
W6VIO Calling

JPL

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



Volume 24 Issue 2

March 1995

President: Merv MacMedan, N6NO, 4-7004
Vice President: Jay Holladay, W6EJJ, 4-7758
Secretary: George Morris, W6ABW, 4-0035
7525
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
WB6IEA Trustee: Walt Diem, WA6PEA, 818-248-

W6VIO Calling Editor; WB6TZS Trustee: Bill Wood,
WB6FXJ, 619-256-5529

Meeting Notice

The next regular JPL Amateur Radio Club membership meeting will be held on Wednesday, March 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.

Join us on March 8 to hear about two opportunities for JPL, Amateur Radio cooperation, and outreach activities:

MGS Beacon Relay Checkout

The Mars Global Surveyor spacecraft will carry balloon relay equipment that receives on 401.5 MHz and transmits on 437.1 MHz at Mars. Dr. John Callas, of Division 32, will present a proposal that amateur radio operators assist with checkout of this equipment at launch plus 30 days.

DSS-12 Radio Astronomy and Moonbounce Opportunity

The Apple Valley Science and Technology Center is negotiating an agreement with JPL to use DSS-12 for student radio astronomy after it is decommissioned next year. Radio amateurs have been asked to assist, and the lure of antenna time for Moonbounce should provide plenty of volunteer support. Mike Stewart, N6PLM, will describe early planning for this activity.

N6NOtes

By Merv MacMedan, N6NO

Thanks to all the members who voted, we now have a set of revised bylaws that permit retirees and contractors to hold club directorships, and we are now in conformance with ERC's rules. Our two provisional

appointments, Walt Diem, WA6PEA, and Bill Wood, WB6FXJ, are now confirmed directors and trustees for the WB6IEA and WB6TZS repeaters, respectively.

A new and exciting long-term project for the club will involve DSS-12 at Goldstone. NASA has decided to decommission this 34-meter antenna within a year, and is negotiating to allow the Apple Valley Science and Technology Center to use it for radio astronomy and ham radio. Our club will have a unique opportunity to help develop the ham radio capabilities that can be used for microwave moonbounce experiments and perhaps gain some notoriety in VHF/UHF contests. It will be a chance to work with the local community and a multinational ham population to bring good publicity and good will to the Lab and to NASA. I have appointed Mike Stewart, N6PLM, to head this committee. Mike is particularly well qualified, since this project is also one of his DSN work assignments.

Wasn't the February W6VIO CALLING impressive? Bill did a super job editing and producing it from his remote location in Barstow. Quite a trick. If you haven't paid your '95 dues to Rick McKinney, get them in fast otherwise you will no longer get these informative newsletters! And, while you are doing that, consider heading up an activity. If the thought has passed through your mind, but you need a little push, give me a call and see if I can convince you!

February Club Meetings

By George Morris, W6ABW

A special board meeting was held on February 3, 1995, in room 301-169. A quorum was present. Walt Diem presented additional changes to the Bylaws. The Board voted unanimously to approve the Bylaws as presented. Rick McKinney presented changes to the "Policy Regarding Off-Lab Membership." The Board voted unanimously to accept the changes as presented. Rick McKinney distributed the "new Member Handbook - 1995 Edition" for comments back to him.

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

On February 8, 1995, the regular membership meeting was held in room 238-543. The call to order was made by President Merv MacMedan. Jim Marr presented the Budget, which was accepted by a unanimous vote of the members. Walt Diem presented the proposed new Bylaws. A vote will be conducted by mail ballot. Jay Holladay made an AMSAT Phase 3D presentation.

The regular board meeting was held on February 22, 1995, in room 301-227. A quorum was present. Secretary George Morris chaired the meeting in the absence of Merv MacMedan and Jay Holladay. George reported that the membership had approved the Bylaws by a vote of 52-3. There was concern about gender specific language used in the Bylaws. The Board directed Walt Diem to remove the gender specific language before submission to the ERC Council for approval.

The Board unanimously accepted the appointments of Walt Diem and Bill Wood as repeater trustees. An FCC form 610B will be submitted to show Bill Wood as the WB6TZS repeater trustee.

