# SCOPE

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



www.arrl.org

Also occurring in June: ARRL June VHF QSO Party Rules

- 1.Object: To work as many amateur stations in as many different 2 degrees by 1 degree grid squares as possible using authorized frequencies above 50 MHz. Foreign stations work W/VE amateurs only.
- 2. Date and Contest Period: The second full weekend in June. Begins 1800 UTC Saturday, ends 0300 UTC Monday (June 11-13, 2011).





Above: K6BZZ's mobile installation. See story on page 10

## Save the Date

**Club Meeting** 

1 June 2011

Greg KI6RXX will speak about Field Day.

**Board Meeting** 

8 June 2011

Palomar Amateur Radio Club board meeting at 7:00pm Field Day

25-26 June 2011

See page 12-13.

#### **Club Membership for June Edition**

New Members Joining PARC: KE6PX, W5BCO, KG6WBJ, W6DMG, KJ6DPE, AE6HF, KD6KZH.

And several reinstatements. Welcome back.

We now have 78 members that have elected to receive the SCOPE on the web. And, we have noticed that a number of those receiving the SCOPE by web mail do not have the monthly label to remind them when their membership is nearing renewal time.

So, the board has recommended that we print the calls of those that MAY HAVE OVERLOOKED their renewal, in the SCOPE as a reminder.

SO - Here is the list of members that "expired" in the last month or so.

KC6VXY, W6ALF, W3LFR, KI6DER, KI6GSG, KJ6RET. Please check this list, and get your renewal checks in the mail!

PLEASE!!!

AI W6GNI

## 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 \$35 +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.

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

April SCOPE Fold & Staple Crew W6GNI Al & Kathy KB6NMK Jo, KI6LLC Roni, WD6FWE Don KB6YHZ Art & Janet (Great Turnout!!)

## KX3 Debuts at Dayton, Talked about in PARC

More here:

http://www.sotawatch.org/reflector.php?topic=5730 and a Photos and Spec Sheet and

Video Demo and Narration here

http://www.worldwidedx.com/hf-bands-hf-rigs/104940-elecraft-kx3-pictures-spec-sheet-dayton-hamvention-2011-a.html

http://www.qrparci.org/

Looks like it will become a Cool Mobile Rig with Add On 100Watt Amp! Stripped down Price Rumored to be \$800, so probably double that with all the Options!

KX3 at Dayton, with spec sheet. Photos by KY6LA.

N6KI

## Advertisements are free for members

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

#### For Sale

SX101 Receiver \$ 175.00 NC109 Receiver \$ 125.00 NC303 Receiver \$ 300.00 NC183D Receiver \$ 300.00

All receivers re-capped, clean and working.

GATES BC1-G Broadcast Transmitter setup on 160M, 250 & 1000 Watt selective power levels \$ 1800.00

Bob, K3QEP

#### **For Sale**

One Henry 2K-4 Amp \$795.00, one Metron Amp \$650.00.

sstires@cox.net

#### For Sale

Collins 136B-2 Noise Blanker for KWM-1,KWM-2,KWM-2A, with Manual. Never Used.

Price \$200.00

Contact: Pete, K6JQE, (858) 755-4838

#### **For Free**

Fifty foot galvanized steel tower. Triangular, 28 inches wide at base. Recipient must remove and must have liability insurance. May be seen at 1175 La Moree Road, San Marcos, in the RV Parking Lot. Call Fred Brown, W6HPH, 760-740-8501 or 760-742-1328, or w6hph@yahoo.es



We had 10 at Phil's BBQ today (for the weekly Friday Feast) and Rhonda really gave us the royal treatment! Nobody has to wait in line anymore, even though it will be out to the parking lot then down the side of the building on Fridays. You just go see Rhonda and say "Help help me Rhonda":-)

Mitch/K6BK and me worked this out with Rhonda at the last Phil's visit Everyone have a nice weekend.

Tom W0NI Photo by WA3IHV

## Flex 5000 with iPad

### Remote Operation

by Howard KY6LA

Today I finally made some QSO's remotely on my Flex 5000 via my iPad.

I had installed on my iPad,

- 1. LogMeIn Ignition to control my Flex Computer and
- 2. Skype to send and receive Audio

On the Flex Computer, (a regular computer attached to the Flex 5000), I installed

- LogMeIn, to control the computer screen remotely
- 2. Skype, to send and receive audio
- 3. DDÜTİL, a control program that connects my SteppIR MonstIR, Rotor, PW1, Power Meters to the Flex
- 4. Virtual Audio Cable, instead of physical connections all Audio is inside the computer as digital bits, and
- 5. PowerSDR. the Flex control program

We were operating from Rob's WA3IHV house in Escondido on 14,172 using his legacy 20th Century IC-7700 Radio.

