to serve as runners during the auction.

Looking down the road....

Another aspect of the October meeting is the

announcement of the Nominating Committee. Nominations for PARC Leadership Offices are due at the November PARC Membership Meeting, and elections are held at the December PARC Membership Meeting.

The November Meeting will be a report on the ARRL and TAPR (Tucson Amateur Radio Packet) Digital Communications Conference, which was held September 15-17. For Digital Mode Enthusiast, this should be a very informative meeting.

The December Meeting will be our annual Elections and Holiday Social.

I hope to see you on October 4th, at the PARC Auction.

-Steve Early
President, PARC

Jo Ashley wins Award

Jo Ashley, KB6NMK, a long-time member of the Palomar Amateur Radio Club and former Treasurer, today was awarded a plaque as the ARRL Southwestern Division Volunteer of the Year.

The presentation was made by Division Director, Dick Norton, N6AA, during the Southwestern Division's ARRL Forum at the Marriott Hotel and Convention Center in San Diego's Mission Valley.

Speaking before a large crowd of Amateur Radio

operators, Director Norton lauded Ms. Ashley for her many years as a dedicated volunteer who could always be counted on to provide communication support at public events, to participate in the Volunteer Examiner program, and as one who actively supports the ARES, RACES, and SATERN programs and many other Amateur Radio activities. The next time you see Jo, give her a hearty thank you for all she does for Amateur Radio.

73,
Harry Hodges, W6YOO
Convention Committee

PARC Survey

I want to thank the 15 or so persons that took the time to respond to the PARC Members Survey, whether on line, or by hard copy.

The PARC Board of Directors is reviewing the results to date, and will be discussing them at the next PARC Board Meeting. As expected, some of the responses were humorous and others were very serious, regarding improving the direction of the club. Please consider sending us your thoughts, via the On-line Survey and palomararc.org.

Software Defined Radio

For those who are not familiar with the term software-defined radio, the concept is relatively straightforward. The RF signal is down converted by a local oscillator directly to the baseband frequency.

Actually, there are two local oscillators 90° out of phase with each other. The output signal from those is fed into a sound card on a PC. At that point all of the signal demodulation and decoding is done inside the DSP of the sound card.

One of the TAPR members brought out his own product the SDR 1000. This radio has no controls on its front panel except for the on-off switch. Everything is handled through the PC.

2006 TAPR DCC Report

TAPR is the acronym for the Tucson Amateur Packet Radio Corp. This group, now 25 years old, hosts a yearly event called the Digital Communications Conference, or DCC. The conference normally cycles from the East Coast to the Midwest and in the end to the West Coast, but this year for the 25th anniversary it was decided to move back to the original city - Tucson. Most of the original six members were there for the reunion dinner and to reminisce about trying to generate a single terminal node controller that would be available to amateurs for transmitting packets between locations over a standard FM radio. Being the type of people that they were, they designed and built the first prototype TNCs and later progressed to the TNC1 and the TNC2 which were sold to fellow hams around the world. With this legacy, and the charter to further digital communications while advancing the radio art, the group now has over 2000 members worldwide.

The group continues to sell kits to amateur radio operators. One of the more interesting kits is the vector network analyzer which will, when connected to a PC, allow you to tune filters, test amplifiers, coaxial cables, and measure antenna characteristics. Another is the DSP module which is fully compatible with another Ham's software defined radio.

The digital communications conference opened with one of our ham members from Australia who came to present his GPS based collision avoidance system for gliders. It seems during competitions that up to a thousand gliders can attempt to ride the same series of thermals and collisions become a real problem. This person got together a small company and designed a unit that fits on the cockpit of a glider, reads the GPS location and pressure altitude, and then communicates this information to other units across the unlicensed bands. The other gliders use this information to determine the relationship between the craft and give direction and distance displays of the other craft in the vicinity. Although he set the bar quite high for the first presentation, the remainder of the presentations that day were up to the challenge.

There was a proposal for a standard for forward error correction for APRS AX.25, three new APRS tools, and discussion of an AX.25 satellite network. Of course each day always ends with playtime in the demonstration room. The morning of the second day was pretty much taken up with AMSAT's Eagle project. We discussed everything from satellite guidance to antenna and radio design.

After lunch the discussion switched to open source

software licensing and a concept for an open source hardware license. The end of the day was taken up with one of my favorite subjects, software-defined radio.

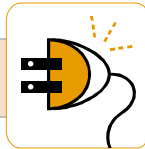
One of the problems with this radio is that it is highly dependent upon the quality of the sound card in the PC. As a result, TAPR is embarking on a new project. The title of that project is high-performance software-defined radio. They're just starting to design the boards that will go into the kits and trying to come up with the money to get the kits produced.

The kits consist of a backplane, a USB interface, the DSP board, and the power supply board. With the control processor in the board there will no longer be any need for a PC to control your software defined radio.

AMSAT Eagle is also flying software-defined radios in the satellite. With so much going on we didn't even get a chance to adequately discuss a previously success of TAPR, SuitSat1, but SuitSat 2 is well underway. Find out more at:

<http://www.tapr.org/>
<http://www.amsat.org/ams-at-new/eagle/>

Mark Raptis
 KF6WTN



Club Classified Ads

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(9.26) For Sale: MFJ High Q 40 - 15 Meter Loop antenna. Ideal for antenna restrictions. Works in attic, garage, etc. Brand New in Box, never opened. MFJ price: \$449+tax/shipping. Only \$350. 2 MFJ Loop tuning Capacitors: One Large, one small. Brand new. Never used. \$70/\$55. Contact Ron, K2RP (760) 436-8109 K2RP@ARRL.NET

(8.27) MFJ-1664 Manual Screwdriver Antenna, continuously adjustable covering 80 through 6-meters-including WARC. Antenna is in its original box and has never been used. Includes both the 10 ft and 4.5 ft telescoping whips. For full specs and various reviews Google "MFJ-1664". Price \$70. Contact: N6FN - Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(8.27) For Sale: Like New Icom IC-20R, Dual Receive Wideband IC-R20 Scanner and CS-R20 Programming Software. In original box with all accessories: antenna, battery charger, belt clip and factory manual. Also comes with the Nifty Accessories Mini-Manual and wallet card reference guides, CS-R20 Cloning software and PC interconnect cable. Price: \$380. Contact: Bernie at 760-781-5522 or email at

n6fn@niftyaccessories.com

(6.28) WANTED: About 0.6 Farads (600,000 uF) or bigger worth of computer grade capacitors (typically they have 10/32 screws on the top) at 25 VDC or better. For homebrew spot welder to make battery packs. Multiple Capacitors OK. Must be cheap. John, WB6IQS (760) 727-3876

(5.24) For sale: 38 foot, two section self-supporting, crank-up tower. NEW, Never installed. U.S Tower HDX - 538, Heavy-Duty, Commercial grade with the TRX - 80 Raising fixture hand crank and cable. Does need second hand crank and tower cable. \$600 takes it all and it is now laying on the ground ready to be moved. Larry, WQ6V Contact person Bob Layton (760) 726-1706 in the Vista area.

(5.24) For sale: For Sale: 40 foot, 4 section light duty tower with KLM KT - 34 Tri-bander. Comes with a HAM II rotator and controller, Two runs of RG-8 @ 100 feet ea. \$300 takes it all and you take it down. Tower is NOT in cement. Easy take down. Larry WQ6V. Contact person Bob Layton (760) 726 - 1706 Vista area.

(5.24) For sale: Collins gray plastic XTAL. Pack is in new mint condition. XTALS. Have mint factory shine. Pack comes with the Collins TW-380 xtal puller - New factory smell - All XTALS. (less the 12 normal issue in the rig.) 114 XTALS. Total in the pack 3.8 MHz. to 30.0 MHz \$375 (that's about \$3.28 per xtal.) Larry WQ6V wq6v@aol.com (760) 723 - 9912

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Committee Chairpersons

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Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Contest Calendar

Oct 1	UBA ON Contest, 6 meters
Oct 1	RSGB 21/28 MHz Contest
Oct 3	ARS Spartan Sprint
Oct 3	German Telegraphy Contest
Oct 3	YLRL Anniversary Party CW
Oct 4	432 MHz Fall Sprint
Oct 5	SARL 80m QSO Party
Oct 6	TARA PSK Rumble Contest
Oct 7	Oceania DX Contest, phone
Oct 7	International HELL-Contest
Oct 7	EU Autumn Sprint, SSB
Oct 7	California QSO Party
Oct 7	PRO CW Contest
Oct 8	UBA ON Contest, SSB
Oct 10	10-10 Int'l 10-10 Day Sprint
Oct 10	YLRL Anniversary Party, SSB
Oct 11	NAQCC Straight Key/Bug Sprint
Oct 14	Makrothen RTTY Contest
Oct 14	Microwave Fall Sprint
Oct 14	Oceania DX Contest, CW
Oct 14	EU Autumn Sprint, CW
Oct 14	Pennsylvania QSO Party
Oct 14	FISTS Fall Sprint
Oct 15	Asia-Pacific Fall Sprint, CW
Oct 15	North American Sprint, RTTY
Oct 15	UBA ON Contest, 2m
Oct 16	Run For The Bacon QRP Contest
Oct 21	JARTS WW RTTY Contest
Oct 21	ARCI Fall QSO Party
Oct 21	Worked All Germany Contest
Oct 21	W/VE Islands QSO Party
Oct 21	50 MHz Fall Sprint
Oct 22	Illinois QSO Party
Oct 28	CQ WW DX Contest, SSB
Oct 28	eXtreme CW World-Wide Challenge
Oct 28	10-10 Int'l Fall Contest CW

What a list of contests! Complete rules may be found in QST, CQ, NCJ, & Worldradio magazines. 73, Harry W6YOO.