It was announced that Merv MacMedan has appointed Mike Stewart, N6PLM, as chair of a new ad-hoc committee temporarily called the "DSS-12 Recycling Committee." This committee will look into amateur radio uses for a 34-meter tracking antenna that will be retired from service next year.

Jim Marr asked committee chairs to call him before making purchases authorized in the budget just to be sure there is enough money in the account.

The Board voted approval to sell the TS-820 and FT-101 transceiver systems consistent with a process approved by the ERC. The Board voted to approve an expenditure of up to \$100 to replace the 220 MHz packet duplexer.

The Board voted to approve a one-time donation of \$25 to Newsline. The Board voted to approve an expenditure of up to \$100 for one GASFet preamp for the WB6IEA repeater or remote receiver.

DX News

By Bob Polansky, N6ET

I just came back from the W6VIO shack [today, Saturday, February 25]. It was about noon and DX was plentiful on all bands between 20 and 12 meters. In addition, I operated from W6VIO in the ARRL CW DX Contest to the tune of over 100 QSO's. Even though the antenna system leaves much to be desired in the way of performance, I had a great time. The DX Bulletin also shows lots of good DX available. I have listed a few of them next. For a more comprehensive list, visit the shack and read the entire Bulletin.

BOTSWANA - A22MN makes many DX'ers happy with his operations on 160, 80 and 40 meter CW operations on the low ends of the CW bands. He operates between 0300 and 0430Z. He is loud and popular!

CAMBODIA - XU95HA is regularly reported near 7009 kHz starting at 1345Z. The band should close in that direction by 1530Z.

CHAGOS - Need this? Look for VQ9TP around 7005 kHz from 1230 to 1330Z.

LESOTHO - 7P8SR frequents the low ends of the 40 and 80 meter CW bands from 0300 through 0430Z. He is also loud and popular!

MADAGASCAR - 5R/DL5UF, DK1CE, and DF5WA should be active through 10 March on CW,

SSB, and RTTY from 160 through 10 meters. 40 through 15 meters should be your best chances for QSO's.

RWANDA - 9X5EE has been reported on 21025, 14025, and 18071 kHz often from 1630 to 2300Z. His "most-often-on" window is from 2030 to 2200Z. I have yet to hear him even though Rwanda is high on my list of wanted CW countries.

SYRIA - YK1AO shows up many mornings on 40 CW around 1430 to 1530Z. I've heard him from 7004 through 7009 kHz. He is not very strong and it takes a pretty good signal to get through. (I still need him!)

ZAIRE - 9Q5TT will be active through 6 April. He is on often around 14192 kHz at about 2000Z. Lots of spots on other band, 80 through 10 meters also.

Have at it! Work lots of DX. It's there! 73, Bob, N6ET

W6VIO Calling--The First Issue

By Mike Frantz, KM6QZ

The first issue of W6VIO was published in June 1971. Stan Hench, WB6JMP, was the first editor. The "Collector's Issue," as it was called, was widely distributed on Lab. Anyone who expressed an interest was sent a copy. This practice only applied to the first issue. All subsequent issues would be sent to members only, and to members "who are currently active and are up-to-date in their payment of Club dues." Membership at that time was \$1.

One of the articles in the first issue discusses upgrading the club station. A high-voltage line test was in the planning stages and the results of that test would lead to the location of the trailer site at Bailey Bridge. One concern expressed at the time was the 900 foot feed line!

The issue reported on members who had received awards. The newsletter reported that Jay Holiday, W6EJJ, had received the Five Band DX Century Club Plaque No. 70. "This confirms that Jay has worked 100 countries on each of the 5 bands!! Whew!!"

The club at that time was conducting General Class code and theory classes, which ran for 18 weeks. The JPL Novice Net met every Monday evening at 2030 local time on 3703 kHz. The author reported that many times rare DX stations would appear.

The first issue included a "classified section" that makes interesting reading. One ad was for a HOMEBREW 90W TRANSMITTER for \$20. Another was for a 2-METER FM (a modified 1953 Motorola) for \$100. The author of this ad said the rig needed about 15 dollars worth of work.

