

SCOPE March 2008 ❄

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

Technical Committee Meeting - Autopatch
5 March 7:00pm at the Carlsbad Safety Center

Club Meeting – Jonathan Kramer, W6JLK: "I'm from the Government (Planning Department) and I'm here to help you!"
5 March 7:30pm at the Carlsbad Safety Center

Board Meeting
12 March 7:00pm at W6GNI QTH



AC6V – Silent Key

By Bernie Lafreniere N6FN



Field Day 2002, Rod assisting 11 year Old Bryce Kozlowski contact Australia! Photo credit: W6VR

Rod got his start in radio in the late 1940's by listening to short wave broadcasts, long range AM stations and eavesdropping on the ham bands with his Knight Kit OceanHopper. Later as his enthusiasm grew he upgraded to a Hallicrafters S-40A.

He seemed to gravitate to electronics, taking two years of electrical and electronics vocational training in high school. Who knows how much electronics mischief he got into while in
continued left side pg 4

K6QK – Silent Key

By Dennis Vernaccia N6KI

I think I met Harvey around 15 years ago and it may have been when he towed his tower trailer up to a PARC FD event or when he volunteered his trailer and operating skills to participate in a few Dx-peditons to Mexico with the 6E2T group in the early /mid 90s.

Harv was a master of many trades and he and I and my dad who is a retired tool and die machinist hit it off pretty well. Harv was a very opinionated guy as we all know and at times we had our disagreements but knowing Harv had a heart of gold and would cut off his right arm to help out, when one got themselves in a pinch on a mechanical project, we always seemed to unruffle our feathers and get back to the tasks.

I am forwarding a couple of pix of when Harv came over with a few other hams. Harv was instrumental in helping me plan and get my MonstIR SteppIR antenna onto my tower on my small city lot when we had to bypass the manufacturer's instructions and figure some way to work on my patio roof with a Rube Goldberg plan of attack.

Then Harv re-engineered his SteppIR and
continued right side page 4

Technical Committee Meeting March 5th 7:00pm Carlsbad Safety Center

This meeting will be held immediately before the general membership meeting. Find W5NYV at a table in the back of the room.

The topic under discussion this month is the Autopatch.

President's Letter

By Steve Early AD6VI

February, while a short month, has come and gone. We had a very good presentation on optical communications by Kerry Banke, N6IZW.

We will start March on a sad note. Two workhorses in the amateur community, Harv Hiller K6QK and Rod Dinkins AC6V have become Silent Keys. HARV was an avid contester who built his own tower trailer, which has been studied and envied by many. Rod hosted and maintained the world-famous AC6V.COM Amateur Radio Web Site. Rod was also the very first contact for many new amateur radio operators in the San Diego area, welcoming them to the PARC repeaters. Both will be greatly missed.

Our March Program will feature attorney Jonathan Kramer, W6JLK and is titled "I'm from the Government (Planning Department) and I'm here to help you!" This is a relevant topic, not only because of local zoning issues, but because of a major zoning issue brewing in Palmdale, CA Looking down the road, Field Day is coming again. We are looking for volunteers to set up, captain and operate the stations. We continue to look for a new Field Day site, as last year's site is up for sale. Field Day was originally established to show that Amateurs could operate "portable". *continued lower right pg 8*

Volunteers Wanted

Volunteers needed to help set up a 2m/440, 50W Yaesu radio and antenna at the Elfin Forest Fire Dept. Help will be needed with attaching the antenna (Diamond X-50a Vertical) and setting up and programming the mobile radio for use in the fire department and to possibly set up the mobile antenna on a car. Date of project TBD.

Contact:

Mickey Cross, KI6CSY

760-744-2034 or mickeykc@juno.com.

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/>

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

Ham4Less.com

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1(760) 945-9503

call us—we may have it!

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SPECIAL:

New G5RV Antenna

(57 ft total length)

\$ 44.00

March Membership

New Members Joining PARC in January: KI6MY, KI6MUG, KI6LAV, AB6RM, and N8QOS.
In February: KI6NVT, N6DWF, N6EZV, KI6GZM, KI6LKP, KI6NUG, and Tom Rentz (No call yet)
WAY TO GO!

Several previous members reinstated their membership. Please be sure to welcome the new and old returning members.

Please use the firms that support the club, and mention that you saw their advertisements in the newsletter.