Repeater Information

52.680 W6NWG -0.5 MHz, Autopatches: 146.730-, 147.075+, *147.130+, *447.000-
 PKT: 145.050s (PALMAR/W6NWG-1) 146.700- (Duplex Pkt) PALBBS/EMG use 145.070/146.700- (W6NWG-3/PALBBS)
 ATV input: 915 wbfm, 2441.25 wbfm
 ATV output: 1241.25 MHz am
 Intercom: 146.415 PL 79.7 nbfm
 Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-, 145.260 KK6KD (HARS) 146.175+ N6FQ (Fallbrook ARC)
 Linked to: 445.600-, 224.900- WD6HFR (Corvair/220 ARC), 446.140- WB6FMT (123.0) Vista

† under repair * 107.2 Hz PL Tone

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Printed October 2006 issue of SCOPE

(Mailed Sept. 2006) Signed: A.L. Donlevy Publisher 09/28/2006



We need a few new members for the Fold & Staple group that puts the SCOPE together each month.

We meet on the last Wednesday of the month in Vista. A good social event, with many subjects to discuss.

If you can make a noon meeting on that Wednesday, please drop in at the "Membership" Table at the back of the room during a meeting, or send e-mail to Al Donlevy (w6gni@amsat.org)

Thanks, Al



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KI6FDN Operational

Palomar Mountain Volunteer Fire Department is now KI6FDN! It has been a busy time on top of ol' Palomar Mountain these last 6 months for the fire department and emergency crews. The great weekend weather has resulted in a considerable amount of motorcycle injuries, several spot fires on Nate Harrison and near the school at Doane Pond, and the seasonal maladies of altitude, low hydration and heat stress injuries.

In addition, we are training 30 firefighters, are working on interdepartmental communications with the County, State, CDF, and Forestry departments, are developing our County and Community Emergency Response plans and building new emergency infrastructure for the mountain.

New Evacuation plans are being drafted with the San Diego County Office of Emergency Services and San Diego Animal Services and the Humane Society are helping to establish safe zones for animal evacuations.

Our CERT program is funded and has begun with 15 selected community members working through the online FEMA CERT introduction for proper training in September. We built a new Emergency Communication Center within the Palomar Mountain Volunteer Fire Station on the mountain.

For this last initiative, I would like to make a request. The Communication Center will be the initial point of communication for a proper Incident Command in time of great emergency, and it is imperative that we have Amateur Radio communications in place and functioning to interface quickly to the Red Cross, ARES, RACES, and off-mountain in time of emergency. The station even has a new "FireCom" Club designation of KI6FDN.

So... we are looking for donations for old equipment, and any assistance you experts can offer. We would like to move the 800MHz RCS Antennas, 168MHz CDF Antennas and scanning antennas along with moving of the radios and installation of any new 'old' equipment. Michelle (W5NYV), Mike (AB6QT), Steve (AD6VI), and Donald (WD6FWE) have already been invaluable, and we are sincerely appreciative.

Specifically, we believe that we still need the following.

**-Masts, and Directional Antennas of 2M or other frequency
-2M, or other frequency Base/Mobile and HT units to match
-Old 2M repeater, or other frequency to match**

I can be reached at anytime either by email, or by cell (below) and, of course, all donations to the Volunteer Fire Department are tax deductible. Sincere thanks for any assistance you can give us, and I look forward to meeting many of you.

Christopher Kusek, KI6EHE,
Palomar Mountain Auxiliary Fire Fighter,
PM CERT Chairman,
PM VFD FireCom Trustee (KI6FDN)
714-925-2577,
kckusek@hotmail.com

PARC by Email

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We have been publishing Scope in PDF form on the PARC web page for a while. Now we've made it easier for you to get the newsletter as soon as it becomes available. You can choose to have the PDF file emailed directly to you as soon as it becomes available, by subscribing to the Scope-PDF mailing list. Or, since the PDF file can be rather large, you can choose to get just a brief email notification whenever a new issue of Scope is posted to the web page, by subscribing to the Scope-notice mailing list. Either way, go to the PARC web page at <http://www.palomararc.org> and click on Newsletter to sign up.

If you find that the online Scope is all you need, you can opt to stop receiving the printed newsletter by mail. To do that, send a note to membership@palomararc.org and let AI know. Please include your callsign, name, and address. For each member who opts out of postal delivery, the club will save money on printing and postage.

Get a Meeting Reminder

Have trouble remembering about the club meeting? Want to get a reminder each month with the latest details about the meeting program? Subscribe to the Meeting-Remind mailing list. You can find this on the Contact Us page.

Need Help?

Most mailing list changes and settings can be handled online at <http://lists.palomararc.org/mailman/listinfo>.

If you run into any trouble with these mailing lists and need help, email webmaster@palomararc.org or kb5mu@amsat.org.

We hope these services will prove useful to you.
-Paul, KB5MU, PARC Webmaster

Apologetic Radio Jammer Jack Gerritsen Gets Seven Years, Fines

NEWINGTON, CT, Sep 19, 2006 -- It was a day many radio amateurs in Southern California had been anticipating for a long time. On September 18, US District Court Judge R. Gary Klausner sentenced convicted radio jammer Jack Gerritsen, now 70, to seven years imprisonment and imposed \$15,225 in fines on six counts -- one a felony -- that included willful and malicious interference with radio communications and transmitting without a license. Before sentencing, Gerritsen apologized to the federal government, the FCC and the local Amateur Radio community, which had endured the brunt of Gerritsen's on-air tirades and outright jamming. "I'm sorry, and I apologize to everyone here," Gerritsen told those in the courtroom, which included more than a dozen radio amateurs and Gerritsen's family members. Gerritsen's contrition did nothing to convince Klausner toward leniency.

"How many times have you said you would not do this again?" Klausner reportedly asked Gerritsen, a repeat offender who

Continued on page 7

License and Class Information

Register 5-7 days in advance for the following test sessions.

☑ PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

☑ EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station # 1 Escondido Fire Department.

The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

☑ "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

Continued from page 6

served as his own attorney during his trial. "But based on your history, you come back again and again for this. I believe you will continue to do it, and it would send the wrong message to others, that five years is not long enough either!"

The sentence even exceeded US District Attorney Lamar Baker's recommended 46-month

sentence. Gerritsen's court-appointed attorney suggested that a two-year prison term would be sufficient. Gerritsen could have received up to 15 years in federal prison. Sentences for his convictions on all counts will run concurrently.

Fines, Conditions Levied

In addition to the prison time, Klausner fined Gerritsen \$225, payable immediately, and an additional \$15,000 to be paid through the Probation Department. The judge also

tacked on two years' supervised probation following his prison term, but he recommended Gerritsen remain in custody in Southern California during that period.

Klausner further ordered Gerritsen to participate in a substance-abuse program at his own expense. He told Gerritsen he could not identify himself by using any other means -- including his previously held

Continued on page 8

Help Needed with RFI

Alan, W4LKE writes

"I have three LCD monitors in my station: A 19 inch ViewSonic, a 17 inch NEC, and a 15 inch Mitsubishi. None make any RFI that I can detect. Also, I have a 32 inch Panasonic LCD TV. It also is quiet.

BUT, I also have a 50 inch Panasonic plasma HDTV. It is an amazing RFI generator. It tears up 80 meters to an extraordinary level. Also, it puts out RFI on the broadcast band on certain frequencies; 1160 kHz, for example.

Surprisingly, I don't hear it on 10 meters. If anyone knows how to quiet down a plasma TV, I would really like to hear about it. 73, Alan, W4LKE"

If any readers of the SCOPE have advice for Alan, please send it in!

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The Mercury Amateur Radio Association would like to invite all Amateur Radio Operators, their friends, and their families to visit the MARA display at the **Emergency Preparedness Fair** hosted by the Del Mar Stake of the Church of Jesus Christ of Latter-Day Saints, 1444 Lake Drive, Cardiff, Ca 92007 on (Saturday) October 14, 2006.

