SCOPE January 2008 * A newsletter by and for the Palomar Amateur

Radio Club of San Diego, CA, USA.

Club Meeting – San Diego Section ARES and an exciting raffle 2 January 7:30pm at the Carlsbad Safety Center

Board Meeting

9 January 7:00pm at W6GNI QTH



Raffle!

Available for raffle at the January meeting will be a Yeasu VX-170 2m hand held radio. In the spirit of ARES, which is our January program, this radio will also have a AA battery pack and a MFJ 2m/440 magnet mount antenna. It will be preprogrammed to San Digeo county 2m open repeaters with alpha tags. Raffle will be done after the sale of \$200 of tickets. The radio was purchased for raffle with help from Ham Radio Outlet, San Diego.



December's raffle winner. Photo by KB5MU

President's Message By Steve Early AD6VI

This past year has been busy, with many good things and a few not so good things. We started last January with Harry Hodges filling in at the last minute with a DVD on the Peter the First Island DXpedition. This year, Harry has stepped in as our interim ARRL San Diego Section Manager, and the January program will be by Jim Cammarano, on ARES.

San Diego is still recovering from the October wildfires. As a community and a club, we learned a lot and are thankful that most of us survived. Several members lost their homes. We nearly lost the repeater site to the Poomacha Fire. The firefighters and Palomar Mountain and Valley Center CERT teams did an outstanding job of protecting homes and buildings on Palomar Mountain, stopping the flames about 50 yards from our site. PARC learned a lot about our repeaters. We learned that the old batteries were good for about 2-3 days, and that the new system will do well, but cannot carry as much equipment load. We discovered that if we had to, we could

We discovered that if we had to, we could cobble several repeaters together out of existing spare parts and have them in operation in a day or so.

| | 1 | |
|---|---|--|
| continued from page 1 As a Board, we learned that several PARC members stepped up to the plate and served where they believed they could do the most good. Unfortunately, we also had PARC members criticizing each others efforts, rather than concentrating on the mutual ground of service to the community. On the brighter side, PARC sponsored a 2 Saturday Extra exam preparation class. SANDARC tested 11 and upgraded 10 to Extra. | 2m/440, 50W the Elfin Fore needed with a (Diamond X-5 and programm in the fire dep possibly set up car. Date of p Contact: Mickey Cross, | An edded to help set up a Yaesu radio and antenna at est Fire Dept. Help will be ttaching the antenna Oa Vertical) and setting up ning the mobile radio for use partment and to the mobile antenna on a project TBD. |
| Looking down the road, Kids Day will be January 6 th . February marks PARC's 72nd Birthday, and Field Day preparations are beginning. | | Resources se great local radio clubs on e following addresses. |
| Field Day was originally established to show that amateurs could operate portable. This point has been proven and the wildfires drove it home again, as there were areas of the county that did not have phones for weeks. Some may still not have working phones. In addition to Field Day, I would like to make a seminar in portable operation a regular feature for new hams. There will be more details on this later. | http://www.fallbrookarc.org/ http://www.sddxc.org/ http://www.earsclub.org/ http://roars.net/ http://www.wa6bgs.org/ http://n6six.50megs.com/ | |
| | Club Members ONLY! | requests, I will pre-check and deliver them to the next club meeting. |
| I hope that everyone had a safe and happy holiday, and hope to see you at the January meeting. | PARC has a tube bank that includes | WB6IQS@amsat.org, -John |
| Steve Early AD6VI ₩ | 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. | Ham4Less.com 1(800) 230-0458 1(760) 945-9503 call us—we may have it! Arrow Antennas Hustler Antennas Opek Antennas Gordon West books Workman Products Anderson Powerpoles SPECIAL: New G5RV Antenna (57 ft total length) \$ 44.00 |

January Membership

New Members Joining PARC: KI6MYX, K7EMR, KI6MDS, K200G, KI6JES, KI6MMI, KI6KJC, and KA9UAG. Please welcome these new members. Welcome!! Five members reinstated their membership. Welcome back.

Did you check your label this month? Check your renewal date! Depending on the speed of the mail for this SCOPE, there may be time to renew your membership for a few years at \$18 per year, instead of the 2008 rate of \$20. (Must be postmarked in 2007!!!)

