
W6VIO Calling

JPL

Jet Propulsion Laboratory Amateur Radio Club
4800 Oak Grove Drive, Pasadena, CA 91109-8099



Volume 24 Issue 1

February 1995

President: Merv MacMedan, N6NO, 4-7004
Vice President: Jay Holladay, W6EJJ, 4-7758
Secretary: George Morris, W6ABW, 4-0038
Treasurer: Jim Marr, AA6QI, 3-1528

Director at Large: Bob Dengler, NO6B, 4-9620
Emer. Comm. Mgr: Walt Mushagain, K6DNS, 4-3036
W6VIO Trustee: Jan Tarsala, WB6VRN, 4-4564
Editor: Bill Wood, WB6FXJ, 619-256-5529

Meeting Notice

The next regular JPL Amateur Radio Club membership meeting will be held on Wednesday, February 8, at noon in 238- 543. Note: This meeting room has been reserved for the second Wednesday of each month for the rest of the year. Club Board of Directors meetings are held on the fourth Wednesday of each month in 301-227. Everyone is welcome at both meetings; bring your lunch.

Jim Marr, AA6QI, club treasurer, will present a summary of the Club's budget, which sets the priorities for our 1995 activities. Jay Holladay, W6EJJ, will present an overview and status summary of the P3D satellite planned for launch in April of 1996.

Walt Diem will present proposed amendments to the club bylaws for discussion. Investigation has disclosed the need for more changes than presented and discussed last month. The purpose of the proposed changes is to bring the club bylaws into conformity with ERC bylaws and ERC Procedures for Subclubs. These include: (1) allowing retirees and contractors to serve on the Board of Directors and (2) providing clarification to conform with the ERC requirement that the number of non-JPL members of the club not exceed 20% of the total membership.

N6NOtes

By Merv MacMedan, N6NO

Greetings from your new fearless-leader-in-the-hot-seat! Those words evoke a little déjà vu for me, having held the club Presidency some 21 years ago. I am honored to be chosen a second time around. Back then there were only about 75 members in the club; now we have grown to over three times that number! Who says ham radio is not growing? With all the help such a large membership implies, I am sure we can have an active and enjoyable year without too much strain causing burnout of any one individual.

Together we will make this an exciting year for the club. Needless to say, the annual Field Day outing has become one of our most popular activities and we will certainly have a winning strategy for this one in July. We will be working to improve our lab emergency communications capabilities, and I would like to see our capabilities grow in new technologies such as Packet Radio and the Internet gateway.

I recently learned about the JPLARC server on the World Wide Web; the guys that developed it did a fantastic job. I would like to see the material available on the Server expanded since it has great potential as an instantly-updatable information source for members and the public too. In the not-too-distant-future, it might even become the way we distribute our newsletter!

Towards the end of the year our club will have a unique opportunity to mount a special event operation to celebrate Galileo's arrival at Jupiter. And I hope to see our repeater usage grow (I note the repeaters have been remarkably quiet recently -- does anybody know why?), as we plan new activities to make repeater operating more reliable, friendly and attractive to our members.

In the next few weeks I will be appointing committee leadership positions. If you have a special interest in one of these, please give me a call, the sooner the better. Some of you have already called me to volunteer for committees that are dear to your heart. Whatever your interest, I'm sure we have a committee for you!

In addition to the appointment of Directors as shown above, the following committee chairs have been appointed so far:

Emergency Communications	Walt Mushagian, K6DNS
ERC Liaison	Rick McKinney, KA6DAN
Field Day	Bob Polansky, N6ET
	Jay Holladay, W6EJJ
Historian/Librarian	Mike Frantz, KM6QZ
Membership	Rick McKinney, KA6DAN
Newsletter	Bill Wood, WB6FXJ

If you would like to lend a hand in one of these areas, please get in touch with the chair as soon as possible. And, if you are interested in chairing one of the other exciting and rewarding club activities this year, please get in touch with me!

Permission to copy is granted provided that credit is given to "W6VIO Calling."

Our vice-president, Jay Holladay, will be working hard to provide a set of interesting programs for our regular meetings throughout the year. Reminder, if YOU have something that could become a program for a meeting, such as something you recently built or have expert knowledge in some area you would like to share with us, let Jay know.

You have elected a very capable slate of officers to make your club progress this year. "Capable" means these guys are good managers. And, that means they listen and want your feedback. Let them know if things are not going well, (and also if they ARE going well!) Constructive interactive criticism will make this club one you will be proud to be a part of.

73 and Best wishes for 1995; Merv, N6NO.

December Dinner Meeting

By Walt Diem WA6PEA

Over 30 people, including JPL Amateur Radio Club members and their families, attended the December dinner meeting held at the Pasadena Soup Plantation on Tuesday, December 13, 1994. Thanks go to Vice-President Richard Schick who made all the arrangements. The Soup Plantation accommodated us comfortably inside in the back of the dining room since the cold weather precluded the planned use of the glassed-in patio. The food was both good and plentiful. Everyone had an enjoyable time. It was great getting to visit with members, spouses, and children.