The fair will be open from 10 am until 3 pm. Various agencies will be present to answer your questions and provide valuable life-saving information all in one location.

In addition to MARA, other agencies or groups present include: The Red Cross Bloodmobile, the San Diego County Office of Emergency Services, the Consumer Education & Outreach Bureau of the California Department of Insurance, the Encinitas Fire Department, the Encinitas Community Emergency Response Team (CERT), County of San Diego Animal Services, Olivenhain Water District, San Diego Medical Services Enterprises (SDMSE....our paramedic/ambulance service), Master Gardeners, and the Solana Center for Environmental Innovation.

For more information, please contact Mickey Cross at

mickeykc@juno.com

PARC Auction

It's October, and that means it's auction time. Come to the General Meeting on October 5th and join the fun! Christy Martin writes,

"Any radio item new or used, working or not (boat-anchors included) will be tagged with the seller's information. Both buyers and sellers will register prior to the meeting. Please plan on arriving early to get a look at the auction items. Hams interested in bidding on items will be given a numbered card to hold up on items they would like to place a bid on. Any further questions can be directed to Tom Martin - KG6RCW, rbg4@aol.com."

A suggestion heard at the September 2005 meeting: put those address labels you get in the mail to good use by bringing them to the auction. Instead of writing your name over and over, use

the stickers instead. Room set-up starts at 6:00. As soon as the room is set up (shortly after 6:00): sellers sign in and tag equipment. Bring your stuff early! 6:30 to 7:00: buyers register (required!) and view the offered equipment.

If you have questions about an item, this is the time to ask it. Inspect equipment before the auction so you know what you are bidding on (write its auction number down!) Auction begins at 7pm. PARC receives 10% of the sale price and there is no other fee for buyers and sellers. Donations to PARC are accepted.

All monies are paid to PARC. Seller(s) may set a written minimum bid on their items. Seller is responsible for removing any item(s) not sold. PARC does not guarantee the condition of any item sold. You don't have to be a PARC member to participate in the auction, so invite your friends to join in on the fun. Sellers will not be paid their money until all monies have been collected that evening, so bring a Self Addressed Stamped Envelope if you want the check mailed to you the next day, or pick it up at the next club meeting.

Continued from page 7

Amateur Radio call sign KG6IRO -- but his real name, and he prohibited Gerritsen from owning, possessing or using any radio transmitting equipment.

Arrested in 2005

The FCC fielded complaints of illegal radio transmissions linked to Gerritsen for four years. According to court documents, the Commission's investigation and signal tracking revealed that Gerritsen transmitted both prerecorded messages and real-time harassment and profanity for hours at a time. He often targeted local Amateur Radio repeater systems, precluding their use by licensed operators, and hams were among the most vocal complainants.

In May 2005 FBI agents, accompanied by FCC staff, arrested Gerritsen without incident and seized his radio equipment. Released on \$250,000 bond while awaiting trial, Gerritsen remained in home detention, barred from possessing any radio equipment.

The FCC already had fined Gerritsen \$10,000 for violating its rules and the Communications Act during his reign of radio terror. Just days before his December 2005 trial, the Commission affirmed \$42,000 in additional fines -- two \$21,000 forfeitures. In doing so, the FCC rebuffed every argument Gerritsen offered in response to

Continued on page 9

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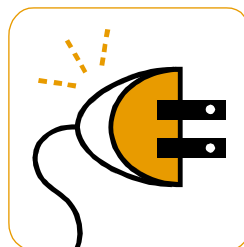
Please check our complete ads in **QST**, **CQ**, and **World Radio** magazines.

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DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
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Sun	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sun	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Mon	1915	146.730	RACES Sub-Net	
Mon	2100	146.730	Microwave Net	Kerry B.
Tues	1900	147.130	Red Cross Net	Ted tthompson@sdark.org
Tues	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillimek@home.com
Thurs	2100	146.730	Ham Help	Manager Needed
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	

PARC 2006 Board

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Club Reports

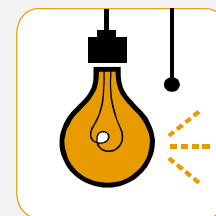
September Meeting Goodie Givers KD6YJB Marvin, KG6JEI Conrad, W6ASP Preston

Fold and Staple Crew KR6BT Merle, W6YOO Harry, W6JAC Jerry, W6GNI Al, KB6YHZ Art, KB6NMM Jo & Tyler & Matthew

Continued from page 8

each Notice of Apparent Liability, including insistent "freedom of speech" claims. The government has yet to collect anything from Gerritsen.

Following his nearly four-day trial, Gerritsen, who lives in Bell, was found guilty on a felony count of causing malicious interference to a communications system operated by the United States -- the US Coast Guard Auxiliary -- during a 2004 search-and-rescue operation. He was convicted of misdemeanors for interfering with American Red Cross radio transmissions in early 2005 while the agency was preparing for disaster relief operations, and for causing the cancellation of a US Army Reserve homeland security training exercise in 2005 by interfering with the US Army Military Affiliate Radio System (MARS) communications. He also was convicted of transmitting on Amateur Radio frequencies without a valid license on three separate occasions in 2003 and 2004, all misdemeanors. The jury deliberated for less than an hour before returning its verdict December 9. Gerritsen has been in custody ever since.



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and deliver them to the

next club meeting.

Contact

WB6IQS@amsat.org, -John

About Us

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org
 Questions? Ideas? Comments? W6NWG@amsat.org

This month's General Meeting will be held on October 4th, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. **The meeting will be our Annual Auction.** Talk-in on 146.730 MHz repeater. Meeting starts at 18:00. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V (past president of PARC)

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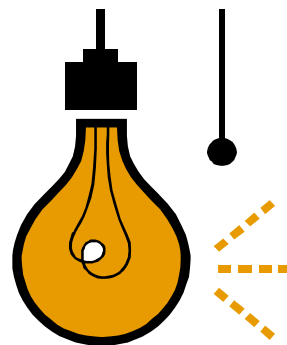
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A newsletter by and for the Palomar Amateur Radio Club of San Diego, CA, USA.

Reminders

Nov 1 *PARC meeting*
Nov 5-7 *CW Sweepstakes*
Nov 15 *SDGARES EMS drill*
Nov 19-21 *Phone Sweepstakes*



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President's Letter

Our October Program was the annual PARC Auction. Bargains were had and the auction ran smoothly. I would like to thanks those that made it happen, particularly for Tom Martin, KG6RCW, who planned it and recruited the help, and also to Art McBride, our Auctioneer. Marvin Munster, WB6PKK, who provided the paperwork and assisted John Kuivinen, WB6IQS, on the floor, and Bob Birch, KG6RGI, who entered all of the data necessary for timely receipts. The November 1st Program will be a presentation on the Tucson Amateur Packet Radio Corporation (TAPR) Digital Communications Conference, which was held September 15-17, in Tucson, Arizona. The presentation will be given by Mark Raptis, KF6WTN.

At the November meeting nominations for next year PARC Board of Directors will be made. This year's Nominating Committee, as announced at the Auction, is Art McBride (KC6UQH), Jo Ashley (KB6NMK) and Rod Dinkins (AC6V). Halloween is past and the holidays are fast approaching. The season is changing and the weather is getting cooler. On Sunday, November 5th, a Work Party will meet on the repeater site to prepare it for this coming winter's weather. Tentatively, this event will concentrate primarily on any weather proofing that is deemed needed. This is an opportunity for newer HAMs and members to check out the repeater site and help with some of the less technical aspects of repeater site upkeep. We will meet at Mothers Kitchen at 10:00 AM, that morning. Keep an eye on palomararc.org, and an ear open at the November meeting for additional

information. The December meeting will be our annual elections and Christmas Social. This is an opportunity to let next year's leadership know what you would like from the club. With the Holidays approaching and New Year's resolutions just around the corner, this is a good time to consider more involvement in Public Service, through Amateur Radio.

Many of us serve various causes through such Amateur Radio related organizations as ARES, RACES, SATERN, the Red Cross, etc. We have put in many long hours and have earned the satisfaction of making a difference. This is a very personal sense of satisfaction that can be had by anyone, including you. For the past several years, I have had the pleasure of teaching Amateur Radio License Exam Preparation Classes. I have met many fine **continued sidebar page 7**

Miramar Air Show 2006

By Howard White, KY6LA

With an attendance of 750,000 people over just 3 days, Marine Corp Air Station Miramar Air Show is by far the largest concentration of people in San Diego County for an event. It therefore poses many special challenges for Public Safety Responders. San Diego Amateur Radio Services Inc, (SDGARES), is the largest and fastest-growing (Membership up over 50% to 252 responders just in the last 4 months) Ham Radio Emergency Communications provider in the County. SDGARES plays a vital public safety role at the Air Show. Our

responsibility is to provide primary backup emergency communications for San Diego Hospital Emergency Services (EMS). Because of our recent successes at the implementation of the Department of Homeland Security (DHS) mandated Incident Command System (ICS), the SDGARES role was upgraded to the primary backup communications provider for EMS. Nineteen SDGARES responders maintained continuous communications coverage to 9 area hospitals throughout the 3 day show in case there was a "Big One". Throughout the show, Senior County EMS

personnel would visit our Mobile Command Center to confirm our readiness for action.