I connected to my home station over my iPad via Rob's WiFi Network

Remotely I automatically tuned the SteppIR to 14172 and turned the beam north Rob gave a call and we heard him distinctly at about S6.

I then gave a call into my iPad and we heard me at S6 at Rob's

There was a definitely Internet Delay of about ½ second, so it sounded like an echo chamber at Rob's albeit it would be OK if we were not listening to ourselves.

It would be too long a delay for CW Contesting but adequate for Digital and SSB.

I then went to Costco in Poway using the 3G feature. I remotely turned the radio to 14243 in the hope of hearing W6D. No luck with Pat but I was able to make a QSO even using the slower 3G. The trick was once I tuned the radio to the frequency, I freed up bandwidth by only using Skype and not LogMeIn as I did not need to see the band then.

The exciting thing for me is that I can travel to Dayton or to Europe or sit in my living room, only need to carry my iPad and yet not miss out on any DX from my house.

Ain't Modern Technology Wonderful!

Hello SD Microwavers,

This past Monday, May 16th, was the date of our monthly meeting of the San Diego Microwave Group at 7:00 PM. The location was Kerry Banke's home QTH in La Mesa.

The technical topic for this meeting was "Microwave Filters You Can Make", and we encouraged all participants to bring any filters made, in order to see them measured with the spectrum analyzer and tracking filter. The filters invited included evanescent waveguide types using waveguide below cutoff, as well as pipe

cap and other types members have built.

If you haven't already done it, you might want to take a look at W1GHZ's web site on the topic of "Filters". This collection of papers and presentations was the topic of the technical program presented by Kerry N6IZW.

All amateur radio operators are invited to our monthly meetings and weekly Monday night 9pm net on 146.730.

Ed W6OYJ and Michelle W5NYV

## Winning Effort!

## NX6T #1 USA & #1 Left Coast 7QP Out of State MS Mixed HP!

by Dennis N6KI Out of State M/S HP

Call	CWQ	PhQ	DgQ	Mult	hr	Score Club
NX6T K6MM N2BJ N5NA	186	171 70 148 0	_	98 82 89 54	16.5 9 8	87,318 SDCC 57,236 NCCC 36,490 SMC 18,144

Call: NX6T

Operator(s): N6KI, WQ6X

Station: W6HCD

Class: M/S HP OTH: CA

Operating Time (hrs): 16.5

Summary:

Band	CW Qs	Ph Qs	Dig Qs
160: 80: 40: 20: 15: 10: 6: 2:	38 64	1 12 68 74 15 1 0	0 0 0 0

Total: 183 171 0 Mults = 98 Total Score = 87,318

Club: San Diego Contest Club

#### Comments:

WQ6X and I ( N6KI ) worked the 3 USA QSO Party Contests (NEQP, 7QP, INQP ) at same time as ARI, unfortunately there was NO contest Logging program that could do this so we modified Old but VERY Useful K1EA CT DOS version 10 NEQP Contest Module to accomplish this feat !



250 - \$59.00 500 - \$79.00

500 - \$79.00

1000 - \$95.00

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email: k7elh@qslsbyk7elh.com

## **Minutes**

### Palomar Amateur Radio Club

Board of Directors Meeting April 13, 2011 (Corrected)

The meeting was called to order by President Dennis Baca KD6TUJ at 7:17pm at the home of Ron Pollack K2RP.

In attendance were:

President Dennis Baca KD6TUJ

Vice President Ron Pollack K2RP Secretary

Paul Williamson, KB5MU

Director #1 Don Johnson, WD6FWE

Director #2 Eric Hutchins, K7ELH

Membership Chairman Al Donlevy W6GNI

SCOPE Editor Michelle Thompson W5NYV

Repeater Technical Chairman Conrad Lara KG6JEI

#### Secretary's Report

Secretary Paul Williamson KB5MU distributed printed copies of the minutes of the February Board meeting, as previously sent by email. Motion by K2RP to approve the minutes as published. Seconded by Al Donlevy W6G-NI. Motion passed unanimously. KB5MU distributed printed copies of the minutes of the March Board meeting, as previously sent by email. Motion by Conrad Lara KG6JEI to approve the minutes as published. Seconded by Michelle Thompson W5NYV. Motion passed unanimously.

#### Treasurer's Report

No Treasurer's report was available.