Former W6VIO Calling editor, Eileen McKinney, KA6DGV, who did a fantastic job for 11 years, was there with husband John McKinney, N6AVW, and son Matthew. Manny Caldera, KC6ZSY, who recently left JPL, brought his entire family. Greg LaBorde, KD6MSM, also brought his family. Walt Mushagian, K6DNS, and wife Diana, KC6LPR, brought visitors -- long time friend Bob Dye, KD6YLC, and wife Shirley. Those with spouses included: Owen Robbins, KB6WYU, and Judy, KB6WYV; Jim Marr, AA6QI, and Michele, KC6FSP; George Morris, WA6ABW, and Connie, KA6JAM; Sam Weaver, WB6EMO, and Gladys; and Walt Diem, WA6PEA, and Nancy. Others in attendance included Richard Schick, KE6BKE, Chris Carson, KE6ABQ, Mark Schaefer, WA6CIA, Rick McKinney, KA6DAN, Jay Holladay, W6EJJ, Bob Polansky, N6ET, Jim Kesterson, KA6IBF, and Randy Hammock, KC6HUR.

The highlight of the evening was the presentation of a plaque to Randy Hammock, KC6HUR, in recognition of his outstanding contributions and service to the club. Randy served as President for two years in succession, actively participated in all work parties and activities, and aggressively maintained and upgraded the repeaters and packet station. As Greg LaBorde, KD6MSM, said: "Randy has been an outstanding example of selfless contribution to the club." "He epitomizes the spirit of club membership and contribution."

This was the last club meeting that Randy could attend because his employer, Telos, transferred him to Goddard Space Flight Center in late December after finishing his last assignment at JPL. We wish Randy luck and happiness on his new job and will sorely miss him and his participation in the club.

January Board Meetings

By George Morris, W6ABW

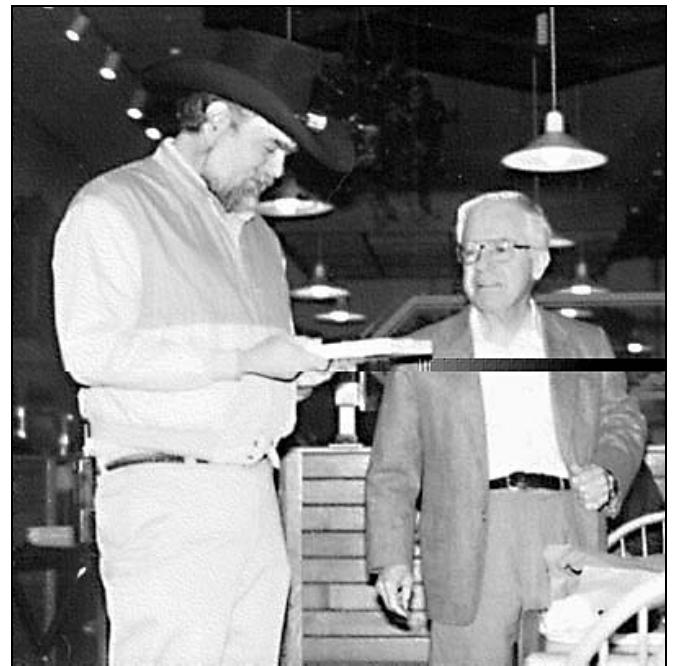
A special board meeting was held January 9, 1995, in room 301-271. A quorum was present. Walt Diem presented changes to the Club bylaws to bring them into conformity with the ERC bylaws.

Special Board Meeting, January 16, 1995, Room 301-227: A quorum was present. Walt Diem presented additional changes to the Club bylaws. Jim Marr presented a projected Club budget which is composed of three accounts: the General Club Account, the Autopatch Account, and the Emergency Preparedness Account.

Special Board Meeting, January 23, 1995, Room 301-227: A quorum was present. Jim Marr presented alternative projected Club budgets.

Regular Board Meeting, January 25, 1995, Room 301-227: A quorum was present. Jim Marr presented a balanced Club budget. The budget was accepted by a vote of the Board. Rick McKinney presented 35 off-Lab members to the Board for approval. The 35 off-Lab members were accepted by a vote of the Board. A vote on the changes to the Club bylaws was postponed until January 30, 1995.

Special Board Meeting, January 30, 1995, Room 301-227: Walt Diem presented new changes to the Club bylaws. Discussion by the Board followed. Walt will make changes to the bylaws, mail them to the Board, the Board will vote by E-mail to the Secretary. If approved by the Board, the bylaws will be presented to the members at the 8 February meeting. Bob Polansky presented a draft questionnaire to be mailed to Club members. Input was requested from all Board members. The questionnaire will be mailed with the March issue of W6VIO Calling.



Randy, KC6HUR, Admiring Plaque with Walt, WA6PEA

FCC News

FCC News Release, January 24, 1995

Rules Amended To Implement Vanity Calls

In recognition of the strong sense of identity among amateur operators that is grounded in the call signs of their stations, the Commission has decided to offer a vanity call sign system to the amateur service community. The Commission will also resume issuing new club and military recreation station licenses. The Commission said these actions are fundamental to its commitment to putting the needs of people first in providing the services that they want.

Each new amateur station licensed by the FCC is assigned a unique call sign. An automated process selects the call sign in accordance with the sequential call sign system. Until recently, the Commission was unable to accommodate the many thousands of requests for call signs of the licensee's choice. The Commission stated that one of its many steps in reinventing Government is to implement new licensing processing capabilities that make it practicable to grant such requests.