If EMS were not enough to keep us busy, even more active were 46 SDGARES responders who provided search and rescue communications at MCAS Miramar for Lost and Found Children and who also assisted RACES with other Communications Emergencies. We were based in Don Bloom's (KG6QQQ) RV, which after 36 man hours of labor we had converted into our Mobile Command Post. SDGARES Responders all were bright orange and **continued on page 5**

By Paul Williamson, KB5MU

Here are a few interesting tidbits from the AMSAT Space Symposium held near San Francisco in October. The big news seems to be that "software-defined transponders" (SDX) are coming soon. A traditional satellite transponder connects the analog IF output of a receiver to the analog IF input of a transmitter, repeating every signal on the uplink band, amplified, on a downlink band. An SDX modifies this by sampling the received signal, passing it through a DSP for processing, and sending the output samples directly into a digital transmitter. The digital transmitter is more efficient, and has a much higher dynamic range (80+ dB) than HELAPS (26 dB), the high-efficiency analog technique we've been using on transponders. The SDX demonstration at Dayton was a hit; everybody said it "sounds sweet" and it was quite robust to interference. As a nice side effect, the DSP can also make every input signal the same strength, so that "alligator" stations using too much uplink power won't cause a problem anymore. Beyond that, the DSP can insert signals of its own (such as telemetry beacons) and even receive and act on uplink signals, all with no additional hardware. This technique is scheduled to be used not only in AMSAT's big Eagle project, but also in AMSAT-DL's Phase 3E satellite and much smaller satellite projects such as AMSAT-UK's ESA SSETI ESEO.

Many small satellite projects are in the works. The US Naval Academy is working on ANDE, RAFT, and MARScam missions.

Space Symposium Report

South Africa AMSAT is working on Sumbandila (roughly, "Pathfinder"). AMSAT-ZL (New Zealand) is working on KiwiSAT. And that's not to mention all the tiny "CubeSAT" spacecraft from educational institutions world-wide. AMSAT's policy of concentrating on larger, high-orbit spacecraft and leaving the small, low-orbit spacecraft to the rest of the community seems to be working out well.

AMSAT's Eagle project has been subjected to some hard-eyed engineering scrutiny. There's a new mechanical design and a definite, feasible set of payloads now. An analog transponder will cater to the traditionalists with primary uplink on 70cm (U band) and downlink on the 2m (V band), plus secondary uplink on 23cm (L band) and downlink on the 2.4 GHz (S1 band). The U/V transponder should be usable over 75% of the orbit, but the L/S1 transponder will have a shorter access window due to antenna constraints. All these transponders will be implemented digitally with SDX, but ground stations will still use normal SSB/CW equipment.

Piggybacked on Eagle's U/V transponder will be a digital short message service intended to be workable from a hand-holdable device. Envision a standard PDA clipped into a transceiver cradle, with a smallish omnidirectional antenna on top. AMSAT will have to develop the cradle and make it available to all at a reasonable price. Exact details of what kind of services will be offered are still to be determined, but expect something like internet Instant Messaging

with some exciting twists. A hand-held satellite station could be just the thing in some emergency communications scenarios.

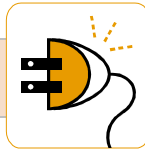
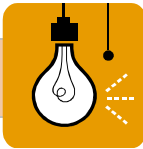
The primary service on Eagle will be a digital voice and data system called the Advanced Communication Payload or ACP, with uplinks on 3.4 GHz (S2 band) and downlinks on 5.8 GHz (C band). Steerable phased array antennas on the satellite will make these links available for 75% of the orbit. Two classes of user stations are envisioned. A user with a single 60-cm (about 2 feet) diameter dish will be able to operate digital voice or about 4800 bits/second of any kind of streaming data. A user with a big dish (6 feet) will be able to do the same, and also handle higher-rate data streams, fast enough for compressed digital video. Here too, AMSAT will make available ground station equipment kits to make it possible for anyone to get on the air without being a microwave guru or independently wealthy. The small dish service is specifically designed to be usable by apartment dwellers and those constrained by antenna restrictions: the small dish isn't so different from a satellite TV dish. It will have to be pointed at the satellite, but only in one axis if the preferred orbit is attained.

The ACP is designed to take advantage of advanced digital techniques to maximize performance. It can handle about 20 simultaneous digital voice (or low rate data) channels, and all of the voice channels are transmitted as a single unified data stream. That means that a user station can, if desired, listen to any

or all of these channels simultaneously. Each user's uplink can be addressed to a logical channel, which might be a one-on-one QSO or a conference room. It's all done in software. This opens some very interesting possibilities. As part of the campaign to get the ground station hardware into the field, I am hoping that AMSAT will make this system available for terrestrial applications, well before Eagle's launch.

For those interested in antenna design, Tony AA2TX came up with two novel variants on the Lindenblad antenna. A traditional Lindenblad is four folded-dipole driven elements in phase, arranged in a square, each tilted 30 degrees from horizontal. It generates a nice omni sky-coverage pattern, circularly polarized, just the thing for low-orbit satellites with relatively strong signals. Tony's design for 2m replaces the folded dipoles with regular dipoles, and uses a tuned coax phasing harness and slightly overlength elements to achieve low SWR without the mechanical complexity of folded dipoles and their twinlead feedlines. Tony's design for 70cm eliminates the feedlines altogether, driving an indenblad-like array of parasitic elements with a vertical dipole at the center.

Both designs are easy and inexpensive to build using hardware-store plumbing parts and aluminum tubing. More information on Eagle and other upcoming satellites is available on www.amsat.org. The printed Proceedings of the Space Symposium will be available from the AMSAT store -- www.amsat.org and click on "Store". 1



Club Classified Ads

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(10.23) **Silent Key, WB6CLT** - selling all equipment and antenna (new in box). Asking for fair offers. Let your conscience be your guide. Swan: 120 single sideband transceiver; 250C transceiver; ICOM: 1C-V8000 VHF FM transceiver w/antenna; IC-21; Heathkit: Oscilloscope Model 10-17; Frequency Scaler 1B-102; frequency counter 1B-1100; Hybrid phone patch HD-15; SD-610; HW-8 receiver; HWA-7-1 Power supply; HM-21-2 Astron SS30 power supply, Butternut antenna and all attachments Model HF9V still in boxes; Master control center CV89-URA-8A. Most have manuals. Contact Eileen 619 417-3113, 760 788-6345 or inkydew@aol.com

(10.18) Like New Icom VR-500 Wideband Scanner. Complete in original box with all original accessories: antenna, battery charger, belt clip and factory manual. Also included are the ADMS-3 programming software and a Nifty Ham Accessories quick reference guide. Price: \$155.

Contact: N6FN - Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(9.26) For Sale: 2 MFJ Loop tuning Capacitors: One Large, one small. Brand new. Never used. \$70/\$55.

Contact Ron, K2RP (760) 436-8109 K2RP@ARRL.NET

(8.27) For Sale: Like New Icom IC-20R, Dual Receive Wideband IC-R20 Scanner and CS-R20 Programming Software. In original box with all accessories: antenna, battery charger, belt clip and factory manual. Also comes with the Nifty Accessories Mini-Manual and wallet card reference guides, CS-R20 Cloning software and PC interconnect cable. Price: \$380. Contact: Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(6.28) WANTED: About 0.6 Farads (600,000 uF) or bigger worth of computer grade capacitors (typically they have 10/32 screws on the top) at 25 VDC or better. For homebrew spot welder to make battery packs. Multiple Capacitors OK. Must be cheap. John, WB6IQS (760) 727-3876

(5.24) For sale: 38 foot, two section self-supporting, crank-up tower. NEW, Never installed. U.S Tower HDX – 538, Heavy-Duty, Commercial grade with the TRX – 80 Raising fixture hand crank and cable. Does need second hand crank and tower cable. \$600 takes it all and it is now laying on the ground ready to be moved. Larry, WQ6V Contact person Bob Layton (760) 726-1706 in the Vista area.