Also, check your label for your renewal date. If your mailed SCOPE didn't arrive, and you are reading this on the web site, as a fall back, maybe your membership ran out? We do great on attracting "New Members", but not so great on the renewals! The club really needs all its members!

Al
W6GNI

Fold & Staple

Sonny WA5ACE, Jo KB6NMK,
Al W6GNI & Kathy

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. 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.

One-Day Amateur Radio Technician License Class

Saturday, March 29th, 2008
8 AM to 5 PM (with breaks and one hour lunch)
Salvation Army - Joan Kroc Center
6845 University Ave, San Diego, CA, 92115
Please RSVP with Don Read, at Don_Read@usw.salvationarmy.org so that adequate materials and testing may be arranged.

Cost of Class: Free

Testing, if available at 5:00 PM, will be \$5

Description:

This purpose of this course is to aid students in preparation for an amateur radio Technician License written examination (Element 2). *

AC6V continued from left side pg 1

high school? Following high school Rod got his start as an electrical apprentice at Republic Steel in Canton Ohio where he worked for a couple of years.

The military and the Korean War came calling and Rod spent four years in the Navy (1951~1955) as an Aviation Electronics Technician – AT1.

Apparently quite good at it, he also taught electronics at the NATTC Memphis, TN.

While in the Navy as a Radio Operator and Avionics Maintenance Technician Rod for Air Transport Squadron VR-8, he accumulated hundreds of hours of flying time out of Hickam Field, Hawaii in Douglas R5D and Lockheed R7V-1 Super Constellation aircraft. It was with great fondness that he looked back and reflected on those days, especially operating CW from these now classic aircraft.

After his stint in the Navy, Rod earned an AA degree in electronics and found employment at Convair Pomona, teaching electronics and missile technology for four years. Later he spent two years as a vocational electronics instructor at the junior college level in Walnut California.

All of this gave Rod the background he needed for his true calling, being a technical writer. Rod was very passionate about producing the best technical documentation possible, patiently and skillfully pulling information from sometimes-reluctant design engineers. He worked 30 years as tech writer in aerospace, with many of those years at Hewlett Packard. With their passion for excellence, Rod really thrived and enjoyed his years at HP.

Rod was first licensed in 1977 as WA6WTO upgrading to extra and his now famous AC6V call in 1978. With his electronics background and passion
continued left side pg 7

K6QK continued from right side pg 1

shorty 40 mtr beam and did a beautiful installation on his re-engineered tubular tower. His uncanny mechanical ability showed when he would come over to my dad's garage machine shop and fabricate some of the few pieces he could not do from his well-laid out home shop.

Well, I am sure he is now upstairs giving Leonardo Di Vinci an earful of how Harv would have implemented all of Leonardo's masterful designs!

This is indeed a sad day and I know Harv will be greatly missed by all who have ever had the pleasure of his company or help. (yeah, even those who he may have rubbed the wrong way might sit back and say, "ya know..., I may have disagreed on a few things with Harv, but his heart was in the right place !)

***My Dear Friend
Harvey Hiller K6QK***

By Tom WONI

I am so lucky to have known Harvey. He knew so much about so many things in this world. Few people have knowledge that is both broad and deep, and few would share their knowledge as freely as Harv. He was always there to give me advice or help out whenever I needed it. I figure over the last 10 years of lunches with Harv I've had the benefit of his knowledge, enjoyed his stories, and his keen wit on 500+ occasions!

As I say, I'm a very lucky guy to have known Harvey Hiller. Smooth seas forever my friend, de Tom/WONI

Harvey Hiller, K6QK

By Bud Semon N7CW

On Feb. 13, 2008, I lost a true friend and the San Diego ham radio community lost a one-of-a-kind guy when Harv, K6QK became a silent key. I've known Harv for about 20 years – we were both members of the old General Dynamics Amateur
continued right side pg 7

Microsats: The San Diego Connection

by Paul Williamson KB5MU

Late one night in November 1987, at a McDonald's near the site of the AMSAT Space Symposium, an idea was hatched. AMSAT would create a batch of several nearly identical small spacecraft, using (then) state of the art computers based on the PS-186 design created by members of the San Diego Packet Radio Association N6NKF, KA6IQA, and WB6HHV. With enough computer processing power on board, and with modems to exchange digital data signals with ground stations, these satellites would operate as store-and-forward relay stations. A message could be sent from anywhere to anywhere, even using a low orbit satellite, by storing the message on board the spacecraft as it whizzed around the planet. The sending station would upload the message when the satellite was in view from his location, and a distant receiving station would download the message later, when the satellite was in view from there.