More stuff from the past next month.

Upcoming VEC Examinations

The following test session information is provided by the ARRL/VEC for the upcoming eight week period. For further information, please call the test session contact person at the telephone number listed. If necessary, you may contact the ARRL/VEC at 203-666-1541 x282 for additional information. Electronic mail may be forwarded to the ARRL/VEC via USENET at "bjahnke@arrl.org" or via MCI Mail to MCI ID: 653-2312 or 215-5052.

Although the test session information presented here does not indicate whether walk-ins are accepted or not, most test sessions do allow walk-ins. We encourage you, however, to always call the contact person at the telephone number provided so that the VE Team is aware that you be attending the test session.

03/10/95, A, Irvine, 714-824-8477, Jack C Lockhart, WD6AEI
 03/11/95, A, Beverly Hills, 310-459-0337, Scott V Swanson
 03/11/95, A, Fontana, 909-823-6818, Louis Johnson, K6UMX
 03/12/95, A, Culver City, 310-459-0337, Scott Swanson
 03/12/95, A, Thousand Oaks, 805-375-1385, Marco Treganza,
 03/18/95, A, Beverly Hills, 310-459-0337, Scott V Swanson
 03/18/95, A, Malibu, 310-459-0337, Scott Swanson
 03/18/95, A, Ridgecrest, 619-375-7245, Lloyd Brubaker
 03/19/95, A, Culver City, 310-459-0337, Scott Swanson
 03/23/95, A, Colton, 909-825-7136, Harold Heydenfeldt
 03/25/95, A, Culver City, 310-459-0337, Scott V Swanson
 03/25/95, A, Pomona, 909-620-2089, Frank Westphal
 04/08/95, A, Anaheim, 714-891-3868, Karen Foster
 04/08/95, A, Camarillo, 805-388-2488, George Kreider III
 04/08/95, A, Fontana, 909-823-6818, Louis Johnson
 04/15/95, A, Long Beach, 310-431-8998, Ken Newkirk, KN6EC
 04/20/95, A, Fountain Valley, 714-778-1542, Thomas Harris
 04/22/95, A, Pomona, 909-620-2089, Frank Westphal
 04/27/95, A, Colton, 909-825-7136, Harold Heydenfeldt
 04/29/95, A, Culver City, 310-459-0337, Scott V Swanson

FCC Issued Call Sign Update

The following is a list of the FCC's most recently issued call signs as of February 1.

District	Group A	Group B	Group C	Group D
	Extra	Adv.	Tech/Gen	Novice
0	AA0VS	KG0TJ	++	KB0QVG
1	AA1MB	KD1ZH	N1UFI	KB1BNN
2	AA2VU	KG2AP	++	KB2TLZ
3	AA3KC	KE3RA	N3UIZ	KB3BGK
4	AE4CX	KS4MX	++	KE4VDD
5	AC5AH	KK5JD	++	KC5MKA
6	AC6JX	KO6PF	++	KE6QOX
7	AB7HT	KJ7JB	++	KC7IQZ
8	AA8SA	KG8OO	++	KB8WQX
9	AA9NS	KG9AJ	N9ZZZ	KB9JCR
Mariana	KH0Q	++	KH0DQ	++
Guam	WH2K	AH2CZ	KH2NB	++
Midway	++	AH4AA	KH4AG	WH4AAH
Hawaii	++	AH6NU	++	WH6CSL
A. Samoa	AH8M	AH8AH	KH8CF	WH8ABB
Alaska	++	AL7PW	++	WL7CKG
Virgin	WP2Q	KP2CD	NP2HY	WP2AHV
Puerto Rico	++	KP4YM	++	WP4MWC

++All call signs in this group have been issued in this area.

The "Bug" is Still Alive

The Vibroplex® Co., Inc., the "Oldest Name in Amateur Radio™" has been acquired by S. Felton "Mitch" Mitchell, Jr., of Mobile, Alabama. Mitch, whose amateur call is WA4OSR, is an extra class amateur and is the first ham to own the Company. Vibroplex is moving all of its operations back to the South where its roots began. All current Vibroplex products, including the Original Bug, the Iambic, the Vibrokeyer, and the Brass Racer keys will continue to be produced.