The Commission will implement the new system by using a series of four "starting gates." Gate One would allow a previous holder of a call sign to apply for that call sign or, where the holder is deceased, a close relative could apply. Gate Two would allow the 66,000 Amateur Extra Class operators, who have passed the most difficult license examinations, to apply. Gate Three would allow the 112,000 Advanced Class operators, who have passed the second most difficult license examinations, to apply; and Gate Four would open the system to any licensee, including a club station license trustee applying for the call sign of a deceased former holder. The Commission will announce the opening of each gate by a Public Notice. The first gate will open as soon as the new application form, FCC Form 610-V, is available and the Commission's licensing facility is prepared to begin processing the applications.

With respect to new club station licenses, the Commission stated that persons not already holding a club station license must first apply for and receive a license before filing an application with the fee collection contractor requesting that the license be modified to show a vanity call sign. However, the Commission will begin accepting applications for new club and military recreation station licenses on the date the Report and Order in this proceeding becomes effective.

Action by the Commission December 23, 1994, by Report and Order (FCC 94-343). Chairman Hundt, Commissioners, Quello, Barrett, Ness, and Chong.

Editor's Note: The new form 610-V will not be available for several months. Jay Holladay, W6EJJ, is researching the "vanity" callsign program with the ARRL and will provide full details in an upcoming issue of W6VIO Calling.

AMSAT News

AMSAT News Service Bulletin 008.01 from AMSAT HQ

Final Frequencies Selected For Phase 3-D

Following a series of discussions, a number of iterations and intensive study, the builders of the Phase 3-D communications equipment have made their final selections of the frequencies to be employed on the satellite scheduled to be launched in April 1996. These selections have since been approved by the P3D Project Leader Dr. Karl Meinzer (DJ4ZC).

These frequencies were carefully selected to minimize mutual interference with other amateur satellites and have been coordinated with IARU band plans by the P3D Frequency Coordinator, Freddy de Guchteneire (ON6UG) with assistance from Peter Guelzow (DB2OS) and Werner Haas (DJ5KQ).

Crystals have been ordered for all receivers and transmitters to implement these frequencies. In accordance with the Phase 3D design concept, all receivers and transmitters are connected to the IF matrix which allows interconnection of the various receivers and transmitters to create what have been known as transponders on former amateur satellites.

The selected Phase 3D frequencies are as follows:

Uplinks

BAND	DIGITAL (MHz)	ANALOG (MHz)	CENTER
15M	N/A	21.210 - 21.250	21.230
2M	145.800 - 145.840	145.840 - 145.990	145.915
70CM	435.300 - 435.550	435.550 - 435.800	435.675
23CM(1)	1269.000 - 1269.250	1269.250 - 1269.500	1269.375
23CM(2)	1268.075 - 1268.325	1268.325 - 1268.575	1268.450
13CM(1)	2400.100 - 2400.350	2400.350 - 2400.600	2400.475
13CM(2)	2446.200 - 2446.450	2446.450 - 2446.700	2446.575
6CM	5668.350 - 5668.550	5668.550 - 5668.800	5668.675

Downlinks

BAND	DIGITAL (MHz)	ANALOG (MHz)	CENTER
10M	29.330 MHz +/- 5 kHz	(To be used for digitized voice bulletins)	
2M	145.955 - 145.990	145.805 - 145.955	145.880
70CM	435.900 - 436.200	435.475 - 435.725	435.600
13CM	2400.650 - 2400.950	2400.225 - 2400.475	2400.350
3CM	10451.450 - 10451.750	10451.025 - 10451.275	10451.150
1.5CM	24048.450 - 24048.750	24048.025 - 24048.275	24048.150

All downlink pass bands are inverted from the uplink pass bands.

Beacons

BAND	Beacon-1	Beacon-2
2M	N/A	N/A
70CM	435.450	435.850
13CM	2400.200	2400.600
3CM	10451.000	10451.400
1.5CM	24048.000	24048.400

Note: The absence of a 2M beacon is due to strictly to characteristics of the IF matrix and the limited bandwidth available on that band. Studies are underway with the intent of providing a 2M beacon, but it is not clear, at this time, that this effort will be successful. The beacons on the other bands are for various purposes including providing spacecraft engineering data to the command stations. All beacons can be modulated with 400 bits per second BPSK and possibly other formats.

DX News

By Bob Polansky, N6ET

It's been a long time, and I am out of practice, but W6VIO Calling is starting again, and so am I. Propagation continues to be poor, as is to be expected at the bottom of the sunspot cycle. Forty and 80 meters, as the terminator goes by, have provided some DX, as has 20 meters. Seventeen meters provides DX also, but only during the most sunlit parts of the day. I have been operating primarily from the W6VIO shack with the "suffering Sommers" as the primary skyhook. We have to figure out what failed on that antenna! As usual, The DX Bulletin provides the inputs to today's DX column.

BELAU - KC6CW and KC6WW will be active from 24 February to 1 March from here. The Club needs this one for it's DXCC Award. Come down to the shack and work him for the Club.

CHRISTMAS ISLAND - VK9XY returns to this Indian Ocean outpost from 18 to 21 February.

COCOS-KEELING - VK9CR plans activity from 8 to 17 February, primarily on the low bands.