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 or phone number kept confidential, let me know, and it will not be printed.

Al W6GNI

December Fold & Staple Sonny WA5ACE, Jo KB6NMK, Al W6GNI & Kathy, Harry W6Y00

Goodie Givers

Nov Meeting Goodie Givers KG6RCW Tom KG6JEI Conrad

Dec Meeting Goodie Givers W6YOO Harry KG6JEI Conrad W6ASP Preston KG6RCW Tom KC6AMY Amy AE6SV Ralph N6FN Bernie

Licensing 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. Please call (619) 465-EXAM for the latest contact info. Test sessions may be cancelled if no one pre-registers.

EARS Testing is in Escondido on the Last Saturday of the month at 9:00 am at the LDS Church. The address is 1917 East Washington Avenue, Escondido, 92025. Contact Harry W6Y00 (760) 743-4212 or W6Y00@amsat.org.

Palomar Amateur Radio Club Board of Directors Meeting Minutes November 14th 2007

The report was distributed by Bob Birch Total Equity and Liabilities are 14,263.42. The pre-paid dues are \$5,273. The current Year to Data Cash Flow statement showed we have revenue greater than expenses of \$1,083.10 since Jan 1st 2007. This doesn't take into

account what we expect to spend on site and tower refurbishment.

Motion to accept report was made by Dennis KD6TUJ and seconded by Tom KG6RCW. All voted to accept report as presented.

Discussion Items

Liability Insurance

The carrier Marsh, Seabury & Smith did not send out a renewal notice this year so Bob club Treasurer called the company. He was told the rate for 2008 would be \$400. He was advised to send a check and letter to the company to renew the insurance. The carrier two weeks later sent a renewal questionnaire, based on this

questionnaire, they raised our liability insurance from \$400 per year to \$1,200 per year. The board decided to put the liability insurance out for bid to see if could find a better rate before we pay this amount

Repeater Site / Tower

Discussion was held on what to do with tower painting since the wildfires have limited our access to the site and weather is changing so painting will not be possible until spring 2008. It was also discussed because of the cost for lift rental and time required and liability would it be worth looking for a professional tower painting company and getting a quote. Generator power and power transfer was discussed based on the wildfires and the loss of electrical at our repeater site. We need to review our procedures and the Palomar Volunteer Fire Department would like to be a part of that discussion so they could turn off the power safely and not have generators feeding power back into the transmission lines. They would be willing to support us if possible during wildfires or other disasters on the mountain.

We need to setup a monthly maintenance list and have items checked off on a monthly basis. We will schedule work parties at the site on a monthly basis starting in April 2008. We have rights to a water share on our site based on our annual fees paid to the water district. Michelle will investigate what we need to do in order to have water on our site.

Palomar Mountain Volunteer Fire Department

Dennis installed a temporary ham radio station for the fire department. We have a tower reserved to give them. We will also assist in the installation of the tower. The tower needs to be delivered to them so they can fabricate a base for the tower. Tom KG6RCW has antennas to go on the tower once it's in the air.

ARES requested a Winlink net on one of the Palomar machines but no action was

taken because more information was needed. Steve presented documentation on how to do non-profit raffles. This has been brought up several times as a way to fund the activities of the club. We will review this documentation and vote at the next meeting. Dennis KD6TUJ will purchase a small setup as a test for the December club meeting.

Steve and Michelle will talk with Terry Runyon on the shirts, jackets he is working on a machine to produce. Maybe a way of advertising

Due to continuing rising costs to support the repeaters, potential cost increase for liability insurance and loss of one of the tenants at the repeater site, Tom KG6RCW made a motion to raise club dues for individuals from \$18 to \$20 a year and family raised to \$35. The motion was seconded by Dennis KD6TUJ. Motion carried with all voting yes. We need to change the printing on the Scope and Website to the new amounts. Discussed and decided to publish other club meetings and programs in the Scope. There may be programs at other clubs our members may be interested in. If we start other clubs may follow and publish our meetings.

General Meeting

Meeting in December will be the club social.

Membership

Al reported the club now has 364 members down again from the previous month.

Next Board Meeting:

Will be held at Al's house W6GNI Motion to Adjourn was made at 9:40 by Bob, seconded by Tom. Motion carried. Respectfully submitted by Bob Birch KG6RGI for Gary Kent W6GDK Secretary.