Mitch says "The Vibroplex name is older than amateur radio and has come to represent the one piece of equipment in the ham shack that symbolizes the interest, camaraderie, and esprit de corps of the world-wide ham radio community. Even in this age of electronics, the heritage of Vibroplex has been passed down from generation to generation in the service of professional and amateur radio operators who demand quality. I intend to continue the unmatched Vibroplex quality, feel, simplicity, and performance."

The new address of Vibroplex is 11 Midtown Park, E., Mobile, AL 36606-4141. The new voice telephone numbers are 205-478-8873 and 800-840-8873. The new FAX number is 205-4760465.

2400 MHz Allocations



Mitch Mitchell, WA4OSR, Vibroplex Company President

ARRL Bulletin 12

The FCC has reallocated 50 MHz of spectrum, including 2390 to 2400 and 2402 to 2417 MHz, from government use. The Commission made these segments available for unlicensed, low-power devices including wireless LANs. At the same time, the FCC elevated Amateur Radio's status in those segments from secondary to primary. This means that amateurs will not have to protect any other user of those bands, and amateur stations are entitled to protection against interference.

The Commission made available 2390 to 2400 MHz for use by unlicensed Personal Communications Services (PCS), and provided for continued use of 2402 to 2417 MHz by traditional unlicensed "Part 15" electronic devices. The unlicensed PCS devices, which include wireless networking and data transfer devices, will be governed by the same rules that apply to PCS devices operating in the 1910 to 1920 MHz band.

The FCC said it believes these allocations will provide for the continued development and implementation of a new generation of advanced communication devices and services, including a new "on ramp" to the information superhighway. The remainder of the 50 MHz of allocated spectrum is at 4660 to 4685 MHz, to fixed and mobile services, an allocation not directly affecting amateurs. (Action in ET Docket 94-32.)

Two More "Astro-Hams"

ARRL Space Bulletin 003

Two more US astronauts have joined the ranks of Amateur Radio licensees and both will fly aboard the Space Shuttle Endeavour during mission STS-67 in March. Pilot William G. Gregory is KC5MGA and Payload Commander Tamara E. Jernigan is KC5MGF. Both took examinations with ARRL volunteer examiners on January 19 and were issued call signs on January 25, thanks to electronic filing with the FCC that has begun recently.

The 16-day STS-67 mission is scheduled for launch on March 2. Six of Endeavour's seven crew members now have Amateur Radio licenses. School groups in 26 places around the world are scheduled to make voice contacts with the STS-67 crew as part of the Shuttle Amateur Radio Experiment (SAREX) component of this mission.

Opinion

A Call to Action to Improve the Club Station

On Saturday, February 25, Walt Mushagian, Chris Carson, Walt Diem, Sam Weaver, Jerry Hawkes, and I worked at the water tower site where we stood the station 67-foot tower on its base and guyed it in an upright position to the new guy anchors previously set. There is a lot of work remaining to put the rest of the antenna together, to finish repairing the hardlines, and to put our W6VIO shack in order after last year's Field Day.

In my humble judgment, the Club members should start taking a more active role in putting our station back together. I would like to propose that we schedule work parties every three weeks until we get everything straightened out. Some of

you are interested in packet, some in satellite, some in computers, some in DX (my passion), and some in slow-scan TV. People with those interests should plan to attend the work parties, cleaning up, and putting back in place their favorite capabilities in the shack. Our shack-away-from-home should be a model station as opposed to a pig sty!

To start this off, let me propose that we have our next work party on Saturday, 11 March from 9 AM to 12 Noon. At that gathering, we will complete refurbishment of our hardlines at the water tower antenna site. It will be a great experience to learn how to splice, repair, and terminate 7/8 inch hardlines. Can someone attend who knows how to drain water from hardlines?