COMOROS ISLAND - Look for D6/DK7UY, now through 24 February, on CW, SSB, and RTTY. If you are real lucky, you might find some short periods of propagation to this antipodal part of the world as the terminators go by.

EGYPT - SU2MT shows up frequently, especially Saturday mornings on the low end of 40 meter CW and on 14025. He is also been reported on 3790 SSB, but you will need an antenna with gain to hear him. QSL's are a tad slow, but they do arrive.

KAZAKHSTAN - UN7TX should be workable with a reasonable dipole on 40 CW (try 7005) around 1200Z. If you cannot make at 4 AM local time, you will probably miss this one.

MACAO - XX9YD will be K8PYD in disguise now until 28 February.

ZAIRE - ON6TT will operate /9Q (or perhaps 9Q5TT) starting the second week in February for two months. Side trips to Burundi are possible.

As I stated earlier, propagation leaves much to be desired, but do not despair, there is some DX out there to be worked. It just requires a well-tuned set of ears and lots of patience!

Good DX, Bob, N6ET

Mobile Electrical Noise - Solved!

By Mike Gauthier, K6ICS

I was having a problem with alternator whine, computer noise, etc. in our 1990 Plymouth Voyager minivan. The noise had become so bad it was overriding the PL on the output of my 222 MHz rig and blocking access to all of the repeaters I use. When operating simplex, the computer noises and alternator whine would nearly wipe out my voice. Even the directional signals could be heard modulating the

radio. My ICOM IC-37A was not connected directly to the battery, but through the ignition switch. That way I could not go off and forget to turn off the radio. But, I needed something to get rid of the NOISE!

Looking through the ham magazines, I found a small ad in Worldradio. It claimed to be the "best filter available" for mobile electrical noise. I sent off my check and about a month later I received a small black box. It came complete with easy-to-follow instructions.

The power line connectors were installed and an additional set of connectors were included, ready to splice on to your radio power cable. My "universal" power plug set up on my cars was the same as on the filter, including polarity. So, all I had to do is to plug the filter in series with the IC-37A and turn on the power. It worked perfectly. I hit transmit and listened on the output. There was no trace of noise: No alternator whine, No computer buzz, No directional signals clicking. I switched to repeater mode and was able to bring up all of the repeaters. I now had a "clean" signal.

I personally recommend this filter to anyone having power lead coupled electrical noises on their mobile signal. Contact Bradley T. Gilliam, N8NNP, of XIONIX, 1544 Craigwood Road, Toledo, Ohio 43612-2255, Tel: 419-476-7334 to order the XIOTRAP Mobile Line Filter. State the maximum current rating of the radio as well as the type of radio when ordering. The XIOTRAP model 2108 Mobile Line Filter (12 amp max.) I received is \$19.95 plus \$3.00 for handling & shipping. I found this a great value and I am now back on 222 MHz from the Voyager.

W6VIO - Twenty Five Years Ago

By Rick McKinney, KA6DAN

While cleaning out my files during my recent office move, I came across some old club records. The stuff from 1970 was dusty and a little faded, but still legible.

The membership list included several familiar names. These included current club members Stan Brokl, Glenn Cunningham, Merv MacMedan, Ron Ploszaj, Jim Lumsden, Bob Polansky, Jay Holladay, Walt Mushagian, and Booth Hartley; as well as recently retired members Norm Chalfin and Walt Diem. Two now Silent Keys, Glen Berry and Gordon Crawford, were listed on the roster.

Club dues in 1970 were the princely sum of \$1.00 (that's a whole buck). Big expenses for the year were \$204 for club QSL cards and \$80 for a Novice Transceiver. Some of those QSL cards are still floating around in the shack. Does anyone know what happened to the Heathkit HW-8 Novice Transceiver? I would hate to think the club's \$80 investment was lost!

10-GHz Record Claimed

Special Bulletin from ARRL Headquarters

Roger Bowman, VK5NY, and Walter Howse, VK6KZ, have claimed a new world distance record on the amateur 10-GHz band. On December 30, 1994, the two worked over a path of 1911 kilometers. Both VK5NY and VK6KZ were portable, the former near his home in Adelaide and the latter portable near Perth.

VK5NY used 180 milliwatts to a 400-mm dish while VK6KZ ran 100 mW to a similar antenna. The 2-way contact was on SSB. The previous 10 GHz record of 1018 km was held by WA6CGR and XE/N6XQ. N6CA and KH6HME continue their efforts to span the 3973-km path between California and Hawaii on 10 GHz.

Howse said there was a typical high pressure cell in the Great Australian Bight, a large inlet body of water, and that good signals were present over the 1900-km, nearly all-water path on 144, 432, and 1296 MHz. On the second night, VK5NY drove 250 km to another location in an attempt to once again increase the record distance, but no contact was made.

VK6KZ reports hearing, and being heard by, David Minchin, VK5KK, a few km farther than VK5NY, but no 10-GHz 2-way contact resulted. VK6KZ lives about 1000 km (some 600 miles) from his portable location near Perth, and must drive there to make these attempts at UHF records. "I have to choose the right time," he said.

KC6HUR's Wanderings

I made it to the East Coast after only three days of driving. I left LA at 4:30 PM on New Years Day and arrived at my parents house at 4:00 AM on the 4th. Later, on the 4th, I drove the final 185 miles to my new address in MD.