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Committee Chairpersons

ARES Info	Tony	KC6YSP
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Billing Ads/etc	Jo A.	KB6NMK@amsat.org
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	Dennis V.	N6KI@amsat.org
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SANDARC	Jin/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Contest Calendar

Nov 3	PSK63 Sprint
Nov 4	IPARC Contest, CW
Nov 4	Ukrainian DX Contest
Nov 4	ARRL Sweepstakes Contest, CW
Nov 4	NA Collegiate ARC Championship, CW
Nov 4	IPARC Contest, SSB
Nov 5	High Speed Club CW Contest
Nov 5	DARC 10 Meter Digital Contest
Nov 5	ARS Spartan Sprint
Nov 11	WAE DX Contest, RTTY
Nov 11	ARRL EME Contest 50-1296 MHz, Part 3
Nov 11	JIDX Pone Contest
Nov 11	OK/OM DX Contest, CW
Nov 11	Kentucky QSO Party
Nov 11	CQ-WE Contest
Nov 16	NAQCC Straight Key/Bug Sprint
Nov 17	YO International PSK31 Contest
Nov 18	SARL Field Day Contest
Nov 18	LZ DX Contest
Nov 18	EUCW Fraternizing CW QSO Party
Nov 18	OE 160 Meter Contest
Nov 18	ARRL Sweepstakes Contest, SSB
Nov 18	RSGB 2nd 1.8 MHz Contest, CW
Nov 18	NA Collegiate ARC Championship, SSB
Nov 19	EU PSK63 QSO Party
Nov 20	Run For The Bacon QRP Contest
Nov 25	CQ Worldwide DX Contest, CW
Nov 30	ARCI Topband Sprint

At least three really big contests this month, especially if one is into chasing DX or WAS. Rules as usual may be found in QST, CQ, NCJ, Worldradio as well as several contest web sites. Hope to see you in the contest. 73, Harry/W6YOO

Repeater Information

52.680 W6NWG -0.5 MHz, Autopatches: 146.730-, 147.075+, *147.130+, *447.000-

PKT: 145.050s (PALMAR/W6NWG-1) 146.700- (Duplex Pkt) PALBBS/EMG use 145.070/146.700- (W6NWG-3/PALBBS)

ATV input: 915 wbfm, 2441.25 wbfm

ATV output: 1241.25 MHz am

Intercom: 146.415 PL 79.7 nbfm

Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-, 145.260 KK6KD (HARS) 146.175+ N6FQ (Fallbrook ARC)

Linked to: 445.600-, 224.900- WD6HFR (Corvair/220 ARC), 446.140- WB6FMT (123.0) Vista

† under repair * 107.2 Hz PL Tone

continued from page 1

yellow ID vests marked "Emergency Communications" so that our patrol could be easily identified by people needing assistance.

We reunited 44 lost children with their care givers. We rescued 5 Alzheimer patients and 2 attendees with Down Syndrome from dangerous situations. We even stopped a potentially serious domestic violence situation. We worked more than 1,275 man hours for the show.

Let me give you some example of the other ways that SDGARES made a difference. First and foremost, Miramar is about as good as it gets as a training opportunity. It is the equivalent of a communications Live Fire Exercise.

You have several hours of low-action hands-on training before it gets very busy. Every day starts off very slowly. We have lots of time in the morning to train scribes and net control operators. Our

policy under ICS of rotating as many net control operators and scribes through each position really pays off. In the days before SDGARES implemented ICS, Net Control was the personal property of 1 or 2 senior ARES people who generally controlled all nets. However, in a true emergency, the chances of those few senior people being in the position to assume net control are at best remote. Under ICS, everyone is encouraged to be cross-trained at as many positions as possible. This way, the first person on the air may be able to assume net control, and therefore increase the efficiency

and effectivity of the operation. This aspect of ICS worked very well at Miramar. The highlight of Saturday was that we had a lost 25-year-old with Down Syndrome with 2 children (5 & 8). During that

Search, we had Kathy Madsen, KF6DGA, as Tactical Net Control. It was her first time participating as a SDGARES Responder. Using the staff accountability logs, Kathy was able to vector the search teams to the suspect area. This was an exceptionally difficult search as two small children accompanied by an adult do not look lost. Dan Musick KG6VVN was able to recognize them. It was wonderful to see Dan and Mitch K6BK herding the three of them back to lost and found. What was truly amazing was the round of applause that Dan and Mitch received from the Marines and the Lost and Found Ladies. This was what we were there for. Everyone was inspired by the successful conclusion of this potentially

continued on page 6



We need a few new members for the Fold & Staple group that puts the SCOPE together each month.

We meet on the last Wednesday of the month in Vista. A good social event, with many subjects to discuss.

If you can make a noon meeting on that Wednesday, please drop in at the "Membership" Table at the back of the room during a meeting, or send e-mail to Al Donlevy (w6gni@amsat.org)

Thanks, Al



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continued from page 5

dangerous situation. The most humorous event on Saturday was the 4 year old who managed to get lost twice within an hour. What made Sunday so special for me were the 3 young hams (Doug KG6WLR, Marc KG6YYF and Marcus KI6FRO) from Mt. Carmel High School and the two Venture Scouts (Josh KI6FCN and Matt KI6EZM). They trained at all positions and assumed all levels of responsibility. Even more importantly, during the intense afternoon period where we found and reunited 18 missing children with their caregivers, net control was manned continuously by hams less than 18 years of age.

These young volunteers vectored the SDGARES search teams to the correct grids. They managed the information flow to the search teams. They scribed the logs. One of them even figured out how to use the RACES packet system. They did an incredibly professional job in a very high stress situation, and should be commended. The most dangerous situation was a 4-year-old girl who was lost outside of the flight lines. She was found wandering through heavy traffic.

So why was it such a great day for SDGARES? Because we got our systems working to perfection! SDGARES Search Teams got so good at finding children that we usually cleared the incidents before we could even communicate the missing person reports to RACES.

As the Marines no longer had budget to feed us, SDGARES had 3 days of all-day BBQ's for the Marine MPs and the Lost and Found Ladies. Pat, WA6MHZ, produced something called Breakfast Jacks that were so out of this world that Marines from all over lined up for them. SDGARES Inc is a 501.3 charitable corporation. Our Board of Directors authorized a budget of \$1,300 for the show for equipment, the rental of a golf cart for logistics, food for the SDGARES staff and Marines and ID Vest Uniforms. We ended up spending only \$840 but through the generosity of our Donors and Responders we actually raised \$860 during the show and covered all expenses. 1

PARC Repeater Policies

A Response to Howard White's Commentary
by Steve Early, AD6VI

Howard White, KY6LA, in a Letter to the Editor, brings up the lack of a Memorandum of Understanding (MOU) between San Diego ARES (SDGARES) and the Palomar Amateur Radio Club (PARC) as an impediment to using PARC repeaters for events.

Events include practices, drills, and other planned-in-advance uses of the repeaters. Events are not emergencies, which by their very nature are unplanned. PARC has policies for both events (planned) and emergencies (unplanned).

Because PARC repeaters have such a broad range, we anticipate two or more groups will each ask for full use of the repeaters during an emergency. We decided that the only way to do this fairly was that during emergencies we'd have a "play nice" policy. In other words, groups would be expected to share the communications resource and work with each other.

For non-emergencies we decided upon a 72 hour notice of exercises. The notice is needed for two reasons. First, because we have scheduled nets that we want to avoid conflicts with. Second, we don't want two events at the same time on the

continued on page 8

PARC Repeater Policies

A Commentary for the SCOPE
by Howard White, KY6LA

Seven different frequencies and repeaters were used during the 2006 Miramar Air Show. As a Member of PARC, I am ashamed to tell you that due to Palomar Emergency Communications Policies, none of the Palomar Repeater could be used for the Miramar Air Show. There are two policies that cause problems. It is my hope that these policies can be reviewed.

First, unlike other repeater owners in San Diego County, the Palomar Amateur Radio Club does not have a written Memorandum of Understanding with SDGARES. As a result, every time SDGARES needs to use a Palomar repeater it must submit a written request no later than 72 hours before the event and then wait an undetermined time until the usage may be authorized.

On the surface this is not an onerous policy, but as the SDGARES Emergency Coordinator for Miramar I had already spent more than 200 man hours on recruiting and logistics. I just did not have the time to deal with the effort and uncertainty that this policy entailed. It's much easier with an MOU. I would like to ask PARC to consider thinking about establishing an MOU with SDGARES.

Secondly and more seriously is that the PARC policy states that all net controls for a public safety event must be PARC members. This is the antithesis of ICS, which emphasizes interchangeability. As the coordinator I would have been required to check everyone's PARC membership status before they could have taken over net control at the air show. If using PARC repeaters with nonmember net controls violates club policy, SDGARES cannot jeopardize public safety and service by using PARC repeaters.

Where do we go from here? SDGARES continues to grow by leaps and bounds. Most of the older leadership has retired to the Honor Roll and new young energetic leaders have emerged. We have great relationships with CERT teams around the county. Now that SDGARES operates under ICS, Red Cross is talking to us about increasing the ARES role there again.

We are on the County Emergency Plan as primary backup for Hospital EMS. This weekend we provided public safety communications for the San Diego 100 Mile Run. We have a major drill with hospitals in November and we provide communications for many public safety agencies such as the Lifeguards.