I propose that the following work party be on 1 April, again from 9 AM to 12 Noon. At that event, the Club members should make an effort to clean up our W6VIO shack. By that, I mean throwing away lots of junk, cleaning out the storage trailer, moving stuff off the floor of the W6VIO shack and storing it in the storage trailer, putting our tool boxes in order, dressing cables, vacuuming the floor, dusting, and making W6VIO a place to be proud of. Our goal should be to have a model operation in place by the time of the November Galileo Operation or sooner.

If the Club members agree with my proposal, future work parties would be scheduled for 22 April, 13 May, 3 June, and so on to put other parts of the W6VIO shack and antenna systems back together.

Any takers? This may need to be pursued at a future Board Meeting and perhaps also at a general Club meeting.

Bob Polansky, N6ET

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

Twenties radio vacuum tubes and radios; Los Angeles radio manufacturing catalogs or historical publications about Los Angeles radio manufacturing in the 1920's and 1930's. Call Floyd Paul, W6THU, 818-242-8961.

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@ccmail.jpl.nasa.gov); or ccMail direct (Wood, Bill).

WB6IEA Repeater & Autopatch

By Walt Diem, WA6PEA

The desense and noise have been eliminated on the WB6IEA repeater. It is now working well with good receive sensitivity. The frequency is 224.72 MHz with 123.0 Hz PL. You are encouraged to use the repeater and to give me reports on coverage and any problems experienced. The only known problem is interference from users of N6XKI/R (Frazier Peak).

Anytime you cannot get into the repeater in an area where you normally can, it may be that someone is transmitting on the input frequency using Frazier Peak. Since Frazier uses a different PL frequency, you will not hear them on the output of WB6IEA. If they have a stronger signal into WB6IEA than you have, their signal will capture the repeater receiver and your signal will not get through.

Frazier users are experiencing the same problem at times when a WB6IEA user has a stronger signal at the Frazier repeater than the Frazier user. Clearly, the two repeaters are not compatible on the same frequency.

The 220 SMA told us over 6 months ago that they recognize the incompatibility of the co-channel assignment on 224.72 MHz and are working on finding another frequency for us. However, they refuse to give us any status information or any evidence that they are actually working on the problem. Furthermore, the Frequency Board activity reports do not indicate that they are working on finding a frequency for any displaced system such as ours. But they do indicate that they are working on finding frequencies for new repeaters.

To have a voice in the 220 SMA and ensure that we are treated fairly, we need to increase our membership in the 220 SMA. Those of you that are already members of the 220 SMA need to make sure that you do not let your membership expire. If you care about the future of the repeater, and have not already joined the 220 SMA, you should join. Membership is \$10.00 per year. Applications are available from Jim Marr, Bob Dengler, and myself.

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

The improved receive performance resulted from a change to split antennas on 4 February. Bob Blakely, N6MTI, and I changed the repeater from duplexing on a single antenna to transmitting and receiving on different antennas. The Scala antenna, that was being used for duplexing, is now being used for receive, while a lower antenna is being temporarily used for transmit. This improved receive sensitivity, but we were still getting popcorn noise. The next day Jim Marr, AA6QI, and I made additional tests and discovered that the noise was coming from the remote receiver link. We turned off the remote and the noise disappeared.

The fact that receive sensitivity improved after splitting the antennas indicates that the duplexer needs retuning. We plan to disassemble, clean, and retune the duplexer; then return to the single antenna. We also need to determine the source of the noise on the remote receiver link to eliminate that problem.

TREASURER'S REPORT

By Jim Marr, AA6QI

Monthly Summary as of January 31, 1995

General Club Account

Balance as of 1/1/95:	\$173.73
Income	
Membership Renewals	\$773.00
Expenses:	
Postage for December Election Ballots	\$18.02
WB6TZS/R '94 USDA Forest Service Permit	\$94.00
Balance as of 1/31/95:	\$834.71

Autopatch Account

Balance as of 1/1/95:	\$420.22
Income	\$0.00
Expenses:	
Aug, Sep, Oct, Nov & Dec '94 Autopatch	\$66.11
Phone Bills	
Balance as of 1/31/95:	\$354.11

Emergency Communications Account

Balance as of 1/1/95:	\$2,000.00
Income	\$0.00
Expenses:	\$0.00
Balance as of 1/31/95:	\$2,000.00

Approved Budget for 1995

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.

