

SCOPE July 2008 ✱

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

Club Meeting

2 July 7:30pm at the Carlsbad Safety Center
“Andre K6AH and digital radio techniques for emergency communications”

Repeater Site Work Party

6 July Meet at Mother’s Kitchen 10am

Board Meeting

9 July 7:00pm at KG6RGI QTH



Collins 75A4 Receiver

by Ron Pollack K2RP

In the early 1950s, SSB became increasingly popular. Many of the transmitters were homebrew, with construction articles in the major magazines almost every month. However, the receivers of the day made reception of these signals difficult.

The receivers came up short in several categories. First, stability needed to be improved. Any slight drift caused the sideband signal to be unreadable. Most of the receivers of the time were not designed to use AVC (AGC) with the BFO on, allowing strong signals to overload the front end. The technique of receiving SSB on these receivers was to advance the audio all the way and use the RF gain as a volume control.

One of the big advantages of SSB was the narrower bandwidth, allowing more signals in a given area of the band without QRM. However, since narrow selectivity was not available, that advantage disappeared. Also, some type of filter was needed to receive only one sideband.

In the early 50s, Art Collins of Collins

Radio fame undertook to produce a top quality receiver in his 75A line (75A3 being the latest) that was designed to solve the problems of the new mode, while still retaining top performance on CW and AM. The 75A4, introduced in 1955, was the result. The introductory price was \$700 including one mechanical filter. Add a CW filter and matching speaker and your tab was \$775. The receiver employed a total of 22 tubes!

Around the same time, a matching transmitter was introduced, the model KWS-1. The two units did not interact, so that transmit and receive frequencies were set separately. These were known, then and now, as the “Gold Dust Twins,” because of the price! Only about 1000 of the transmitters were made, and are very rare and valuable today. About 6000 receivers were built until being replaced with the 75S1. A great many of these receivers survived, and change hands frequently, but not inexpensively. Depending on condition and accessories, a 75A4 will bring from \$800 to \$1500 today. The transmitter, if you can find one, will probably be in the \$5000 range. Complete with power supply, this 1 KW CW, AM and SSB transmitter weighed a whopping 260 lbs and would nick your

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Technical Committee Meeting July 2nd 7:00pm

Carlsbad Safety Center

This meeting will be held immediately before the general membership meeting. Find a club officer to participate.

Membership Report

New Members Joining PARC:
KI6QDB, K7WCC, and KI6MMF. Welcome!

And no "old" members reinstating their membership. Not a very good month for growing the membership!

Al
W6GNI

Fold & Staple Report

W6GNI Al & Kathy
KB6NMK Jo & Tyler & Toby &
Matthew
K2RP Ron, KD6TUJ Dennis

We could use one or two more on the list of Fold & Staple folks. Stop by the membership table and volunteer. A social work exercise, and get a participation point too.

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.

<http://www.kiloxray.com/vec/>

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.

Radio Club Resources

Check out these great local radio clubs on the web at the following addresses.

<http://www.fallbrookarc.org/>
<http://www.sddxc.org/>
<http://www.earsclub.org/>
<http://roars.net/>
<http://www.wa6bgs.org/>
<http://n6six.50megs.com/>

Show And Tell

PARC is looking for members to bring items to the meetings for a "show and tell". These items could be projects in progress or completed old and/or restored equipment, short items of interest, or unusual items, and happens 5-10 minutes prior to the evening's presentation. Contact Dennis KD6TUJ at 760.802.2573 or email at KD6TUJ@amsat.org to help coordinate.

Club Members ONLY!

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.

WB6IQS@amsat.org, -John

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SPECIAL:

New G5RV Antenna

(57 ft total length)

\$ 44.00

continued from page 1

bank account for \$2000! Remember, all these prices are in 1955 dollars! No wonder they were called the “Gold Dust Twins!”

The 75A4 was not just an improved 75A3. The entire receiver was redesigned. Some of the new features included less gain in the front end for lower noise and greater dynamic range.

Some “firsts” were mechanical filters in the IF, separate product and diode detectors, amplified AGC with both detectors, and passband tuning.

Passband tuning made it possible to move an interfering signal out of the IF passband without creating distortion.

One feature carried over from the earlier receivers was the PTO, permeability tuned oscillator. The traditional method of tuning receivers was with a variable capacitor.

Collins developed a VFO whose frequency was varied by moving a slug in and out of a coil, varying the inductance and thus the resonance of the tuned circuit. This resulted not only in increased stability, but also allowed a linear rate of tuning.