To accomplish this mission, the spacecraft needed substantial processing power, and it needed a lot of memory to store the messages. It needed to be comparable to, say, an IBM PC XT desktop computer. But the spacecraft would be only nine inches on a side, and there had to be room for batteries, and radio transmitters and receivers, and all the other hardware needed on board a satellite. The entire computer system had to fit into a tray that was only nine inches square and less than two inches deep. All the memory had to be solid-state RAM -- a hard disk with its moving parts was out of the question! We needed 256K of program memory, which had to be capable of automatically correcting single-bit errors caused by radiation, and a total of 10 megabytes of additional memory for message storage. That was a very large memory array for those days.

To cram all this stuff into the available space, three 8-layer circuit boards were packed densely with surface-mounted components. This kind of construction is

routine nowadays, but it was pushing the envelope for civilian commercial construction in 1988, and way beyond anything AMSAT had used. Obtaining the required components in the required quantities was a challenge. The manufacturer of the circuit boards was not very familiar with surface mount technology and was using brand-new software to design the board layout. Because of the component density of the boards, AMSAT broke with its tradition and paid to have the components soldered onto the boards commercially -- and that contractor was also not as familiar with surface mounting techniques as it might have been. All of these problems were exacerbated by a tight schedule to meet a specific deadline in order to be ready for the launch we'd managed to arrange.

It was only natural that the assembled computer boards be sent to San Diego for testing and debug. We had the original PS-186 designers, and we had access to surface-mount rework equipment in the prototype assembly lab at Qualcomm. The schedule allowed for a long holiday weekend to check out the boards and certify them working, before sending them on to the next stage of spacecraft integration in Colorado. This plan was, shall we say, somewhat optimistic. The boards arrived in time for the holiday weekend, but they were incompletely assembled, and, well, they just didn't work.

The long weekend turned into three long weeks of all-nighters and weekends for an expanded crew of digital hardware and software engineers. We found and corrected circuit design errors. We found and corrected board layout errors caused by bugs in the new layout software. We found and corrected board fabrication problems caused by poor process control at the board manufacturer. We found and corrected numerous soldering defects caused by poor process control in wave soldering at the commercial assembly house. We found and corrected manual assembly errors caused by plain sloppiness at assembly, which was probably caused by the schedule rush AMSAT imposed on

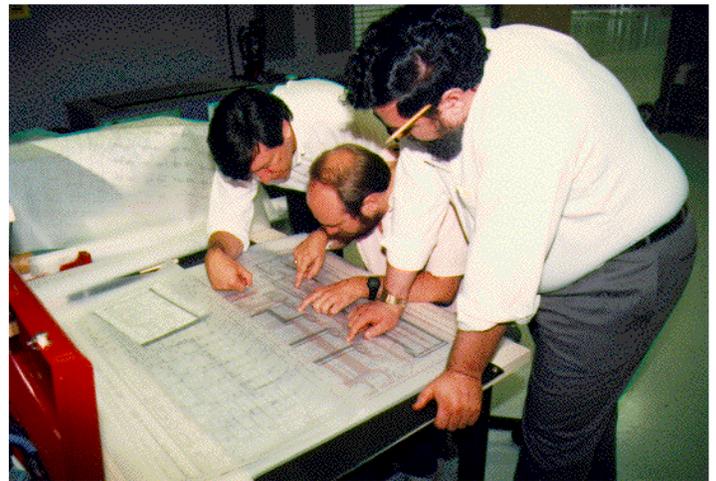
them to get done before the long holiday weekend. Eventually we got everything working on all six sets of computer hardware. The watchword for the project was "Some Assembly Required."