GENERAL ACCOUNT	1995 Budget
SUMMARY:	
Balance as of 1/1/95	\$173.73
Income	\$4,457.18
Expenditures	\$4,229.95
Estimated balance as of 12/31/95	\$400.96
INCOME:	
Dues/Member-contributions	
Dues	\$1,736.00
Contributions/Donations	\$381.56
Subtotal: Dues/Member contributions:	\$2,117.56
Sell Obsolete Radios (TS820, FT101)	\$500.00
Reimbursement Against 1994 ERC Grant	\$528.39
ERC 25% & 50% Grants for 4/95-3/96)	\$956.23
ERC Grant at 100% for Newsletter Reproduction.	\$355.00
Totals: INCOME	\$4,457.18

EXPENDITURES:**Activity Supplies:**

Field Day:	
Out-house rent	\$91.83
Field Day Food	\$400.00
Tent Rental	\$138.75
Subtotal: Field Day	\$630.58
Door Prizes	\$200.00
Lunches for Guest Speakers	\$25.00
Subscriptions	
95 DX Callbook	\$24.95
The DX Bulletin	\$32.00
Subtotal: Subscriptions	\$56.95
Subtotal: Activity Supplies:	\$912.53

Other:

Postage ('94, Newsletter, QSL)	\$430.42
"W6VIO Calling" Production Costs [1&2c]	\$355.00
Memberships:	
AMSAT	\$50.00
AMSAT Ø3D Development Fund ('94 & '95)	\$140.00
TASMA, 220 SMA, SCRRBA, SCDCC	\$40.00
Subtotal: Memberships	\$230.00
DSS Forest Service Permit CY '95 & '96	\$194.00
Subtotal: Other	\$854.42

Trophies/Awards**Capital Equipment:**

WB6IEA/R Equip/Parts/Supplies:	
Misc. parts & supplies	\$25.00
Crystals for Frequency Move	\$100.00
Antenna Grounding	\$125.00
Antenna for Remote Receiver Move	\$150.00
Battery Charger & vent caps for NIFE Battery's	\$398.00
W6VIO/R Equip/Parts/Supplies:	
Misc. parts & supplies	\$25.00
Wattmeter Tuning Slug	\$40.00
Linear Amp for Von Karman. to Mesa audio circuit (\$50?)	\$0.00
450 MHz Repeater Crystals	\$30.00
WB6TZS/R Equip/Parts/Supplies:	
Misc. parts & supplies	\$25.00
W6VIO/HF & Satellite Equip/Parts/Supplies:	
Misc. repairs, parts & supplies:	\$50.00
CD-ROM player for SSTV support of GLL	\$150.00
Camera for SSTV (\$800)	\$0.00
ATV transmitter (\$200)	\$0.00
W6VIO/Packet Equip/Parts/Supplies:	
Misc. parts & supplies	\$25.00
Cliff Yamamoto's Mitrek 9600 baud packet receiver	\$200.00
500 MB IDE Hard Disk (for LINUX/NOS box)	\$300.00
Weatherproof Node "Box" (including Labor/parts)	\$60.00
TNC Stacking Kit (node)	\$40.00
2 ea. TNC-2s (for node)	\$200.00
Batteries for node	\$150.00
Charge controller/ charger	\$185.00
Solar panel(s)	\$185.00
Subtotal: Capital Equip.:	\$2,463.00
Totals: EXPENDITURES	\$4,229.95

AUTOPATCH ACCOUNT	1995 Budget
SUMMARY:	
Balance as of 1/1/95	\$420.22
Income	\$176.00
Expenditures	\$222.11
Estimated balance as of 12/31/95	\$374.11
INCOME:	
New Accounts at \$16 each	\$176.00
Annual Dues	\$0.00
Donations	\$0.00
Totals: INCOME	\$176.00
EXPENDITURES:	
Postage	\$0.00
Autopatch Phone Bill	\$222.11
Equipment Purchases:	\$0.00
Totals: EXPENDITURES	\$222.11