Start of the 60s By Ron Pollack K2RP

By the beginning of the 1960s, the SSB handwriting was on the wall. As the 50s came to a close, AM was still king of the phone modes, and among the major manufacturers, only Collins, Hallicrafters and Gonset offered selfcontained sideband transmitters. Most of the receiver manufacturers included product detectors and narrower filters to make SSB reception easier, but sideband transmitters were expensive to buy and complex to build. Homebrew transmitters for CW and AM were common, and although magazines published "build it" articles for sideband transmitters throughout the 50s, I don't think very many were built!

Not only was the choice of SSB transmitters limited, they were expensive! The Gonset GSB100 was probably the least expensive unit at \$500. Collins had introduced the 75S1 at nearly \$600 (plus a \$100 power supply). Collins also produced the famous KWM2 transceiver (first of the true transceivers) for \$1100 plus power supply. The Hallicrafters HT32A, successor to the HT32 we discussed recently, sold for nearly \$700. Keep in mind that these are 1960 dollars!

So, imagine that you were a ham in 1960 with a desire to try SSB, but could not afford one of these. What else could you do? As they did on numerous occasions. Heathkit came to the rescue! Introduced in 1959, the SB10 was a phasing type of SSB generator designed for use with the very popular TX1 Apache medium power transmitter. It was easily adaptable to most other similar transmitters of the day. At \$90, including VOX, it enabled the owner of a medium-powered AM transmitter to enter the world of SSB. Many thousands of these were sold. Shortly thereafter, Johnson Viking introduced a similar unit.

The photo on page 6 shows a typical "low" cost" high-power SSB station that was typical of the era. Once again, Heathkit saw an opportunity to fill a demand, and introduced the HX10 Marauder in 1962. The specifications and general circuit details are very similar to the Hallicrafters HT32 series: Two 6146 finals, 180 watt final input, filter type dual conversion sideband generation, built in VFO, power supply, VOX, etc. While not an exact copy, it is clear that the features in the Marauder were inspired by the HT32. In fact, there are several features in the Heathkit transmitter that are superior to the Hallicrafters. For example, the HT32 only meters relative output, while the Heathkit monitors grid current, plate current, ALC, high voltage, and output. In addition, crystals and bandswitch positions are provided for the entire 10 meter band, and there is a narrow range pi network output for matching. In contrast, the HT32 (until the 32B model) provided only one 500 kHz segment, and required changing a crystal for other segments, and the output is fixed at 50 ohms. The heterodyning schemes are also different, in that the Hallicrafters VFO tunes clockwise to increase frequency on some bands, and counterclockwise on others. This slows bandswitching. Unlike the HT32, all the VOX controls are on the front panel of the Heathkit.

The biggest difference, however, was the price! The Marauder was introduced as a kit at \$335, about half of what the manufactured HT32 listed for! Of course, the Heathkit had to be assembled, which was not a trivial project. In addition to putting thousands of hams on SSB, the Marauder was a "double milestone" for Heath. It marked the beginning and end of eras. It was the first self-contained SSB transmitter they produced. It may have been the first kit SSB transmitter produced by anyone! I don't know of an earlier one. I can't think of any other SSB transmitter kits ever produced in

continued from page 5

any great quantity by anyone other than Heath!

It was also the end of the era of Heath's "big iron" transmitters. Gone were the DX100, Apache, and other heavyweights. Collins, with the introduction of the S line, and Drake, with their small receivers, provided proof that equipment did not have to be heavy and bulky to be top quality.

The receiver shown in the photo below is the Hammarlund HQ170, (with its matching speaker) introduced in 1958, and was manufactured (as the slightly improved 170A) until the mid 60s.



It is a triple-conversion ham-band-only unit, covering 160 through 6 meters. and sold for \$359, less speaker. The clock timer shown is a \$10 option. It featured, among other things, selectable sideband. The two dials move together with one tuning control. The lower bands are on the right scale and the upper bands on the left, for ease of reading the scales. There is a vernier tuning control which varies the receive frequency by plus or minus 3 kHz. This has always been a top quality popular radio, exceeded perhaps only by the famous Collins '75A4, which sold for about \$200 more.