And, of course, there is always Miramar 2007 and hopefully there will be a written Memorandum of Understanding with ICS friendly policies between SDGARES and PARC so that PARC can make a difference as well.

You can read about and sign up for Miramar 2007 at www.sdgares.org along with our many other meetings, practices, drills, and public service events. 1

License and Class Information

Register 5-7 days in advance for the following test sessions.

☑ PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

☑ EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station # 1 Escondido Fire Department.

The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

☑ "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

Updates

by Paul Williamson, KB5MU

The transceiver version of the v6 SoftRock board is now available in beta. The receive-only boards are still available as well. Details at the softrock40 Yahoo group.

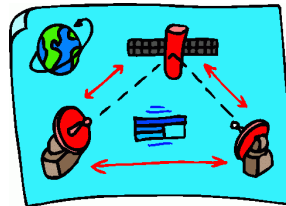
HIT-SAT, a small cubical satellite from Hokkaido Institute of Technology in Japan, was launched successfully on September 23 and is now known as ↗

HIT-SAT-OSCAR 59. Listen for CW telemetry on 437.275 MHz and FM packet on 437.425 MHz.

<http://www.hit.ac.jp/~satori/hitsat/index-e.html>

for more information.

Listen for experimental stations between 505 and 510 kHz (600 meter band). ↴



continued from page 1
people on their way to joining our ranks.

In the past two years, I have noted a significant interest coming from members of various CERT (Community Emergency Response Team) programs throughout San Diego County. I have seen classes grow from 5 to 10 students on average, to 40 to 60 students each, in just the last few months. (42 registered for the recent 10/7 Escondido Class and 60 registered for a recent Mira Mesa Class). These folks are the ones that will be helping us keep amateur radio alive and they need our help! Currently, the help that all new (and potential) HAMS need the most is in 1) Earning their licenses and 2) Being "Mentored" onto the air.

To this end, I am asking each and every one of you to consider becoming an instructor, a mentor, and/or a Volunteer Examiner. Teaching a Tech Class is easy. Heck, even I can do it! PowerPoint Presentations and teaching aids are available that anybody can use.

The hard part is making the time available for one-on-one help to get a new HAM on the air. This is where each of you can help the most.

PARC is looking to put together a regularly scheduled seminar / class for new HAM's. I am looking for both seasoned Veterans of Amateur Radio and recently licensed operators to Help Make This Happen. The goal is to have enough Elmers (new and old) to give one-on-one and one-on-two type attention, on a regular monthly/quarterly schedule. If you are **continued sidebar page 8**

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continued from page 7
interested, please give me a call (619) 461-2818, or look me up at a PARC Membership Meeting.

I hope to see you at the PARC Meeting on Wednesday, November 1st.

Steve Early
President, PARC

Silent Key

Notice from AC6TS

Larry R Ruegseger, WA6UTQ, passed away at 4:00 PM October 22 at Scripps Chula Vista after a long bout with congestive heart failure and cancer.

He knew he was terminal and had a good time until he was unable.

His wife Isabel, KE6DFA, called me yesterday to inform me.

Larry was a member of PARC and had moved to Ensenada, Mexico. He was instrumental in getting the original set of batteries from Pacific Bell for the repeater site. He also served on the fold and staple committee. He will be missed.

continued from page 6

repeater. In other words, we do our best to support exercises provided that we haven't given permission for another one.

The request for notice of an event is not required because we want to control other groups. We simply want to maintain coordination of our own repeaters for non-emergency use, which includes practice events like the Miramar Air Show.

No group should have the right to co-opt our 146.730 repeater at any time, for any reason, all in the name of spontaneous training. If a group goes to the effort to plan a training or practice event, then giving notice to the board of directors of PARC isn't an unreasonable thing to ask.

For emergencies, the 72-hour notice does not, has not, and will never apply.

Howard's second point is that the PARC Net Control Operator Policy applies to Special Events, such as the Air Show. It does not, and it never has. Howard and I have discussed this policy on several occasions. Howard knows that the PARC Net Control Operator (NCO) Membership requirement applies only to regularly scheduled nets.

The Regular NCO's PARC Membership requirement is to ensure that:
(1) The Net Control Operator has ownership and supports PARC Policy and procedures and
(2) To encourage net participants to join PARC and share the financial burden of maintaining the assets (repeaters, etc.)
Note: electricity alone is around \$1,300 per year.

It is the position of PARC that if a group cannot ensure that it has at least one member (the Net Control Operator) helping to pay PARC's regularly scheduled bills, then that group should not be using PARC repeaters for regularly scheduled nets.

Special events are exempt from this policy, but membership is still highly encouraged.

The PARC Board of Directors is open to signing an MOU with ARES, but will not agree to cede total control of any club repeater to any other organization except in cases of actual emergency.

continued next column

Current PARC Repeater Usage policy:

Casual use – No formal net control:

- 1) Compliance with all FCC regulations and Good Amateur Practice is required at all times
- 2) Commercial messages are not allowed. 97.113
- 3) User members are to keep QSO's short and to pause between exchanges to allow for breaks to pass traffic.
- 4) If interference comes up on the repeater, IGNORE it or change to an alternate frequency.
- 5) Contacts in which a "third party" participates must be initiated and terminated by a licensed operator. 97.115 / 97.7

Note 1: These are open repeaters and Club membership is not required for casual use.

Note 2: Our repeaters are automatically timed out with a carrier over 90 seconds unless deactivated by a Control Operator (no beep at end of transmission).

continued page 9

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Box 462222, Escondido, CA 92046

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Palomar stocks a wide variety of cores and beads. Our RFI Tip Sheet is free on request.

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Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$16.50+tax+\$8 S&H/order.

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See catalog at www.Palomar-Engineers.com

Please check our complete ads in **QST**, **CQ**, and **World Radio** magazines.

continued from page 8

Regularly Scheduled Nets: (weekly scheduled nets, etc.)

In addition to items 1 through 5, listed above, groups using the Palomar Amateur Radio Club repeaters (W6NWG) for regular scheduled nets shall:

- 6) Secure permission from the PARC Board of Directors for such a net.
- 7) Conduct the net on the schedule published in the Scope.
- 8) Ensure that all Net Control Operators are current PARC Members.

Emergency Use: (Declared Emergencies, such as wild fires, etc.)

- 9) Net Control Operator Membership requirement is waived for Declared Emergencies
- 10) Repeater Assignments:
147.075: Mercury Amateur Radio Association
146.730: Amateur Radio Emergency Services
147.130: Back-up to either 147.075 or 146.730, and to be a shared resource by organizations that are not serviced by MARA or ARES.
447.000: Shared Resource.
52.68: Shared Resource

Note 4: During a Declared Emergency, it is requested that user organizations make a good faith effort to notify a Member of the PARC Board that they are using one of our repeaters.

continued next column

Special Events: (Races, Parades, Public Service, etc.)

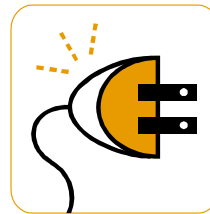
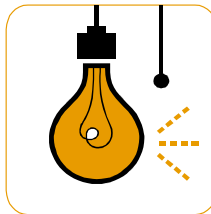
- 11) Net Control Operator Membership requirement is waived for special events.
- 12) Groups desiring to use a PARC repeater shall e-mail the PARC Board of Directors at baord@palomararc.org, a minimum of 72 Hours prior to the special event.

Note 4: This is to ensure that no more than one organization is scheduled to use the same repeater during the prescribed time period.

Note 5: The 72 period starts when a PARC Board Member acknowledges receipt of the request.

Note 6: The PARC Repeater Usage Policy may be adjusted, without prior notice, to serve the Public Good as determined by the PARC Board of Directors.

Sincerely,
Stephen M. Early, AD6VI
President, Palomar Amateur Radio Club



Club Reports

Membership New Members Joining PARC: KI6csy, KI6FIA, KG6NDX, KI6FIB, KG6WWX, AD6LM, AD6LL, KG6EJP, KI6CUG, KI6FKD. Be sure to greet these new members when you see or hear them on the repeaters.

Several times each year, we print the following note in the SCOPE: Especially watch for the Green "Please renew now" and avoid the dreaded Red "Last Issue" on your label. "Last Issue" means your membership expires within a few days.

Now, we have a number of members that have opted to receive their SCOPE on the internet (no Post Office mailing). I'm looking for suggestions on how to remind those members to renew their membership in PARC when the time comes. Even with the colored mailing labels, often the renewal date just slips by! (The e-mail addresses on record often are obsolete in my file.)

AI
W6GNI

FREE TUBES

Club Members ONLY! The 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, I will pre-check and deliver them to the next club meeting.

Contact

WB6IQS@amsat.org, -John

About Us

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org
 Questions? Ideas? Comments? W6NWG@amsat.org

This month's General Meeting will be held on November 1st, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. It will be about the Digital Communications Conference.