GENERAL + AUTOPATCH TOTALS	1995 Budget
Balance as of 1/1/95:	\$593.95
Income	\$4,633.18
Expenditures	\$4,452.06
Estimated balance as of 12/31/95	\$775.07

EMERGENCY COMMUNICATIONS ACCOUNT 1995 Budget

SUMMARY:	
Balance as of 1/1/95	\$0.00
Income	\$2,000.00
Expenditures	\$2,000.00
Estimated balance as of 12/31/95	\$0.00
INCOME:	
Gil Duke Grant	\$2,000.00
Totals: INCOME	\$2,000.00
EXPENDITURES:	
Field Day:	
Field Day Transportation Vehicles (\$150)	\$150.00
WB6IEA/R:	
Kendecom PA-100 repair (\$300)	\$0.00
W6VIO/R:	
Linear Amp for Von .Karman-Mesa Circuit (\$250)	\$0.00
Micor Squelch chips for Repeaters*	\$50.00
Circuit Breaker for VIO/R 220 amp. power. supply*	\$25.00
RLC-3 Radio Port Card*	\$250.00
WB6TZS/R:	
Celwave PD220-2 Super Stationmaster*	\$650.00
W6VIO/HF & Satellite:	
Re-wire Comm. Trailer by JPL (\$500)	\$0.00
Guy Wire for HF Antenna Tower (\$75)	\$75.00
Repair 2-failed ICOM VHF/UHF Xcvrs (\$400)	\$400.00
Amatron QSK box for HF Station AMTOR*	\$300.00
W6VIO/Packet:	
Antenna for automatic Packet Node (\$200)	\$0.00
All:	
Misc. Parts from JPL Stores: (\$100)	\$100.00
Totals: EXPENDITURES (\$1975)	\$2,000.00

* Item NOT on original proposal to G. Duke

Jim Marr AA6QI
1995 Treasurer

JPL AMATEUR RADIO CLUB

BYLAWS

ARTICLE I NAME AND LOCATION

SECTION 1. The name of the organization shall be the "JPL Amateur Radio Club."

SECTION 2. The headquarters and regular meeting place of the organization shall be at the Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, California 91109.

ARTICLE II AIMS AND PURPOSES

SECTION 1. The object and purposes of the JPL Amateur Radio Club shall be to organize radio amateurs for the purpose of developing and encouraging interest in amateur radio and generally support lawful activities for the welfare, benefit and betterment of Radio Amateurs.

SECTION 2. More specifically, the JPL Amateur Radio Club shall:

- a. Further the cause and interest of amateur radio at the Jet Propulsion Laboratory.
- b. Operate an emergency communication facility as part of the NASA Emergency Net.
- c. Promote and support public service communications and training activities.
- d. Provide information and encourage exchange of information among radio amateurs.
- e. Promote radio knowledge, fraternalism and individual operating proficiency.
- f. Conduct club programs and activities to advance the general interest and welfare of amateur radio in the community.
- g. Participate in other emergency communications services in the public interest, such as Amateur Radio Emergency Service, Search and Rescue, Military Affiliate Radio Systems, Radio Amateur Civil Emergency Service, etc.
- h. Encourage others to become radio amateurs by offering public education, public information, training courses, testing, and amateur radio operations experience.

ARTICLE III MEMBERSHIP

SECTION 1. JPL Affiliation

For the purposes of determining eligibility for membership, personnel are defined as being **affiliated with JPL** if they are, or were immediately prior to retirement, employed by or assigned to work at the Jet Propulsion Laboratory, the California Institute of Technology, or their facilities (e.g., Deep Space Network).

SECTION 2. Regular Membership

- a. Regular members may utilize Club facilities and shall have a vote in the conduct of the affairs of the Club.
- b. Regular membership shall be open to Amateur Radio Operators who are currently licensed by the FCC and are affiliated with JPL (as defined in Section 1 above).
- c. Regular membership shall change to the applicable membership class at such time that a Regular member no longer meets all of the requirements in paragraph b. above.