Heathkit also produced a receiver that

matched, in appearance, the Marauder and the Apache. It was the RX1 Mohawk, introduced in 1958. To simplify construction and alignment, the front end (RF section, mixer, oscillator, and bandswitch) were assembled and aligned at the factory. It is double conversion, and follows the "big and heavy" philosophy. It cost, as a kit, \$300 plus speaker.

The two matching transmitters far outsold the Mohawk. I speculate that the reasons for this are: Hesitation on the builder's part to tackle such a complex and critical project and modest cost savings. Going just by published specifications, the HQ170 is a far superior receiver, and could be had for \$60 (20%) more. By comparison, buying a manufactured transmitter would cost \$350 more than its kit counterpart. The Hallicrafters SX101A receiver was available for \$395, not to mention several other outstanding products in the same price category. All this being said, the reason I don't show the Mohawk with its matching amplifier and transmitter is that I don't have one! I've had my eye out for one for years!

The linear amplifier shown is the HA10 Warrior by Heathkit. It was introduced in 1961. This was the first Heath product ever offered factory wired as well as in kit form. The kit sold for \$230, and the wired version was \$100 more. The popularity of SSB made the grounded grid linear popular, as no huge modulator was required for high power as it is in AM mode. With a built-in power supply and 4 811A tubes, it is capable of 1000 watts input, the maximum permitted at the time. This is hardly a revolutionary circuit. There were several other grounded grid 811A amps available, and Ameritron is still making a very similar unit today! The biggest differences are in the use of solid state rectifiers in the more modern units, and the inclusion of a relay for use with transceivers. In the days of

continued from page 6

separate transmitters and receivers, an antenna relay on the output of the transmitter or amplifiers switched the antenna between the units. With a transceiver, the antenna must bypass the amplifier when receiving, and most modern amplifiers include a relay for that purpose, and most transceivers provide switching for the amp. In order to use a vintage amp with a modern transceiver, another relay must be provided. The rectifiers provided in the Warrior are the 866A Mercury Vapor types. The tubes have to be warmed before high voltage is applied, and if the unit is moved, a 30 minute warm-up is required. I replaced these tubes with plug-in solid state rectifiers to avoid this.

For about \$1000, the 1960 ham could be on the air with a "full gallon," if he was willing to spend some time with the soldering iron. To do so with the manufactured units at the time would cost at least twice as much.

Comparing this setup to my Hallicrafters station described a few months ago, I find that audio and signal reports are

continued on bottom right of page 8

Meet the 2008 Board Membership Chair Al Donlevy W6GNI



Professional Engineer Metallurgist, Titanium, and refractory metals specialty. Married, father of two, now retired from engineering.

> Lived in: California, Hawaii Oklahoma, Pennsylvania, Massachusetts, and Illinois

Hobbies: Amateur Radio (W6GNI for over 50 years), hunting, shooting, gardening, home maintanence, computer uses, boating, sailing, hiking, backpacking. Generally - been there, done that.

Meet the 2008 Board PARC President Steve Early AD6VI



Steve Early, AD6VI, earned his Technician license (KD6WRL) in 1993 and upgraded to Extra in 2000.

Steve is married with three children. All have earned Technician licenses. Steve was challenged to get an amateur radio license after working for RCA Government Services for several years, installing naval communications equipment.

For a day job, Steve is currently a Senior Manufacturing Engineer at Goodrich Aerostructures Group, in Chula Vista, CA, working on Boeing '78'7 Thrust Reversers.

After work, Steve serves with PARC, volunteers with the San Diego Imperial Counties Chapter of the Red Cross, teaches amateur radio related classes and is now running for ARRL San Diego Section Manager.

Steve has taught a number of Technician license preparation classes over the years and has had over 300 successful Technician license students.