Tom Bodett lied; they did not leave the light on. The circuit breaker was tripped and I had no lights at all the first night when I arrived. They did get it fixed.

Ran into snow flurries in Amarillo TX; heavy snow through Arkansas; ice in Nashville. Mileage: Day 1: 520, LA to AZ; day 2: 1037, AZ to AR; day 3: 998, AR to VA; day 4: 185, VA to MD. TOTAL: 2740

My new address is: 8951 Tamar Dr. #101, Columbia, MD 21045, Phone: (410)964-5503. I'll keep my email address at W6VIO for the time being. I can log in via WA3NAN over the Internet.

73 de KC6HUR (Randy Hammock)

Membership Dues

It's that time of year again. If you have not already sent in your dues to Rick McKinney, M/S 168-327, now is the time to take advantage of a 10 percent discount. If you hurry up and send in your annual dues before February 15, you can get the benefits of club membership for only \$9, a bargain in anyone's book. Your dues include a one-year subscription to W6VIO Calling, which will again be published

each month. Your financial support of the club allows it to continue to provide the benefits of Amateur Radio at JPL.

How To Use the DX QSL Bureau

By Mike Gauthier, K6ICS

The QSL bureau always seems to be a mysterious place. Stations are sending their QSL cards "via the bureau." But, how do I get my QSL's? It is all very easy. The Sixth District QSL bureau prefers that you send \$2.00 to \$4.00 and 6-10 address labels with your return address (no envelopes please!) to:

Sixth District DX QSL Bureau
Box 1460
Sun Valley, CA 91352

The bureau will supply the correct size envelope and apply the correct postage. It takes about two months to get setup in the system. After that, QSL cards received by the Bureau will be mailed directly to you each month. On each envelope they will state the number of envelopes you have on file and the amount of cash in your account to cover the extra postage. When you get down to one or two envelopes and less than a dollar, just send additional mailing labels and a dollar or two. That's it. Now, sit back and watch the mail. It is always a thrill to see a bureau envelope, whether it be thick or thin. QSL cards are always exciting to the collector.

Classified Section

For Sale

Kenwood TS-430 HF rig with Kenwood PS-130 Power. Supply, hand microphone, HEIL headset/microphone, crystal filter, DC cable and manual. All in excellent condition. Asking \$750.00 OBO. Call Larry Smith, N6PBS, at 4-3628 or 818-362-7135.

Battery Packs for HT's, camcorders, cordless and cellular phones, etc. at unusually low prices. Larsen mobile antennas also at discount. Call Walt Diem at (818) 248-7525.

Wanted

Information on how to modify a Kenwood TS-700A to work with repeaters in the 145 MHz range. Call Richard Spear, KD6LWD at 4-3513 or 818-352-8386.

Your want ad or article for inclusion in a future issue of W6VIO Calling. Submit either to Bill Wood, DSCC-33; or via Internet (bill.wood@cmail.jpl.nasa.gov); or ccMail direct (Wood, Bill).

Newsletter Deadline:

The last Monday of the month. Your articles, ads, photos, diagrams, letters to the editor, or technical material should be submitted to the Editor at the return address shown on the last page of this newsletter.

WB6IEA Antenna Installation

By Walt Diem WA6PEA

The new Scala 220 MHz antenna was installed on top of the phone pole at the Cerro Negro site on 1 July 1994. The new antenna was needed to replace the Super Station Master that was destroyed during a heavy wind storm the previous winter. Jan Tarsala, WB6VRN, and Sam Weaver, WB6EMO, did the work on the pole, while Randy Hammock, KC6HUR, Chris Carson, KE6ABQ, Jim Kesterson, KA6IBF, and Walt Diem, WA6PEA, provided support from the catwalk of the fire tower. Before climbing the pole, Jan tightened all the climbing rungs that had become loose due to the aging condition of the pole. Fortunately, all the rungs tightened well. The photograph shows Jan above and Sam below on the pole, with the Scala antenna nearly in its final position. While Jan and Sam were tightening clamps and fastening the new hardline to the pole, the tower crew readjusted audio levels in the repeater.

When the pole work was completed, Chris, Jim, Randy, Sam, and Walt removed razor wire that was fastened to the metal tower with bailing wire. The rusty joints of the bailing wire were acting as diodes in the RF field of the transmitter causing broadband noise which desenses the receiver. Near the end of the removal process, which was done with welding gloves, the razor wire caught Jim Kesterson's arm and opened a gash which bled profusely. After applying a tourniquet, Randy and Chris rushed Jim to Verdugo Hills Hospital while Sam and Walt picked up at the site. When the mended Jim returned, we loaded up and called it a day. Jim's arm is now healed, but that took weeks. The moral: don't tangle with razor wire.