Now, in the real world, or even in a rational version of the AMSAT world, these computers would have been developmental prototypes. They would have been used for lab testing only. The changes we invented to correct the problems found in the lab would have been incorporated into new board designs and a nice fresh set of computers would be built (and tested) for flight. But that wasn't practical, for a number of reasons. There wasn't enough time to do anything like that and still meet the launch schedule. Even if there had been enough time, we didn't have enough money in the budget to build another set of boards. And, even if there had been enough time and money, we probably would not have been able to obtain another set of components. So, those hacked-up circuit boards, covered with hand-soldered wires and Xacto-knife cuts and even piggy-backed components soldered on top of other components, debugged in an environment resembling a lunchroom more than a cleanroom, were the actual flight computers for the four Microsats launched in January 1990 as AO-16, DO-17, WO-18, and LO-19.

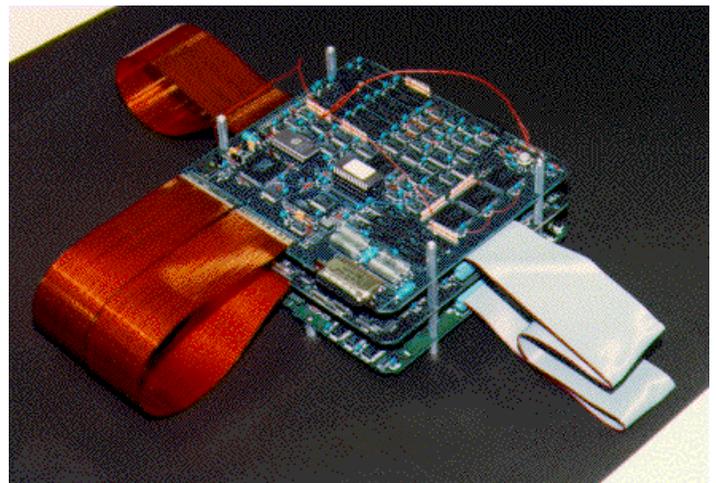
Miraculously, those computers worked. AO-16 in particular had no computer failures from launch in 1990 until about 2005, and it appears the same is true of LO-19. It's a bit harder to tell about DO-17 and WO-18 because of unrelated failures in the spacecraft. But now, finally, it appears that there has been a major failure in the memory array on board AO-16. The computer itself is still operational, but without reliable memory it can't do anything very useful.

So what happened with that crash schedule? The primary payload was delayed, which delayed the launch. Our

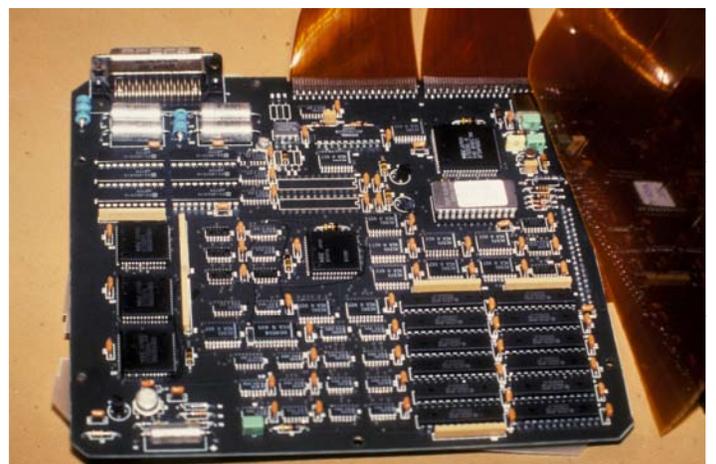
satellites were ready months ahead of time.



Tom KA6IQA, Paul KB5MU, and Franklin N6NKF study the Microsat computer schematic diagram in the lab at Qualcomm. Photo by NK6K.



Three-board stack in lab test configuration. Photo by NK6K.



The main CPU board. Photo by N4HY

AC6V continued from left side pg 4

for excellence, Rod thrived in Amateur Radio, earning numerous awards, including DXCC Honor Roll and even DXCC QRP in addition to 5-Band WAS, and as if that was not enough, WAS on 17 meters and he even had 49 states on 12 meters, needing only Utah. Here at the Palomar Amateur Radio Club, Rod was best known for elmering many of our members, providing years of assistance to all that asked on our 146.730 repeater, manning the GOTA station at field day, and initiating impromptu fire nets in times of emergency. However, the rest of the rest of the world knows Rod through his world-class amateur radio web page www.AC6V.com and his books FM-101X and DXing 101-X. Rod's passing leaves a big hole in the Palomar Amateur Radio Club and in the amateur radio community at large. Rod is survived by his lovely and caring wife Karla, his two sons Jeff and Steve. For many years Jeff was a professional programmer at Sun Microsystems and now operates as an independent consultant. Steve is Video/Media Engineer at Apple computer. Both of his sons following in their dad's technological footsteps. In closing, one of Rod's favorite sayings: "Hark! I Have Hurl'd My Words To The Far Reaches Of The Earth! What King Of Old Could Do Thus?" Rod has certainly hurled his words to the far ends of the earth and he now has a much higher platform from which to do it! ✨