#### **Upcoming General Meeting**

K2RP reported that Pat Bunsold WA6MHZ would have a very funny presentation about his trip to the Dayton Hamvention at the May meeting. The June meeting will be about Field Day.

#### **Membership Report**

Membership chairman Al Donlevy W6GNI reported that Club membership is 278. Postal rates were adjusted on April 12; it will now cost 0.1 cents more per Scope mailed. Mailing labels will have to be rotated 90 degrees from their current orientation. Dropping off Scopes at the post office will now involve waiting for the postal workers to process the stack and correct any errors.

#### **Repeater Technical Report**

Repeater Technical Chairman Conrad Lara KG6JEI reported on a repeater site visit last month. A duplexer was replaced and additional filtering was added to mitigate interference on the 447 MHz repeater. The power amplifier module was replaced in the 147.130 MHz repeater. Some time was wasted due to directional coupler limitations that resulted in a false indication of desense.

The 145.05 MHz packet node TNC was reset, and it worked for a while thereafter, but has again lost its programming, after a loss of AC power at the repeater site. The lithium battery in the TNC is fresh, so some deeper hardware problem is suspected.

The additional power cutoff relays have not yet been ordered.

The 220 Club will install a 48V power converter for their repeater at a work party scheduled for Sunday April 17.

KG6JEI reported no progress on the 6m repeater. W5NYV reported that three designs for a new 6m repeater antenna are in hand, all but one of which use off-the-shelf components. Simulation studies show a slight advantage for mounting the antenna on its own separate pole, as it is currently, but there may be mechanical advantages to mounting it on the main tower.

#### Field Day

KG6JEI reported for Field Day Chairman Greg Gibbs KI6RXX. A work party is scheduled for May 11 to refurbish the club's two 20m yagi antennas. Field Day sites in Oceanside are still under consideration. KI6RXX will provide a Field Day article for the Scope by Friday. KD6TUJ will visit Oceanside Parks and Recreation to see about using Rancho Del Oro park. K2RP noted the importance of asking the chuck wagon volunteer to feed us again this year.

#### **Request for Repeater Usage**

Timothy Higgins requested the use of a repeater intermittently in support of the Scout Fair at Qualcomm Stadium the following weekend. Motion by Don Johnson WD6FWE to approve the request. Seconded by W5NYV. Motion passed unanimously.

#### **Operating Day**

KD6TUJ reported that Operating Day was held at the YMCA in Oceanside. About 35 people signed in. Councilman Kern attended for about 15 minutes, and asked if the tower trailer would be typical of amateur radio installations at homes. KD6TUJ reported that he had sent a letter of thanks to the YMCA. KD6TUJ returned the check written by the club to cover expenses, since no net expenses were incurred.

#### San Diego Amateur Radio Council

KD6TUJ reported that he made a request to SANDARC to fund the club's Operating Day event in April and its next Operating Day event, in the amount of \$200, and the request was approved. Since there were no expenses incurred at the April event, the funds will be banked for the next event.

SANDARC held its election of new officers. Challengers replaced incumbents in both contested races. There was some controversy about inactive status for member clubs. It seems that the SANDARC bylaws require a vote to move a club to inactive status, but clubs have been treated as inactive without a vote being held. The main implication seems to be that a quorum to transact business depends on the number of active clubs, so some meetings may not have had a legal quorum.

#### **Raffle Results**

KD6TUJ turned over \$70 net proceeds from the raffle at the last club meeting.

#### Logbook of the World

W5NYV reported that the club callsign W6NWG is now active on Logbook of the World. Anyone holding old contest or other event logs for W6NWG should submit them.

#### **Next Board Meeting Location**

It was agreed that the next Board meeting would be held at the home of K2RP at 7pm on May 11, 2011.

Adjournment

The meeting was adjourned at 8:35 pm.

Respectfully submitted, Paul Williamson KB5MU Secretary



## Mobile Antenna Raising Gearbox

This might not qualify as an "internal" mobile installation, but perhaps it will be of interest. After having broken a few whips off the top of my van, I am trying this idea. A motorized antenna raising gearbox. A 12v DC motor and gear box can raise or lower the Hustler antenna in about 4 seconds! Just don't forget to lower it when the van is moving!

The SWR is still OK when half way up. Bob Zelenack, K3QEP



KENWOOD

Do you have a mobi need some motivation

We're looking for a f the drawing board, of time you get in and show your installatio

Tips, narratives, exp encountered and eva scope@pa

Thank!