(9.9) AC ARC Welder, Marguette 180. 220 Club Classified Advertisements VAC power. With heavy duty cables and welding rod holder. \$50 OBO. WB6IQS, Personal equipment ads are free to John. 760-727-3876. members and could be bumped after 3 months. Make up your ad like the ones Satellite Dishes. 1 meter Primestar and on this page and send to smaller. Ku band LNBs. Most with SCOPE@PALOMARARC.ORG. hardware and mounting clamps. Make offer / free to good ham radio homes. Commercial ads in big boxes: \$2/col. WB6IQS, John 760-727-3876. inch/month. We will squash your ad copy to the number of inches bought. Reloading Equipment: Pistol / rifle dies, Rockchucker press, Lyman press, (1.1) For Sale 2m Hand held accessories, brass, copper jacketed bullets. Kenwood TH-K2 FM Transceiver about lead casting molds and furnace. Lots of a year old. Have all the books on the cast lead in small ingots. Best offer for all unit and it are programmed with all or parts. WB6IQS@att.net, John 760-727the local channels. Asking \$75 OBO. 3876. Please call Bayard K6GA0 858-755-5507 (8.26) FOR SALE: YAESU FT 840 Transceiver (1.1) Wanted Yaesu FT-857D ASTRON RS 35A Power Supply transceiver, or similar, for new General MJF 949 Deluxe Versatuner licensee. **30** Foot Vertical Cushcraft Antenna David 760-942-5167 K200G@arrl.net Ken Clark, KE4MII 200 N El Camino Real #165 (11.29) Looking for a small 3 element Oceanside, CA 92058 tri-band HF beam such as the TH3-JRS. 760-231-8377 Jim Keller wb6yxy@arrl.net 760-717-6126 (7.22) Wanted: Transport for amateur UHF antennas to San Francisco Bay (10.15) For Sale 2 meter FM area. Fred Brown, W6HPH. Tel. Transceiver. ICOM IC-2100H Mobile 760-741-1328. w6hph@yahoo.es 207 memory Channels, HM-98S Lighted Mike, 55 Watts output. Green or Amber (6.30) Cushcraft R-8 Vertical Antenna, Display. Like NEW. All Local Channels

With S.A.M.E. AC power supply.

at 858-755-5507.

\$25.00 OBO. Please call Bayard K6GAO

For Sale Like New UNIDEN BEARCAT

for all service Freq. AC and DC power

supply cables. \$75.00 OBO. Please Call

Bayard K6GA0 at 858-755-5507.

SCANNER BC-350C all pre programmed

Programmed in. \$75.00 OBO. Please call Bayard K6GAO at 858-755-5507. For Sale Uniden Weather Radio WX 500 NOAA all Hazards Weather Radio.

continued from page 7

comparable. The Hammarlund receiver is probably a bit better than the Hallicrafters one. The HT32 transmitter, however, has a wonderfully solid feel to the controls and a precision of tuning that the Heathkit cannot match. All this equipment is a thrill to use, but the HT32 is a joy. It represents a pinnacle in the art of electronics in that era.