JPL ARC Repeaters

Pasadena:

W6VIO	147.150 MHz	(+)	PL 131.8 Open
W6VIO	224.080 MHz	(-)	PL 156.7 Shuttle Audio
WB6IEA	224.720	(-)	Closed Autopatch
W6VIO-1	145.090 MHz		Packet Node/BBS
W6VIO-1	223.540 MHz		Packet Node/BBS

Table Mountain:

WB6TZS	145.280 MHz	(-)	PL 131.8 Open
WB6TZS	223.96 MHz	(-)	PL 156.7 Open
WB6TZS	447.325 MHz	(-)	PL 94.8 Open

1994 TREASURER'S REPORT

General Club Account Statement

SUMMARY:

Balance as of 1/1/94	\$100.00
Income	\$3,743.52
Expenditures	\$3,669.79
Balance as of 12/31/94	\$173.73

INCOME:

	<u>This Month</u>	<u>Year-to-Date</u>	<u>1994 Annual Budget</u>	<u>(Over) Under Budget</u>
Dues/Member-contributions				
Dues		\$1,736.00		
Contributions/Donations		\$1,007.52		
Subtotal:	\$0.00	\$2,743.52	\$2,000.00	(\$743.52)
ARRL Memberships				\$0.00
ERC Grant		\$1,000.00	\$500.00	(\$500.00)
Other			\$100.00	\$100.00
Totals:	\$0.00	\$3,743.52	\$2,600.00	(\$1,143.52)

EXPENDITURES:

	<u>This Month</u>	<u>Year-to-Date</u>	<u>1994 Annual Budget</u>	<u>(Over) Under Budget</u>
Activity Supplies:				
Field Day:				
Outhouse Rent		\$91.83		
Field Day Food		\$400.00		
Tent Rental		\$138.75		
12/93 Dinner Expenses		\$45.00		
Subscriptions				
1994 Callbook		\$24.95		
The DX Bulletin		\$32.00		
Subtotal: Activity Supplies:	\$0.00	\$732.53	\$800.00	\$67.47
Other:				
Postage		\$131.21		
AMSAT Membership		\$50.00		
Subtotal: Other	\$0.00	\$181.21	\$144.00	(\$37.21)
Trophies/Awards			\$50.00	\$50.00

Capital Equipment:

RLC-3 Controller		\$1,645.00		
Packet 2m & 220 Transceivers		\$625.96		
Repeater Antenna Parts		\$36.75		
Link Repeater Standby Battery		\$43.09		
WB6IEA Delta-freq. Crystals		\$104.35		
WB6IEA Standby Batteries		\$275.00		
Repeater Parts		\$25.90		
Subtotal: Capital Equipment:	\$0.00	\$2,756.05	\$1,450.00	(\$1,306.05)
Totals:	\$0.00	\$3,669.79	\$2,444.00	(\$1,225.79)

Autopatch Account Statement

SUMMARY:

Balance as of 1/1/94	\$361.00
Income	\$176.00
Expenditures	\$116.78
Balance as of 12/31/94	\$420.22

INCOME:

	<u>This Month</u>	<u>Year-to-Date</u>	<u>1994 Annual Budget</u>	<u>(Over) Under Budget</u>
New Accounts at \$16 each:		\$176.00		(\$176.00)
Annual Dues				\$0.00
ERC Grant				\$0.00
Donations				\$0.00
Totals:	\$0.00	\$176.00	\$0.00	(\$176.00)

EXPENDITURES:

	<u>This Month</u>	<u>Year-to-Date</u>	<u>1994 Annual Budget</u>	<u>(Over) Under Budget</u>
Postage				\$0.00
Autopatch Phone Bill		\$116.78	\$156.00	\$39.22
Equipment Purchases:				\$0.00
Totals:	\$0.00	\$116.78	\$156.00	\$39.22

JPL ARC COMBINED ACCOUNT SUMMARY (General and Autopatch)

	<u>This Month</u>	<u>Year-to-Date</u>	<u>Annual Budget</u>	<u>(Over) Under Budget</u>
Balance as of 1/1/94		\$461.00		
Income		\$3,919.52	\$2,600.00	(\$1,319.52)
Expenditures		\$3,786.57	\$2,600.00	(\$1,186.57)
Balance as of 12/31/94		\$593.95		