Jose XE2SJB Jerry N5MCJ

Н R 0

**OUTLET** 

rf CONCEPTS DIAMOND **US TOWERS** Joe N6SIX **KANTRONICS** YAESU, MFJ, ICOM BENCHER, Inc. HUSTLER **COMET AMERITRON** 

Astron, AEA, **OUTBACKER** Larsen Antennas TEN-TEC Hy-gain, Tri-EX, Cushcraft And Others 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.

Open: 10a.m. – 5:30p.m.<sub>Ask about our</sub> Monday thru Saturday great prices 858 560-4900 or toll free 1-800-854-6046

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!



#### Hear Yourself!

Type in call sign or calls you may have used in a Multi-Op Contest like "NX6T" or "WQ6X" or "N6KI" etc. and you will hear what you sounded like in Wales!

Fun to listen to your favorite Contest Op!

http://gw4ble.dxlist.co.uk/

Click on the Play button on Audio Slide Bar or SAVE.

Typically these recordings are made by Contest Logging Programs like Writelog, N1MM, WINTEST etc and are stored on hard drive if one selects that option and has a big enough hard drive during contests.

I heard WQ6X, W2PWS N6CY and possibly N6NC ( N6OX ? ) in calls we have use the last 5 years doing Multis from W6HCD or N6KI site! See if you can recognize the your voice as the Op who worked this guy!

These are mostly sideband recordings but he does also gave CW recordings.

We have a GREAT Signal in Wales!

73, Dennis N6KI

le installation? Do you want to have a mobile installation, and in?

ew good mobile installations - whether they're completed, on or half-way done and tripping you and your passengers every out of the vehicle - to be featured in the Scope. We'd love to n.

planations, techniques, problems encountered and solved (or ided) are what we're looking for. Send them in! allomararc.org





Our May Meeting. Thank you W6SST (below). He's bringing in the coffee! Photos by KB5MU.



## Mobile Installation

by Dick K6BZZ

Here is a description of my mobile setup. There have been lessons learned along the way which will be shared here. The radios are installed in an Infiniti QX-4 SUV. Operation is on HF, VHF, and UHF, with APRS capability. The rigs are an Icom IC-706MKIIG, Ameritron ALS-500M HF amplifier, Kenwood TM-D700 2 meter/440/APRS, Hamstick antennas on NMO mounts, and a Byonics GPS antenna/receiver.



The radios are mounted in the rear of the vehicle, with remote control heads and speakers up front. There are two NMO mounts on the rear, one for HF thru 6, and the other for 2/440.

Before adding the 500 watt amplifier everything worked well at 100 watts output on HF. Then the fun began. It's a lot of fun to run 500 watts from a mobile HF station and receive great signal reports, break through pileups, etc, but there are some tradeoffs required in order to have this much fun. The first problem showed up when transmitting high power on 40 meters. The engine would shut down. That's when I learned about ECCs- Engine Control Computers. There was enough RF



getting into the ECC to cause problems. The solution turned out to be very simple, and I pass it on here to save you hours of testing.

I wound a RF choke using about 8 turns of the RG-8x feedline coax into a ferrite doughnut placed at the base of the hf antenna feed point. RFI now gone.

The engine is happy again. It's important that the HF radio in back be well grounded to the frame of the vehicle. RG-8 coax shield works well. The radios should be connected directly to the battery through a large fuse (60 AMP) in the positive cable.

I prefer to run a negative cable from the back to the battery also, rather than using the vehicle chassis as ground. After a lot of searching the best power cable for the long run from the battery to the radios was #6 Monster Cable used for high power automobile audio amplifiers. It is very flexible and easy to run around corners. The two cables run from the battery, through the firewall, then under the door sills, and under the rear carpet and seats to the rear area of the vehicle.

Good luck with your installations. Mobile HF is a lot of fun. Just be safe and don't take your eyes off the road to adjust radios. I've found it's really more fun to operate while mobile at rest or with someone else driving.





'73 de Dick K6BZZ Maricopa AZ, Carlsbad CA

## Field Day Site Measurements

Measurements of Possible sites:





## NiCd Lady Company

Grace Lloyd N6WPA

grace@nicdlady.com

#### www.nicdlady.com

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#### PARC Field Day 2011

by Greg KI6RXX

ARRL Field Day

CQ Field Day CQ Field Day, W6NWG calling CQ Field Day... Field Day is fast approaching with just less than a month away.