The 75A4 is generally regarded as the premier receiver of the era. It is hard to overemphasize the status of these two units in their day. Therefore, it’s surprising to find dozens of modifications that were made!

Throughout the 50s, 60s, and even 70s, over 80 articles were published in the amateur press describing mods. Some were great, some were not so great, and some required special equipment and skills to complete.

Popular topics were AGC mods, sensitivity mods, noise limiter

improvement, and use of less expensive mechanical filters. There was even a book published that was a compendium of all the modification articles.

I acquired the receiver shown in the photo below last year, under bittersweet circumstances, to say the least.

I had always admired it when it belonged to a good friend who became an SK in the fall of 2006, and his family, knowing what I thought of the receiver, made it available to me. The only way I would part with it is if I could bring my friend back!

It has all the available filters, plus some spares. (The receiver has room for 3 switch selected plug in filters.) It also has the optional 4:1 spinner knob.

It is in the same condition as when I got it, and other than cleaning I have done nothing to it. In my collection of many dozen vintage units, this one is in the best, most original condition. It looks like it did when it came out of the box well over 50 years ago, and performs flawlessly.

Anyone who wants to come and operate one of the true classics of the 50s is welcome to give me a call!



Repeater Site Work Reports

On 06/08/08, David, KD6EBY, Michelle, W5NYV and Mike, K6MRP were present for the scheduled June work party. David did an excellent job of cleaning out the old battery shed and preparing the battery racks for removal. Michelle checked for volunteer workers at Mothers Cafe and found none. She then proceeded to the site to work on inventory and documentation. Mike wired in the distribution box for emergency inverter power in building #4 which houses the PARC voice repeaters.

On 06/22/08, Art, KC6UQH replaced the 146.730 repeater with a spare which he had updated and modified at his QTH. After doing some in service testing it was determined it had a much better signal than the old repeater. Thanks Art! Art will be taking the old repeater to his QTH to fix and update it. Mike, K6MRP added conduit and added 5 emergency inverter outlets in building #4.

The club is looking for 19 inch equipment racks with slide out shelves so that we can better organize our repeater equipment . Any donation from someone removing said equipment would be greatly appreciated. Please contact Mike, K6MRP at k6mrp@amsat.org or 760 749 8888. Thanks.

The next work party is on Sunday, the 6th of July. Meet at Mother's Kitchen at 10am to head over to the repeater site, or 9am if you would like to meet Michelle for breakfast and/or coffee.

Any questions please contact Michelle W5NYV, Work Party Chair at w5nyv@amsat.org or Mike K6MRP Repeater Site Technical Chair at k6mrp@amsat.org .

de Mike, K6MRP
Repeater Site Technical Chair

In Search of W6IAC

My name is Dave Raab W7DKR. I lived in Escondido for a little over 20 years and graduated from the old High School in 1952.

We had a Ham Club with the call sign of W6IAC. The station sponsor was Ed Cameron, W6FJH. We had quite a group and I am not sure how long the club lasted after I was gone.

I have thought a lot about that club and was wondering if anyone in PARC may remember that far back or maybe someone may still be around that belonged to the club.

If anyone did belong to the EUHS Radio club, could you please get in touch with me?

I would like write a little piece for the QCWA journal about the W6IAC club.

Thank you in advance for any assistance you may give me.

73's and CUL,

Dave W7DKR, ex-WN6PCQ (1952)
E-Mail: daveraab@gmail.com



Dave Tennant KD6EBY helps clean out the old battery building at the repeater site work party on June 8th.

ATV Guide

ATV stands for amateur television. Using amateur radio frequencies, operators can transmit and receive NTSC standard video. You may have heard of slow scan TV. This type of transmission is often called fast scan TV.

Here is a roundup of ATV activity, from the ATV Newsletter distributed by Bryon Foster N6IFU.