AC6V memorial luncheon at Philly Frank's. The people shown (clockwise from the left) are Paul NN6X, Charlie NN3V, Tom WON1, Steve AD6VI, Conrad KG6JEL, Terry K3PXX, Howard KY6LA, and Dick N6AA. Photo by KB5MU.

K6QK continued from right side pg 4

Radio Club and the San Diego DX Club. We shared many common interests – DXing, Contesting and building stuff. While my projects were small electronic gizmos, Harv built towers, tower trailers and refurbished old cars.

We started our relationship by operating Field Day and the California QSO Party together. We operated Field Day from the top of Hot Springs Mountain and CQP from Elliot Mine in Imperial County. We both enjoyed the work involved in setting up a competitive station in the wild and then operating to run up a good score. Harv liked his outdoors a bit more civilized than I did. And he was always the cook – a damn fine cook at that. It was during an early Field Day that the idea of a tower on trailer was born and he took it from there. He designed and built that thing from scratch – it was self contained with operating areas, cooking areas, massive tarps for sun shade and antennas to cover almost every band. Operating CQP from Elliot Mine was a very tough 4WD trip (without the trailer) which did not fit Harv's idea of civilized. So we moved to Desert View Tower, where we could pull the trailer, and that continues to be our CQP location. Along with Harv, Jim, K6ZH and others, we have won the Multi-Single and Multi-Single County Expedition category of CQP 8 times in 15 years. And we still own the M/S CE record.

When it came to ham radio projects with a mechanical flavor, Harv was always the go-to guy. He has helped with many of the local San Diego antenna and tower raisings. Most of my antenna projects would not have gotten off the ground without his help and imagination. My current tower in Arizona only exists because of Harv's ingenuity, his skill and his effort.

Among the many things I learned from Harv is "Do it right". Don't skimp on material or quality. For several years
continued on pg 9

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.

(1.20) Help needed. Looking for someone who has experience mounting the Arrow Satellite antenna to a tripod or other support structure. Thanks, Jim Keller WB6YXY jkeller@cox.net

(1.1) For Sale 2m Hand held Kenwood TH-K2 FM Transceiver about a year old. Have all the books on the unit and it are programmed with all the local channels. Asking \$75 OBO. Please call Bayard K6GAO 858-755-5507

(1.1) Wanted Yaesu FT-857D transceiver, or similar, for new General licensee. David 760-942-5167 K200G@arrl.net

(11.29) Looking for a small 3 element tri-band HF beam such as the TH3-JRS. Jim Keller wb6yxy@arrl.net 760-717-6126

(10.15) For Sale 2 meter FM Transceiver. ICOM IC-2100H Mobile 207 memory Channels, HM-98S Lighted Mike, 55 Watts output. Green or Amber Display. Like NEW. All Local Channels 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. With S.A.M.E. AC power supply. \$25.00 OBO. Please call Bayard K6GAO at 858-755-5507. For Sale Like New UNIDEN BEARCAT SCANNER BC-350C all pre programmed for all service Freq. AC and DC power supply cables. \$75.00 OBO. Please Call Bayard K6GAO at 858-755-5507.

Fallbrook Amateur Radio Club

The Fallbrook Amateur Radio Club will be meeting March 1 at 3:00PM. The meeting will be celebrating "Anniversary of 10 Years on Red Mountain" Speaking about repeater history, Art Rideout-WA6IPD, Chris Durso-AA4CD, Bob Gonsett-W6VR, Ron Patten-KG6HSQ.

Meeting location, Roy Noon Hall, 231 E. Hawthorne St.

Visitors are welcome.