Jim Marr, AA6QI, 1995 Treasurer

January 1995 JPL Amateur Radio Club Roster

NAME	CALL	CLASS	NAME	CALL	CLASS
Adams, Jon T.	NW6H	EXT	Hall, Justin R.	WB6PTX	ADV
Anglin, Richard L.	N6KUB	TECH	Hall, Rahla L.	KE6AEB	NTECH
Archer, Eric	WB6GYD	EXTRA	Hammock, Randy	KC6HUR	TECH
Atkisson, James B.	WB6GCI	TECH	Hansen, George R.	NJ6I	EXT
Aumann, Hartmut H.	KE6FE	ADV	Harcke, Leif J.	N3EEN	EXTRA
Balzer, Scott	KC6NRP	TECH	Hartley, Barbara	N6TQH	TECH
Barnes-Roberts, Donna	KE6PNC	TECH	Hartley, R. Booth	N6BH	EXT
Barnes-Roberts, Phil	KE6PMZ	GEN	Harvey, Daniel G. "Skip"	WB6SQE	EXTRA
Bathker, Dan A.	K6BLG	GEN	Hawkes, Jerome	W6WXL	EXTRA
Beaudry, Bruce	N6IRZ	TECH	Herrman, David T. , Jr.		
Bednarczyk, Steve M	NJ6J	EXT	Hodder, James	KG6OH	ADV
Billitti, Dorothy	KB6VOG	NOV	Holladay, Jay	W6EJJ	EXTRA
Billitti, Joe	KA6SMO	TECH	Humphrey, Vince	W6RNO	ADV
Blakely, Robert B. Jr.	N6MTI	TECH	Ivlev, Robert V.	KB6ANJ	TECH
Bonazza, Walt J.	W6NYW	ADV	Jackson, Shannon	KO6ED	ADV
Bowen, Jim	KE6HSL	Tech	Jenkins, George "Bud"	KA6CBI	GEN
Brodkin, Robert "Bob"	WA6TBH	EXTRA	Jenkins, J.Steven "Steve"	N6UNI	ADV
Brokl, Stan	N2YQ	EXTRA	Jennings, Lloyd E.	KE6DKR	TECH
Bunker Robert L.	W6MWP	TECH	Johansen, Carl A.	W6DLK	ADV
Byrom, Curtis	KD6IFU	TECH	Johnson, Kirk	KA6RKX	NOV
Caldera, Manuel	KC6ZSY	TECH	Johnson, Sid	WB6VWH	TECH
Carnakis, John M.	KE6DKY	TECH	Johnston, Edward J. "Jim"	WB6DNO	ADV
Carricco, Bruce	KE6MHI	TECH	Johnston, John W.	N6ZZJ	TECH
Carson, Christopher	KE6ABQ	NTECH	Johnstone, Randy	WB6QWR	ADV
Cassingham, Randy	KA6FDS	TECH	Kazz, Greg J.	KC6OMM	TECH
Chalfin, Norman	K6PGX	TECH	Kazz, Sheri	KE6IAB	NTECH
Chapman, Allan	W6MEO	ADV	Keller, Wendell L.	KL7OE	ADV
Chue, Eddy	KE6END	TECH	Kesterson, Jim	KA6IBF	TECH
Clark, Doug	WA6IFY	ADV	Killian, Rudolph "Rudy"		
Clark, Gilbert	N6FHC	GEN	Kinney, Laurence R.	WA6HOB	ADV
Clifton, Buddy	KM6OZ	EXTRA	Kuchler, Albert M.	KI6IE	ADV
Crane, Irv	W6WMK	ADV	Kushner, Leonard	KA6HVV	NOV
Crane, James E.	KC6DYL	NOV	La Borde, Gregory R.	KD6MSM	TECH
Culhane, T. H.	KC6MBN	TECH	Lang, Minh	KD6ARD	TECH
Cunningham, Glenn E.	WA6TPT	TECH	Lawson, Betty M.	KA6JEX	TECH
Deen, Bob	N5DPU	GEN	Lawson, Donald B.	WA6SQF	ADV
Dengler, Bob	NO6B	EXTRA	Layne, Robert W.(Padgett)	W6LTC	ADV
Desilveira, Carl	KG6LG	ADV	Lindsey, Richard M.	KD6ARX	TECH
Desilveira, Ruth	KC6RYZ	NOV	Loer, Peter	KD6RLU	TECH
Devault, Alan	N6WDX	TECH	Lord, Don	N6IXB	TECH
Dewit, Greg	WA6JAD	GEN	Luers, Edward B.(Ed)	KE6SU	ADV
Diem, Walt	WA6PEA	ADV	Lyman, Peter T.	KK6QP	ADV
Duncan, Courtney	N5BF	EXTRA	Lynch, George D.	WA6WDX	GEN
Duncan, Viann	WD5EHM	NOV	MacMedan, Daniel	N6HJZ	TECH
Edelman, Harris Boldt	KB6OWB	TECH	MacMedan, Merv	N6N0	EXT
Erickson, Danette	N6IRC	GEN	Malm, Nancy M.	KB6IGN	GEN
Erickson, Jim	N6PGC	TECH	Malm, Richard	KF6FK	ADV
Erickson, Kerry	N6DSG	TECH	Margitan, Jim	KE6IGX	TECH
Espejo, Pio	AB6RD	EXTRA	Marr, James C. "Jim"	AA6QI	EXTRA
Fesler, William C.	KA6TCL	EXTRA	Marr, Michele	KC6FSP	CTECH
Fiore, Mark	WA2YKF	ADV	Mason, Peter V	N6BBP	GEN
Flemming, Gordon	WA6VIY	GEN	Mathison, Richard P.	KG6Y	EXT
Francis, Robert A.	KD6AMI	TECH	McClosky, Peter	N6TGZ	TECH
Frantz, Michael	KM6QZ	ADV	McKinney, Eileen	KA6DGV	TECH
Gauthier, Margaret A.	WA6OUD	TECH	McKinney, John C.	N6AVW	TECH
Gauthier, Mike	K6ICS	EXTRA	McKinney, Leona	KA6RHH	NOV
Gautier, Thomas N."Nick"	AA7R	EXTRA	McKinney, Michael	N6TJL	TECH
Goldstein, Paula A.			McKinney, Richard P.	KA6DAN	TECH
Goodwin, Kathleen H.	KF6GW	ADV	Miles, Ralph F.		
Graham, Nellie A.	KC6LQN	NOV	Mintz, Frederick	KC6YLO	TECH
Greer, Tom	KC6TML	TECH	Morgan, Scott	KD6NMC	TECH