*

| Contest Corral | |
|----------------|--|
| Contest | |

| Contest | Time and Date |
|-----------------------------------|--------------------------------|
| SARTG New Year RTTY Contest | 0800Z-1100Z, Jan 1 |
| AGCW Happy New Year Contest | 0900Z-1200Z, Jan 1 |
| AGCW VHF/UHF Contest | 1600Z-1900Z, Jan 1 (144) and |
| | 1900Z-2100Z, Jan 1 (432) |
| ARRL RTTY Roundup | 1800Z, Jan 5 to 2400Z, Jan 6 |
| | |
| EUCW 160m Contest | 2000Z-2300Z, Jan 5 and |
| | 0400Z-0700Z, Jan 6 |
| Kid's Day Contest | 1800Z-2400Z, Jan 6 |
| Hunting Lions in the Air Contest | 0000Z, Jan 12 to 2400Z, Jan 13 |
| 070 Club PSKFest | 0000Z-2400Z, Jan 12 |
| MI QRP January CW Contest | 1200Z, Jan 12 to 2359Z, Jan 13 |
| Midwinter Contest, CW | 1400Z-2000Z, Jan 12 |
| North American QSO Party, CW | 1800Z, Jan 12 to 0600Z, Jan 13 |
| NRAU-Baltic Contest, CW | 0530Z-0730Z, Jan 13 |
| Midwinter Contest, Phone | 0800Z-1400Z, Jan 13 |
| NRAU-Baltic Contest, SSB | 0800Z-1000Z, Jan 14 |
| DARC 10-Meter Contest | 0900Z-1059Z, Jan 13 |
| NAQCC Straight Key/Bug Sprint | 0130Z-0330Z, Jan 17 |
| LZ Open Contest | 0400Z-1200Z, Jan 19 |
| | |
| UK DX Contest, RTTY | 1200Z, Jan 19 to 1200Z, Jan 20 |
| Hungarian DX Contest | 1200Z, Jan 19 to 1200Z, Jan 20 |
| North American QSO Party, SSB | 1800Z, Jan 19 to 0600Z, Jan 20 |
| ARRL January VHF Sweepstakes | 1900Z, Jan 19 to 0400Z, Jan 21 |
| Run for the Bacon QRP Contest | 0100Z-0300Z, Jan 21 |
| CQ 160-Meter Contest, CW | 0000Z, Jan 26 to 2359Z, Jan 27 |
| REF Contest, CW | 0600Z, Jan 26 to 1800Z, Jan 27 |
| BARTG RTTY Sprint | 1200Z, Jan 26 to 1200Z, Jan 27 |
| UBA DX Contest, SSB | 1300Z, Jan 26 to 1300Z, Jan 27 |
| SPAR Winter Field Day | 1700Z, Jan 26 to 1700Z, Jan 27 |
| SARTG New Year RTTY Contest | 0800Z-1100Z, Jan 1 |
| AGCW Happy New Year Contest | 0900Z-1200Z, Jan 1 |
| AGCW VHF/UHF Contest | 1600Z-1900Z, Jan 1 (144) and |
| | 1900Z-2100Z, Jan 1 (432) |
| | |
| ARRL RTTY Roundup | 1800Z, Jan 5 to 2400Z, Jan 6 |
| EUCW 160m Contest | 2000Z-2300Z, Jan 5 and |
| | 0400Z-0700Z, Jan 6 |
| Kid's Day Contest | 1800Z-2400Z, Jan 6 |
| Hunting Lions in the Air Contest | 0000Z, Jan 12 to 2400Z, Jan 13 |
| 070 Club PSKFest | 0000Z-2400Z, Jan 12 |
| MI QRP January CW Contest | 1200Z, Jan 12 to 2359Z, Jan 13 |
| Midwinter Contest, CW | 1400Z-2000Z, Jan 12 |
| North American QSO Party, CW | 1800Z, Jan 12 to 0600Z, Jan 13 |
| NRAU-Baltic Contest, CW | 0530Z-0730Z, Jan 13 |
| Midwinter Contest, Phone | 0800Z-1400Z, Jan 13 |
| | |
| NRAU-Baltic Contest, SSB | 0800Z-1000Z, Jan 14 |
| DARC 10-Meter Contest | 0900Z-1059Z, Jan 13 |
| NAQCC Straight Key/Bug Sprint | 0130Z-0330Z, Jan 17 |
| LZ Open Contest | 0400Z-1200Z, Jan 19 |
| UK DX Contest, RTTY | 1200Z, Jan 19 to 1200Z, Jan 20 |
| Hungarian DX Contest | 1200Z, Jan 19 to 1200Z, Jan 20 |
| North American QSO Party, SSB | 1800Z, Jan 19 to 0600Z, Jan 20 |
| ARRL January VHF Sweepstakes | 1900Z, Jan 19 to 0400Z, Jan 21 |
| Run for the Bacon QRP Contest | 0100Z-0300Z, Jan 21 |
| CQ 160-Meter Contest, CW | 0000Z, Jan 26 to 2359Z, Jan 27 |
| REF Contest, CW | 0600Z, Jan 26 to 1800Z, Jan 27 |
| BARTG RTTY Sprint | 1200Z, Jan 26 to 1200Z, Jan 27 |
| ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | |

PARC and PARC Affiliated Repeaters

| Tx | Tone | Call Sign | Remarks |
|-----|-----------------------------------|---|--|
| _ | 107.2 | W6NWG | |
| _ | 107.2 | W6NWG | Autopatch; see note 1, |
| + | 107.2 | W6NWG | Autopatch; see note 2 |
| + | 107.2 | W6NWG | Autopatch; see note |
| — | 107.2 | W6NWG | Autopatch; see note 2 |
| — | 107.2 | KK6KD | Americas Unidos |
| — | 107.2 | WD6HFR | Convair/220 ARC |
| — | 107.2 | KK6KD | Sharp Hospital Coverage |
| — | 123.0 | WB6FMT | Vista |
| + | 107.2 | N6FQ | Fallbrook ARC; linked to 445.600 |
| — | 107.2 | N6FQ | Fallbrook ARC; linked to 146.175 |
| (s) | None | W6NWG-1 | Packet node; linked to Metro 9600 net |
| _ | None | W6NWG-4 | Packet duplex repeater; Duplex; PALBBS use |
| | | | OK |
| | + + - - - + (s) | 107.2 | 107.2 W6NWG 107.2 WD6HFR 107.2 KK6KD 107.2 KK6KD 107.2 KK6KD 107.2 N6FQ 107.2 N6FQ (s) None W6NWG-1 |

PARC also conducts the following ATV (amateur fast-scan television) operations: ATV in: 915 MHz WBFM, 2441.5 MHz WBFM Intercom: 146.415 MHz NBFM simplex (tone 79.7) ATV out: 1241.25 MHz AM

Regular Nets Sponsored by PARC

| Day | Time | Frequency | Name | Manager |
|----------|------|-----------|-----------------|------------------------------|
| T/Th/Sa | 2000 | 146.730 | NTS Traffic Net | Marvin |
| | | | | KD6YJB KD6YJB@arrl.net |
| Sunday | 0830 | 146.730 | ARES Net | Jo Ashley KB6NMK@arrl.net |
| Sunday | 1900 | 147.130 | Handi-Hams | Marcia De Runtz KG6FIX |
| Sunday | 2045 | 147.075 | MARA | 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@sdarc.org |
| Tuesday | 2100 | 146.730 | Off-Road Net | Dick Wilimek |
| | | | | KA7AYTrwilimek@cox.net |
| Thursday | 2000 | 147.075 | SATERN | tomcarmody@cox.net |
| Thursday | 2100 | 146.730 | Ham Help Net | |
| Friday | 2100 | 146.730 | Hiker's Net | Ed KF6DXX@juno.com |

| Board of Directors Position | Call Sign | Contact Information |
|----------------------------------|-----------|------------------------------|
| President - Steve Early | AD6VI | 619-461-2818 ad6vi@amsat.org |
| Vice President | | |
| Secretary | | |
| Treasurer | | |
| Director | | |
| Director | | |
| Scope Editor - Michelle Thompson | W5NYV | w5nyv@amsat.org |
| Repeater Chair | | |
| Membership - Al Donlevy | W6GNI | 760-630-3096 w6gni@amsat.org |

¹ The 146.730 repeater transmits a CTCSS tone of 107.2, but does not usually require any tone for access. When necessary, an access tone of 107.2 can be enabled. A 107.2 tone is always required for autopatch access. ² PARC autopatches are closed, for members only, and always require an access tone of 107.2. For PARC autopatch access info, email autopatch@PalomarARC.org.



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+\$8 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). **Model BA-58** (for RG58, RG8X & similar cables up to ¼" dia. \$8.50+tax+\$8 S&H/order

Model BA-8 (for RG-8, RG-213, 9913 and similar cables up to ½" dia. \$16.50+tax+\$8 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+\$8 S&H

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

Please consider our advertisers when you're shopping.

Let them know that you heard about their business from the SCOPE.

| Astron, AEA, OUTBACKER Larsen Antennas TEN-TEC Hy-gain, Tri-EX, Cushcraft And Others too Numerous to Mention! | Dro of v Find dete (AF con mag lice Bul |
|--|---|
| | SOL |

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!

Address service requested

PERIODICALS US POSTAGE PAID AT VISTA CA 92085-9998

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 \$20 per year or \$35 per year for a family. Dues include a subscription to Scope. Editor: Michelle Thompson W5NYV.

Submissions:scope@palomararc.orgQuestions?Ideas?W6NWG@amsat.org

This month's General Meeting will be held on January 2nd, 2008 (The first Wednesday of each month) at the Carlsbad Safety Center. This month the program is about San Diego Section ARES. Talk-in on 146.730 MHz repeater. Meeting starts at 19:30 but show up at 19:00 for setup and visiting before the meeting. 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, 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)