Talk-in on 146.730 MHz repeater. Meeting starts at 18:00. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V (past president of PARC)

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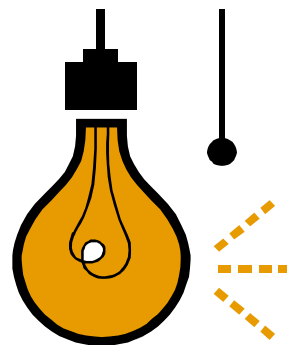
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Email meeting reminders!
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A newsletter by and for the Palomar Amateur Radio Club of San Diego, CA, USA.

Reminders

Meeting December 6th



Letter from the President

The seasons are changing from warm to cool. It's time to waterproof our antennas and feed lines, just in case it rains. Christmas is just around the corner, which means many of us will find new rigs in our shacks. I wish everyone a happy holiday season and hope you have had a pleasant Thanksgiving.

Our November Program was a presentation on the Tucson Amateur Packet Radio Corporation (TAPR) Digital Communications

Conference, held September. Mark Raptis, KF6TWN, gave a good presentation. Also at the November Meeting, Nominations for next year's PARC Board of Directors were made. Attend the December 6th meeting and find out who next year's Board will be.

The December meeting is the PARC annual meeting, which is comprised of the Board of Directors elections and Christmas Social. This is a great opportunity to get

to know the HAMs that regularly attend PARC meetings, as well as bend the ear of your Board of Directors. The January meeting will be on EchoLink. Many of us are looking forward to hearing Charlie NN3V speak on this. February is slated to be on MonstIR Yagis and March is a new format of "I got my License...Now what?" With the Holidays approaching and New-years resolutions just around

See page 2

Emergency Preparedness Fair Report

On October 14 an emergency preparedness fair was held at the Cardiff building of the Church of Jesus Christ of Latter-Day Saints.

The goal of the fair was to allow the public to be able to talk with various agencies and groups in order to learn more about how to be better prepared for disasters. Some of the agencies and groups in attendance were the Mercury Amateur Radio Association, San Diego County Office of

Emergency Services, California Dept. of Insurance, SDG&E, Olivenhain Water District, The Red Cross, San Diego County Animal Services and the Sheriff's Dept.

In addition to the agencies, tables displayed various "how to" information such as 72 hour kits, water purification & storage, first aid kits and food storage.

The Masonic Bureau of San Diego provided free child identification sheets with a digital picture and

thumbprint of each child. It is estimated that about 500 visitors attended the fair.

-Mickey Cross



"The fold and staple crew needs a couple of new members. We get together on the last Wednesday of the month at noon, and get the SCOPE ready for the Post Office.

The meeting place is in Vista, and takes an hour or so. The regulars have interesting conversations, and get the work done quite quickly.

Please make yourself known to Al (W6GNI) at the Membership Table during a meeting if you want to volunteer for this fun and social activity."

President's Letter Continued

continued from page 1
the corner, this is a good time to consider more involvement in public service, through amateur radio. Currently, the help that all new (and potential) HAMs need the most is in 1) earning their licenses and 2) Being "Mentored" onto the air. To this end, I am asking each and every one of you to consider becoming an instructor, a mentor, and/or a volunteer examiner. Teaching a Tech

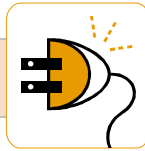
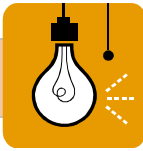
class is easy. Heck, even I can do it! PowerPoint presentations and teaching aids are available that anybody can use.

The hard part is making the time available for one-on-one help to get a new HAM on the air. This is where each of you can help the most. PARC is looking to put together a regularly scheduled seminar / class for new HAM's. I am looking for both seasoned veterans

of amateur radio and recently licensed operators to help make this happen. The goal is to have enough Elmer's (new and old) to give one-on-one and one-on-two type attention, on a regular monthly/quarterly schedule. If you are interested, please give me a call (619) 461-2818, or look me up at a PARC Membership Meeting.
-Steve Early, President PARC

Preparedness Fair Photos





Club Classified Ads

Personal equipment ads are free to members and could be bumped after 3 months. Make up your ad like the ones on this page and send to SCOPE@PALOMARARC.ORG

Commercial ads in big boxes: \$2/col. inch/month. We will squash your ad copy to the number of inches bought.

(11.6) For Sale: Aluminum tower disassembled in 7 ft sections (6 each), with hinged base plate, top fixture for rotor, plus two guy plates. Tower snaps together with aircraft safety pins. make offer, moving to Guam. Contact KE6DUG-Rich at 760-806-4870 or email at richnjo@aol.com. Located in vista.

(10.23) Silent Key, WB6CLT - selling all equipment and antenna (new in box). Asking for fair offers. Let your conscience be your guide. Swan: 120 single sideband transceiver; 250C transceiver; ICOM: 1C-V8000 VHF FM transceiver w/antenna; IC-21; Heathkit: Oscilloscope Model 10-17; Frequency Scaler 1B-102; frequency counter 1B-1100; Hybrid phone patch HD-15; SD-610; HW-8 receiver; HWA-7-1 Power supply; HM-21-2 Astron SS30 power supply, Butternut antenna and all attachments Model HF9V still in boxes; Master control center CV89-URA-8A. Most have manuals. Contact Eileen 619 417-3113, 760 788-6345 or inkydew@aol.com

(9.26) For Sale: 2 MFJ Loop tuning Capacitors: One Large, one small. Brand new. Never used. \$70/\$55. Contact Ron, K2RP (760) 436-8109 K2RP@ARRL.NET

(8.27) For Sale: Like New Icom IC-20R, Dual Receive Wideband IC-R20 Scanner and CS-R20 Programming Software. In original box with all accessories: antenna, battery charger, belt clip and factory manual. Also comes with the Nifty Accessories Mini-Manual and wallet card reference guides, CS-R20 Cloning software and PC interconnect cable. Price: \$380. Contact: Bernie at 760-781-5522 or email at n6fn@niftyaccessories.com

(6.28) WANTED: About 0.6 Farads (600,000 uF) or bigger worth of computer grade capacitors (typically they have 10/32 screws on the top) at 25 VDC or better. For homebrew spot welder to make battery packs. Multiple Capacitors OK. Must be cheap. John, WB6IQS (760) 727-3876

(5.24) For sale: 38 foot, two section self-supporting, crank-up tower. NEW, Never installed. U.S Tower HDX – 538, Heavy-Duty, Commercial grade with the TRX – 80 Raising fixture hand crank and cable. Does need second hand crank and tower cable. \$600 takes it all and it is now laying on the ground ready to be moved. Larry, WQ6V
Contact person Bob Layton (760) 726-1706 in the Vista area.

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Committee Chairpersons

ARES Info	Tony	KC6YSP
ARES Net	Dennis S.	K7DCC@amsat.org
Attendance	Al	W6GNI@amsat.org
ATV	Art	KC6UQH@amsat.org
Auction	Tom M.	KG6RCW@amsat.org
Badges New	Al	W6GNI@amsat.org
Batteries	David	BK6EBYDAT@Gerry.Palomar.caltech.edu
BBS Monitor	Bill B.	N6FMK@amsat.org
Billing Ads/etc	Jo A.	KB6NMK@amsat.org
Contest Info	Dennis V.	N6KI@amsat.org
Control Ops	Filled	W6NWG@amsat.org
Del Mar Fair	Jim Cooper	NE6O@amsat.org
EmComm	Harry	W6YOO@amsat.org
	Dennis V.	N6KI@amsat.org
Field Day Tech	John K.	WB6IQS@amsat.org
Inventory	Dennis B.	KD6TUJ@amsat.org
New Member	Christy M.	KI6AOL
Nets	PARC	Board@palomararc.org
Newsletter	Michelle	W5NYV@amsat.org
Patch Info	Stan	W9FQN@amsat.org
Patch Electronics	Jerry H.	WB6FMT@amsat.org
Picnic	Mark R.	KF6WTN@amsat.org
Power AC/DC	Mike P.	K6MRP@amsat.org
Programs	Dennis B.	KD6TUJ@amsat.org
Publicity	Terry R.	K3PXX
QSL Cards	Harry H.	W6YOO@cox.net
RACES Info	Jo A.	KB6NMK@amsat.org
RED Flag	Steve	AD6VI@amsat.org
Repeater Site	Mike P.	K6MRP@amsat.org
Repeater Tech	Mike D.	AB6QT@amsat.org
SANDARC	Jim/Steve	NE6O/AD6VI
Seller Table	John K.	WB6IQS@amsat.org
Testing VE	Rusty	dunedancer@cox.net
Trustee	Mike D.	AB6QT@amsat.org
Web	Paul W.	www.palomararc.org

Contest Calendar

Dec 1	EU-PSK-QRP Contest
Dec 1	ARRL 160-meter contest
Dec 2	TARA RTTY Melee
Dec 2	Wake-UP! QRP Sprint
Dec 3	TOPS Activity Contest
Dec 5	ARS Spartan Sprint
Dec 9	ARRL 10-meter Contest
Dec 10	NA High Speed Meteor Scatter Winter Rally
Dec 13	NAQCC Straight Key/Bug Sprint
Dec 13	Russian 160-meter Contest
Dec 16	OK DX RTTY Contest
Dec 16	MKXA PSK Death Match
Dec 16	Croatian CW Contest
Dec 16	International Naval Contest
Dec 17	ARCI Holiday Spirits Homebrew Spring
Dec 18	Run for the Bacon QRP Contest
Dec 24	RAEM Contest
Dec 26	DARC Christmas Contest
Dec 30	RAC Winter Contest
Dec 30	Stew Perry Topband Challenge

Contests are normally sparse during December because of the Holidays; however, for those who need their contest fix there are a few interesting ones. Complete rules may be found in QST, CQ, NCJ and Worldradio magazines and also on the Web.