January 1995 JPL Amateur Radio Club Roster

NAME	CALL	CLASS
Morris, Constance L.	KA6JAM	TECH
Morris, George A	W6ABW	EXT
Mosher, Joel	KB6RXE	EXTRA
Mushagian, Diana	KC6LPR	CTECH
Mushagian, Walter H.	K6DNS	ADV
Nolte, Bruce	N6TFS	ADV
Nolte, Scott	N6CUV	TECH
O'hara, Maryann	WB6YSS	TECH
O'hara, Tom	W6ORG	ADV
Olson, Floyd "Pete"	N6IWT	TECH
Ortiz, Perfecto "Pete"	KA5YLL	TECH
Parkyn, James F.	WA6QMH	TECH
Pattison, Jack	W6POP	GEN
Paul, Floyd A.	W6THU	ADV
Person, Jerry	KK6TS	ADV
Pfeiffer, Martin	KC6ZZR	TECH
Pfeiffer, Theodore "Ted"	K6OEF	EXTRA
Pfeiffer, Valerie	KC6LWL	NOV
Piotrowski, John	KC6TVK	TECH
Piotrowski, Michelle	KD6NEH	TECH
Piroumian, Maurice A	WA6OPB	ADV
Ploszaj, Ronald A.	WA6TPW	ADV
Polansky, Robert G	N6ET	EXT
Quinn, Rex B	N6SGK	TECH
Rauch, Lawrence	W8FDG	ADV
Reder, Leonard	KB6DVG	TECH
Repar, John	WA6LWD	ADV
Reymann, Joseph "Skip"	W6PAJ	EXT
Rhoades, Charles	WB6KZE	ADV
Ricardo, A. Len	VK1ALR	EXTRA
Ring, Warren	AB6QE	EXTRA
Ritchie, Donald W.	K6PGT	EXTRA
Ritchie, Jan	N6USE	TECH
Rivera, Jessie	N6WJX	TECH
Robbins, Judith	KB6WYV	EXTRA
Robbins, Owen	KB6WYU	TECH
Roberts, Mel N.	W6OC	EXTRA
Robinson, Gwen	WB6SPA	TECH
Robinson, Herb	WB6RFT	GEN
Ruple, Larry	AA6TV	EXTRA
Ruple, Patricia "Patti"	KB6VPO	TECH
Sander, Stan	N6MP	EXT
Santana, Mike	WB6TEB	ADV
Sarrel, Marc	N7OLI	TECH
Sarture, Charles M.	KG6NF	ADV
Schaefer, Mark	WB6CIA	EXTRA
Schick, Richard	KE6BKE	NTECH
Schmitt, Deril M.	KA6YIX	TECH
Schneider, Horst W	WB6INZ	GEN
Seidel, David M.	KC6NRL	NOV
Serviss, Orin	KC6YQV	TECH
Shebel, Dennis	WB6IZR	TECH
Simmons, Clinton	WB6DPE	TECH
Smith, Jami	KK6CU	ADV
Smith, Larry D.	N6PBS	TECH
Smith, Robert	N6JKQ	EXTRA
Spear, Richard	KD6LWD	TECH
Stapleton, Brian	KW6J	EXT
Stapleton, Mary E. "Mimi"	WA6CWR	GEN
Stevens, Gary	WD6FLY	ADV
Stevenson, Alan K.		

NAME	CALL	CLASS
Stewart, James M. "Mike"	N6PLM	TECH
Stimpson, Abigail	KC6LWO	NOV
Stockett, Michael H.	WA7DYX	ADV
Strickland, Riley L.	N6BTL	ADV
Sugimura, Russell S.		
Sutton, Jr. Jim C.	ND6X	EXT
Szeto, James T. "Jim"	KC6WIK	TECH
Tallon, John	N6OMB	TECH
Tarsala, Jan A.	WB6VRN	EXTRA
Ulrich, Richard L. "Dick"	K6KCY	TECH
Vescelus, Fred	WB6LNO	ADV
Vosicky, Gene	KC6FPO	NOV
Wagner, David	N6GGJ	TECH
Walsh, Gerry	KB6OOC	GEN
Weeks, Kent C.	WA6JKM	TECH
Weaver, Sam	WB6EMO	GEN
Weber, William J.	N6CI	EXT
Weldon, Vieve	KD6YLI	TECH+
Westphal, Bill	WB6YPF	GEN
Wetzel, Richard	WA6JBZ	GEN
White, Leslie	KN6JU	ADV
White, William R.	N6RBW	GEN
Wiggins, Cecil P.	KE6GB	ADV
Wirth, Vince	WA6BZB	GEN
Woo, Harry W.	KN6MG	ADV
Wood, Bill	WB6FXJ	ADV
Wright, William C.	KC6UZN	TECH
Yanow, Gil	K6TOS	ADV
Yanow, Marlene	KD6NQJ	NOV
Yee, Steve	KC6LPW	NOV
Young, James W.	WB6FNI	EXTRA
Young, Karen A.	N6PJL	ADV
Younger, Herb	W6OJA	ADV
Zenone, Ron	W6TUZ	ADV
Zygielbaum, Art	WA6SAL	EXTRA
Zygielbaum, Christine	N6WEI	TECH

This listing of current JPL Amateur Radio Club members, as-of January, 1995, was provided by Rick McKinney, KA6DAN, club membership chairman. Next month we will publish a call sign indexed roster. Please send corrections, including any change of Lab or home address, to Rick at 168-327. Past members who wish to be reinstated should send Rick a check for \$10 for 1995 membership, made out to the JPL ARC.