Scheduled Program Guide for ATV

Monday:

SCART Net (GB3IV)

<http://g7jtt.camstreams.com>

Tuesday:

ATCO ATV Net

Every Tuesday at 6:00 PM PT/9:00 PM ET

<http://wb8lga.camstreams.com>

W7TED Repeaters Net Night

Every Tuesday at 8:00 PM PT/11:00 PM ET

<http://w7ted.camstreams.com>

Torbay Amateur Television & Microwave Group

Group Activity Night

Every Tuesday at 2000 to 2200 UTC/1:00 PM PT/4:00 PM ET

or www.gb3tb.dyndns.tv

<http://www.ustream.tv/channel/gb3tb-23cms-atv-repeater>

Wednesday:

Chat Night, GB3ZZ

Every Wednesday at 2100 UTC/1:00 PM PT/4:00 PM ET

<http://gb3zz.camstreams.com>

CATS Net

Every Wednesday at 6:00 PM PT/9:00 PM ET

<http://kb3lnn.camstreams.com>

Thursday:

Torbay Amateur Television & Microwave Group

Group Activity Night Every Thursday at 2000 to 2200 UTC/1:00 PM PT/4:00 PM ET www.gb3tb.dyndns.tv

San Bernardino Microwave Society Meeting

Topic of Tech Talk: 10 Band Rover Rig
By Wayne Overbeck N6NB

Next meeting July 3rd

7:00 to 9:00 PM PT

www.ac6rb.com then click on option

#1 or #2

BRATS Net

Every Thursday at 6:00 PM PT/9:00 PM ET

<http://kb3lnn.camstreams.com>

Friday:

GB3GG, Grimsby Amateur Television Group Net

Every Friday at 2100 ZULU

2:00 PM PT/5:00 PM ET

<http://www.ustream.tv/channel/gb3gg>

Sunday:

Torbay Amateur Television & Microwave Group

Group Activity Night

Every Sunday at 2000 to 2200

UTC/1:00 PM PT/4:00 PM ET

<http://www.ustream.tv/channel/gb3tb-23cms-atv-repeater>

or www.gb3tb.dyndns.tv

MATS Net

Every Sunday at 5:00 PM PT/8:00 PM ET

<http://kb3lnn.camstreams.com>



Powerful Progress

Mike Pennington K6MRP works on the power distribution at the repeater site work party on June 8th.

He's upgrading the power lines as well as adding additional outlets designed for emergency power.

Club Classified Advertisements

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.

(6.8) Wanted: Cushcraft R7 vertical multiband antenna for HF use. Contact Mickey 760-744-2034 or mickeykc@juno.com.

(6.5) FOR SALE: HP 1727A Oscilloscope. Club Donation. Dual Trace, 275 MHz bandwidth. With service manual and padded top cover. Unit checks out but trace on CRT is dim. No probes included. Has analog storage capabilities, but this feature is not guaranteed. Circa 1981. Unit is very heavy and extra deep. It is all solid state, except for scope tube. \$50 OBO. Contact WB6IQS@att.net.

(5.1) Complete 5-watt portable 20-meter QRP CW station. Oak Hill Research OHR-100A professionally wired and aligned. Built-in Iambic keyer, battery supply. Custom "Old Timer" wood case with calibrated vernier dial. Complete with field kit with mini-keys, 20 meter "Gusher" dipole and many accessories. Like new condition
PRICE REDUCED to \$100.
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San Diego Section Meeting Location: Do you know of a good place?

As the incoming Section Manager, I am conducting a series of Section Information Meetings. The purpose is to provide a forum for us to meet and discuss needs and opportunities within the San Diego Section. Your input is important, so that the Section may better serve the local amateur community.

I am planning to hold several of these meetings, at different location within the Section, so that you do not have to travel far to attend.

The first was held on April 4th, 2008, in at the Carlsbad Safety Center. Other locations in the Section will follow.

If you know of a location near you, which can accommodate up to fifty (or so) of us, please contact me at ad6vi@arrl.org. ❖

Minutes Palomar Amateur Radio Club Board of Directors Meeting May 14th 2008

The meeting was called to order at 7:05 PM by President Steve Early AD6VI. The meeting was held at the home of Bob Birch KG6RGI. Present at the meeting were:

President Steve Early AD6VI
Vice-President Dennis Baca KD6TUJ
Secretary Loren Hunt AD6ZJ
Treasurer Bob Birch KG6RGI
Director #1 Tom Martin KG6RCW
Repeater Site Mike Pennington K6MRP
Guest Conrad Lara KG6JEI

Treasurer's Report

Steve AD6VI distributed the report. Total Assets are \$15,591. The prepaid dues are \$6,293.00.

A motion to accept the report was made by Tom KG6RCW and seconded by Loren AD6ZJ. Motion was carried.

Secretary's Report

Loren AD6ZJ presented the Secretary's report. A motion to accept the Minutes with one name change was made by Dennis KD6TUJ and seconded by Mike K6MRP. Motion was carried.