CU in the contest. 73 de Harry, W6YOO

Repeater Information

52.680 W6NWG -0.5 MHz, Autopatches: 146.730-, 147.075+, *147.130+, *447.000-
 PKT: 145.050s (PALMAR/W6NWG-1) 146.700- (Duplex Pkt) PALBBS/EMG use 145.070/146.700- (W6NWG-3/PALBBS)
 ATV input: 915 wbfm, 2441.25 wbfm
 ATV output: 1241.25 MHz am
 Intercom: 146.415 PL 79.7 nbfm
 Affiliated: 224.380-, 224.940 KK6KD (HARS) 447.050-, 145.260 KK6KD (HARS) 146.175+ N6FQ (Fallbrook ARC)
 Linked to: 445.600-, 224.900- WD6HFR (Convair/220 ARC), 446.140- WB6FMT (123.0) Vista

† under repair * 107.2 Hz PL Tone

Repeater Site Report

Here are some photos of Mike Pennington, K6MRP, hooking up an electrical panel box in the storage container workshop at the repeater site. The temperature today was quite brisk and the electrical circuit was promptly tested with the heavy load of a space heater.

-Dan K6NKC





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Time for a membership survey.

One of the duties of the PARC Board of Directors is to ensure that the Club maintains relevance to its membership and to the Amateur Radio Community. This has been at topic at every Board meeting this year. The biggest questions are: What would our membership like is to provide? And what are the best ways to determine this?

One tool to help this process is the old fashioned survey. So here it is! Instructions for submitting the survey are below.

1) What topics would you like presented at next year's meetings?	
2) Would you like to hear meeting announcements on the repeater?	
3) Would you like a voice Identifier on a PARC repeater?	
4) What can we do to see you at our monthly meetings?	
5) Should PARC sponsor a Car Pool Net for club meetings?	
6) Should PARC offer amateur radio-related training, like Contesting Techniques, Emergency Operations, Antennas 101, etc? If yes – name a topic.	
7) How can we improve our repeaters?	
8) Would you like the Scope by e-mail, or by traditional mail?	
9) What question (s) should we be asking of the members?	
10) How would you answer the question we should ask?	

Please take some time to answer these questions and either bring your responses to the next meeting, or send them to me at ad6vi@cox.net or at 4724 Maple Ave, La Mesa, Ca, 91941.

There is also an online form on our website www.palomararc.org

License and Class Information

Register 5-7 days in advance for the following test sessions.

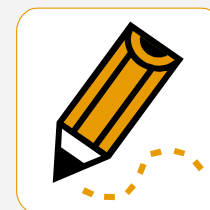
☑ PARC Testing is in Carlsbad on the 2nd Saturday of the month at 9:30am at the Carlsbad Safety Center. Test sessions may be cancelled if no one pre-registers. Contact Rusty Massie AA6OM at (760) 747-5872 or dunedancer@cox.net.

☑ EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at Fire Station #1 Escondido Fire Department.

The address is 310 North Quince Street, Escondido CA 92025.

Contact Harry W6YOO (760) 743-4212 or W6YOO@amsat.org.

☑ "The ARRL Technician Class Course for Ham Radio Licensing" Course No. EC-010 \$99 ARRL members / \$139 non-members. Courses begin on the first and third Tuesday of each month. For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.



Are you interested in upgrading your license? Do you work better in small study groups or on your own? Is the code requirement an obstacle? Let SCOPE know! Certified instructors in PARC are ready and willing to help you. Write to scope@palomararc.org with your license goal and study preferences. Possibilities include online study groups, pre-PARC meeting study groups, and weekend study groups.

www.ac6v.com

This wonderful ham radio website, run by Rod AC6V, is a fantastic online resource for amateur radio information. With 700 topics, 6,000 links, and 132 pages, it weighs in at the top of the scale as one of the best topical indices of ham radio webpages. The site gets well over 1,000 hits a day. Readers from 127

countries have visited www.ac6v.com which been in operation since 1997. Unlike many sites that post reams of links, only to let them rot over time, Rod sees that the links at his site are checked monthly. This removes one of the most irritating things about resource sites – the dreaded 404 Page Not

Found.

Thanks to Rod, things are easier to find on the ever-growing and often chaotic Internet. Thanks Rod, for doing such a great job and providing such a wonderful service to the ham radio community!

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Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to 1/2" dia. \$15+tax+\$6 S&H/order.

TUNER-TUNER

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See catalog at www.Palomar-Engineers.com

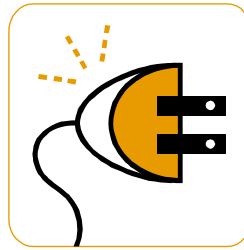
Please check our complete ads in **QST**, **73**, **CQ**, and **World Radio** magazines.

Regular Nets Sponsored by PARC

DAY	TIME	FREQ.	NET NAME	NET MANAGER CONTACT INFORMATION
T/R/S	2000	146.730	NTS Traffic Net	Charles N6TEP cmiele@juno.com
Sun	0830	146.730	ARES Sunday Net	Dennis K7DCG
Sun	2045	147.075	MARA ES	Glenn Jones KG6JDF@amsat.org
Mon	1915	146.730	RACES Sub-Net	
Mon	2100	146.730	Microwave Net	Kerry B.
Tues	1900	147.130	Red Cross Net	Ted tthompson@sarc.org
Tues	2100	146.730	Off-Road Net	Jerry A. K6PFP jwak6pfp@cts.com Dick W. KA7AYT rwillimek@home.com
Thurs	2100	146.730	Ham Help	Manager Needed
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com Glenn P. KE6ZLY@juno.com
Nightly	>2200	147.130	Facetious Group	

PARC 2006 Board

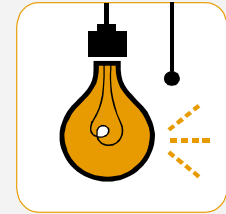
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 Membership: Al Donlevy W6GNI (760) 630-3096 W6GNI@amsat.org
 Site Tech: Mike Doyle AB6QT (760) 742-1573 AB6QT@amsat.org



Membership Report

New Members Joining PARC: W6ZZ, KB6CUT, N6XT, K6PFC, and Ray McNeil (no call yet) And one reinstatement (from 1997) We are presently sending out reminders to all those that let their membership expire in 2005. If you are reading this on the web, and get one of those reminders, PLEASE renew! In January we will print the e-mail address of record on the label instead of the expiration date. (A sneaky way of not admitting that I still have a Y2K problem with the database program the first month of the year!)

Al
W6GNI



FREE TUBES

Club Members ONLY! The 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, I will pre-check and deliver them to the next club meeting.

Contact

WB6IQS@amsat.org, -John

About Us

Scope (USPS #076530) is published monthly by the Palomar Amateur Radio Club 1651 Mesa Verde Drive, Vista, CA 92084. Periodicals postage paid at Vista, CA 92085. Dues are \$18 per year or \$30 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions: scope@palomararc.org
 Questions? Ideas? Comments? W6NWG@amsat.org

This month's General Meeting will be held on August 2nd, 2006 (the first Wednesday of each month) at the Carlsbad Safety Center. The meeting will be about Echolink. Talk-in on 146.730 MHz repeater. Meeting starts at 19:30. Ridesharing and coordinating for dinner beforehand often occurs on the repeater on Wednesday afternoons. Everyone is welcome!

The Palomar Amateur Radio Club serves the Amateur Radio community of San Diego County California with repeaters located on Palomar Mountain. The club has monthly meetings, Field Day festivities, an annual auction, and many other fun and interesting functions. All are welcome at our club meetings and on-the-air interactive radio nets which now feature discussion groups on hiking, sailing, microwave, off-roading, as well as traditional message traffic and emergency communications nets (RACES - ARES - MARA).

73 and hope to CU you on the air! -NN3V (past president of PARC)

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