Every year the ARRL selects a Field Day "Theme" or "Challenge". This year the overall theme is to :Do Something Different. The ARRL States: "As part of your "Field Day challenge" in 2011, do something different. Try making contacts using a new mode for you... Tinker with a new antenna design... Concentrate on getting "newbies" on the air... Focus on demonstrating our hobby to government officials and representatives from served agencies... Choose a different venue for your event... Learn how to use a new piece of equipment... Set goals for maximizing the number of participants who make contacts... Be creative in holding an educational activity component with your set-up..." "The innovations are there – you simply need to employ them!" This year, as a brand new Field Day Captain, I have chosen to do something different; To not only run Field Day rather than just attending it, but to also try and make Field Day both contest friendly as well as fun friendly for the club.

This year your Field Day Band Captains currently include the following generous people: Preston Butler W6ASP who will operate on 10M. Don Johnson, WD6FWE, will operate the 6M (VHF) and GOTA station as usual. Charlie Ristorcelli NN3V, will be on 20/80 SSB. The HandiHams with coordination from Tom KI6IET and hopefully Bill N6HBO will operate on 15/40 SSB. Howard KY6LA will be bringing his "most current state of the art" Flex SDR Radio. Michelle W5NYV and Paul KB5MU have also offered to to provide a station where needed. We are hoping to operate a 5A Station which means we still need operators for the two 20/80 and 15/40 CW stations.

Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and ending at 2100 UTC Sunday. One cannot expect to reasonably operate during this lengthy time period without at least one decent meal. This year the food will be provided once again by Rick Roberts N1OW and his amazingly impressive PsychoKitchen! I encourage club members to bring a main dish, side dish, or desert to share on Saturday, in an effort to bring back the Road Kill Cafe, Pot Luck Style this year.

Rick, N1OW has also offered to bring his Daisy and help with the filling of the water tanks which are used to hold down the antenna towers. Repair work has been completed on the 20M SSB and CW Yagi antennas with the help of Denis N6KI, Ron K2RP and others at the hill top site of Nash Williams W6HCD located in Fallbrook. We hope to also schedule an Antenna Party within the next few weeks for the other antennas to get them re-tuned and ready for Field Day.

This year I hope to make Field Day both fun and exciting! My personal goal this year is to better enhance my understanding within this hobby and hopefully overcome the huge learning curve that has come with being a new, inexperienced Field Day Chairmen. If you wish to get involved or help in any way, please contact me at thenetquest@gmail.com or on my cell: 760-583-9668. I Look forward to seeing you there!

73 from, Greg KI6RXX

## Photographs from May Membership Meeting



CAPTAIN:		BAND:	
ITEM	SUPPLIER	ITEM	SUPPLIEF
+Antenna Equipment:		Computer Equipment:	
Antenna	PARC	Laptop or Desktop	
Antenna Mount	PARC	Monitor for Desktop	
Antenna COAX	PARC	Keyboard for Desktop	
Rotator	PARC	Logging: Write Log	PARC
Rotator Mount	PARC		-
Rotator Cable	PARC	Power:	
Rotator Controller	PARC	Generator	
Tower	PARC	Gas	
Tower Stops	PARC	Fire Extinguisher	
Tower Guys	PARC	Extension Cord	
Tower Guy Anchors	PARC	Power block	
Tower Weights	PARC		-
		Shelter Supplies:	
Radio Equipment:		Shelter	
Transceiver		Table	
Power Supply		Chairs	
Microphone		Lighting	
Speaker		Pencil and Paper	
* Headphones		Operating Manual	
CW Key		Field Day Rules	
* Foot Key		Safety Rules	
*SWR meter		First Aid Kit	
*Patch Cord			
*Antenna Tuner		Site Communications:	
*# Bandpass Filter		VHF HT w/ extra batteries	
*Spare Transceiver		*Speaker Microphone	

- \* Items are optional though highly recommended where possible.
- + A Tower Tailor could replace all these items

\*Spare Fuses

# PARC HAS LIMITED SUPPLY! It is best to bring your own as we do not have enough for all stations!

PARC Can provide latest version of Write Log if necessary.

Here's the Field Day checklist from Greg KI6RXX. PARC is looking forward to a fun Field Day, and we invite you to join us. This checklist is useful not only for Field Day, but also for going over your own supplies in order to improve your station's level of emergency preparedness.

SCOPE P.O. Box 73 Vista, CA 92085-0073 PERIODICALS POSTAGE PAID AT VISTA CA 92085-9998

Return service requested



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Editor: Michelle Thompson W5NYV Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

#### Featured Program:

At 7:30pm on the 1st of June 2011, Palomar Amateur Radio Club will have a program presented by Greg KI6RXX. He will talk about Field Day.

Arrive at 7:00pm to socialize. We look forward to seeing you at the Carlsbad Safety Center, 2560 Orion Way, Carlsbad, CA.