Discussion Items

1. Field Day

- Have Site – Same San Marcos site as the last several years
- Insurance forms received and sent
- The following band captains have been asked and/or accepted:
 - 20/80 SSB NN3V - accepted
 - 20/80 CW WN6K - asked
 - 15/40 SSB N6UWW & W6BFG - asked
 - 15/40 CW N6KI - accepted
 - 10M SSB N6HBO - asked
 - 6M GOTA WD6FEW - accepted
 - Satellite KE6UQH - accepted
 - Roadkill Café KG6RCW – accepted
- Conrad KG6JEI will chair this year's Field Day
- Field day site budget and cooking budget needed
- List of FD sites should be posted in the

Scope

- Tom, KG6RCW will cut the grass, he is looking for an additional helper
- Look into mailer to all new hams in the area to invite them to field day
- Discussion to purchase 3 additional folding antenna brackets. A motion was made by Tom KG6RCW and seconded by Bob KG6RGI to purchase the 3 brackets with a NTE of \$400.00. Motion carried
- A motion was made by Dennis KD6TUJ and seconded by Mike K6MRP for a food budget NTE \$300.00. The motion carried
- Trailer assignment – PARC trailer – 20/80 CW station. K3PXX's Bird trailer will also be available but not assigned at this time.

2. Repeater Site

- Batteries removed from shed
- Trailer still on site but buyer still wants it
- The work party had no workers, we need to do better at communicating the need
- Request was made to change the technical committee name and subject matter to be more general in nature
- Lighting and electrical upgrades for the buildings has started, there is much to do
- Plan to move the old batteries off site on the 21st.
- K6MRP, Mike has been approved as the temporary technical chair – KG6RCW made the motion and was seconded by AD6ZJ. The motion carried
- Discussion of training more club members on controlling the repeaters remotely and on general repeater site practices
- 3. General Meeting for June – Paul, WN6K will be presenting on WriteLog, a contest logging program.

Membership Report:

Current club membership is 379.

New Business:

- 1) Discussion of member recognition
 - 2) Place of next Board Meeting: Bob Birch KG6RGI
- Motion to Adjourn made by Loren AD6ZJ and seconded by Tom KG6RCW.

PARC and PARC Affiliated Repeaters

Frequency	Tx	Tone	Call Sign	Remarks
52.680	-	107.2	W6NWX	
146.730	-	107.2	W6NWX	See note 1
147.075	+	107.2	W6NWX	
147.130	+	107.2	W6NWX	
447.000	-	107.2	W6NWX	
224.380	-	107.2	KK6KD	Americas Unidos
224.900	-	107.2	WD6HFR	Convair/220 ARC
224.940	-	107.2	KK6KD	Sharp Hospital Coverage
446.140	-	123.0	WB6FMT	Vista
146.175	+	107.2	N6FQ	Fallbrook ARC; linked to 445.600
445.600	-	107.2	N6FQ	Fallbrook ARC; linked to 146.175
145.050	(s)	None	W6NWX-1	Packet node; linked to Metro 9600 net
146.700	-	None	W6NWX-4	Packet duplex repeater; Duplex; PALBBS use OK

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@amsat.org
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 tthompson@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	Lin Robertson kj6ef@amsat.org
Friday	2100	146.730	Hiker's Net	Ed KF6DXX@juno.com

Board of Directors Contact Information

Board of Directors Position	Call Sign	Contact Information
President - Steve Early	AD6VI	619-461-2818 ad6vi@amsat.org
Vice President - Dennis Baca	KD6TUJ	
Secretary - Loren Hunt	AD6ZJ	
Treasurer - Bob Birch	KG6RGI	
Director - Paul Williamson	KB5MU	858-571-8585 kb5mu@amsat.org
Director - Tom Martin	KG6RCW	
Scope Editor - Michelle Thompson	W5NYV	858-229-3399 w5nyv@amsat.org
Repeater Site - Mike Pennington	K6MRP	760-749-8888 k6mrp@amsat.org
Repeater Tech - Mike Pennington	K6MRP	760-749-8888 k6mrp@amsat.org
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.



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

This month's General Meeting will be held on July 2nd, 2008 (The first Wednesday of each month) at the Carlsbad Safety Center. This month the program features Andre K6AH and digital radio techniques for emergency communications. Talk-in on 146.730 MHz repeater. Technical Committee meeting starts at 19:00. General meeting starts at 19:30 but show up at 19:00 for setup and visiting beforehand. 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)