Talk in 146.175+ 107.2

Web site www.fallbrookarc.org *

Special Event on 147.130

The Fallbrook Amateur Radio Club has been asked to help with communications for "Avenue of the Oaks" bicycle ride on April 5th, 2008 in Fallbrook. See <http://www.avenueoftheoaks.com/> The 147.130 repeater will be used for a secondary communications net. The primary net will be on the FARC repeaters. This is a brand new event,, so much will be learned about supporting the 62 mile route. *

President's Letter continued from pg 2

In support of Field Day and to educate the amateur radio community, PARC is creating a Seminar on "Basic Portable Operation". We are looking for participants can share their experience and ideas for doing this on a shoe-string budget.

In addition to Field Day leadership, we are looking for candidates to apply to the PARC Technical Committee. It is past time to get new people involved. To aid this process, we are seeking qualified hams to be interviewed, selected, and trained by our current technical committee members. You will be hearing more on this in the next few months. I hope to see you on March 5th. Bring a friend.

Steve Early,
President, Palomar Amateur Radio Club. *

after leaving GD, Harv worked as a handyman. When he would give a potential customer a quote, they would invariably ask “Why is it so expensive?” His response was “Do you want it cheap or done right?” He often walked away from a job when the customer answered “Cheap”. He couldn’t stand it when he couldn’t do a job correctly. I have so many great memories of times shared with Harv, I could write for days. There was the time he convinced me to operate CQP from the desert near Ocotillo Wells. It was so hot, that we drank and drank and didn’t pee for 2 days. We operated the ARRL VHF contest from Hot Springs Mountain one year. Harv was operating from one side of the trailer and I was on the other. A large rattlesnake came out of the bushes to check on Harv’s operating style – Harv could really move fast for a short guy! One part of ham radio we had not shared was going to the Visalia DX convention. That was planned for this year. Since I moved to Arizona, we chatted every couple weeks, keeping up on our lives, new projects, plans, exchanging ideas. Harv was one of those unique individuals (at least in my life) where one of us would start with an idea, the other would build on it, the first person would build further and after a dozen iterations, a first class design is ready to go. Then Harv would build it while I watched. Thanks, Harv, for everything you gave me over the years. SK. ✨



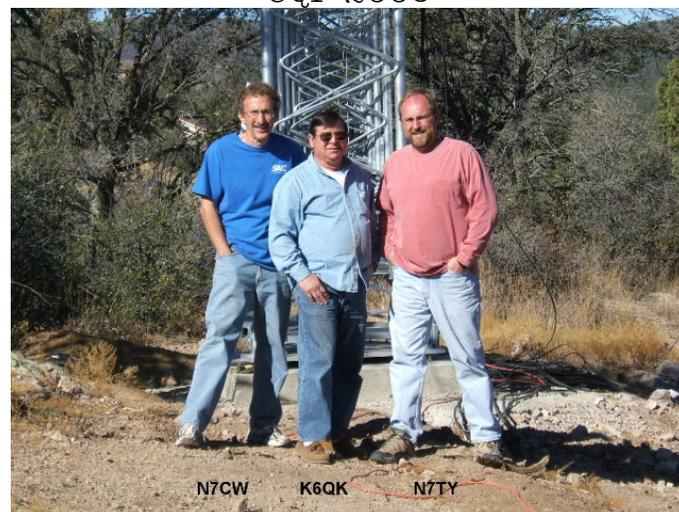
Harv at Elliot Mine, CQP 1991



Harv at a January VHF Contest from Mt. Soledad in San Diego



CQP 2006



Bud, Harv and Bruce at the N7CW Tower Installation, 2007

PARC and PARC Affiliated Repeaters

Frequency	Tx	Tone	Call Sign	Remarks
52.680	-	107.2	W6NWX	
146.730	-	107.2	W6NWX	Autopatch; see note 1,
147.075	+	107.2	W6NWX	Autopatch; see note 2
147.130	+	107.2	W6NWX	Autopatch; see note
447.000	-	107.2	W6NWX	Autopatch; see note 2
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@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 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
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Secretary - Loren Hunt	AD6ZJ	
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Director - Tom Martin	KG6RCW	
Scope Editor - Michelle Thompson	W5NYV	858-229-3399 w5nyv@amsat.org
Repeater Chair - Mike Pennington	K6MRP	mrpenni@pacbell.net
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.

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

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This month's General Meeting will be held on March 5th, 2008 (The first Wednesday of each month) at the Carlsbad Safety Center. This month the program is about dealing with the government. 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)