SECTION 3. Associate Membership

- a. Associate members shall have all the privileges of Regular members, except they shall have no vote and are ineligible to be members of the Board of Directors.
- b. Associate membership shall be open to anyone with a bona-fide interest in the advancement of Amateur Radio that is either affiliated with JPL (as defined in Section 1 above) or an immediate family member of an individual affiliated with JPL.
- c. Associate membership shall change to External membership at such time that an Associate member no longer meets the requirements in paragraph b. above.

SECTION 4. External Membership

- a. External members shall have all the privileges of Associate members.
- b. Individuals that have a bona-fide interest in the advancement of Amateur Radio and do not qualify for any other membership category may be accepted as External members by a majority vote of the Board of Directors, subject to paragraph c. below. Renewal of such membership each year shall be contingent upon reacceptance by the Board.

- c. The number of External members of the Club shall at no time exceed 20% of the total membership. If through resignation or other action, this level is violated, the Board shall act to reduce the percentage of External members.

SECTION 5. Honorary Membership

- a. Honorary members shall have all the privileges of Associate members, and in addition are not required to pay dues.
- b. An Honorary Member is an individual who, by their accomplishments as an amateur or by their support to the advancement of amateur radio, has gained this distinction. Honorary membership shall require approval by the Board of Directors and the Club Members.

SECTION 6. Application for Membership

Application for membership shall be made in writing to the Secretary or designee. Each applicant must express a willingness to abide by the Bylaws and other rules promulgated by the club.

SECTION 7. Termination of Membership

- a. A Member may resign from the Club at any time upon written notice addressed to the Secretary.
- b. Forfeit of membership shall be for delinquent dues.
- c. Members who resign, or are expelled from the Club shall be absolved automatically of all duties and rights of memberships and they shall surrender all properties of the Club in their possession upon termination.
- d. Any Member may be expelled for improper conduct. Written charges, having been duly made, will be read by the Board of Directors who will, in turn, bring their recommendations to the membership. A decision shall be made by two-thirds vote of the Members present and voting with a quorum being present.

ARTICLE IV DUES

SECTION 1. The amount of annual dues shall be determined by the Board of Directors and shall be due 1 January and payable no later than 30 January to the Treasurer.

SECTION 2. Under certain special circumstances (such as Club members in foreign countries, etc.) dues may be waived by the Board of Directors.

ARTICLE V ORGANIZATION AND MANAGEMENT

SECTION 1. The affairs and business of the Club shall be managed by the Board of Directors.

SECTION 2. The **Board of Directors** shall consist of the Officers of the Club, the Emergency Communications Manager, Trustees, and the Director-at-Large. All Directors shall be Regular members in good standing; in addition, the Treasurer, at least one other officer, and at least 50% of the Directors shall be active or retired employees of the Jet Propulsion Laboratory.

SECTION 3. The **Officers** shall consist of the President, Vice President, Secretary and Treasurer.

SECTION 4. The **Trustees** shall be appointed by the President, with the concurrence of the Board of Directors. Trustees shall be Regular Members with appropriate license classes to avoid restricting the operating privileges of the Club Stations.

SECTION 5. The **Emergency Communications Manager** shall be appointed by the President.

SECTION 6. The **Director-at-Large** shall normally be the immediate Past President. In the event that the Past President is unable to serve, the President shall appoint another former officer or director of the Club to this position.

SECTION 7. **Standing Committees** shall include the following: Education, Publicity, Emergency Communications, Repeater, and Station Facility.

ARTICLE VI POWERS AND DUTIES

SECTION 1. OFFICERS

The **President** shall be the chief executive officer of the Club, shall preside at all meetings of the Board of Directors, and at all meetings of the membership of the Club. The President shall be an ex-officio member of all committees (except the Nominating Committee) of the Club and shall represent the Club at official functions.

The **Vice President** shall, in the absence or disability of the President, act as and have all the powers of the President in the conduct of the affairs of the Club, and shall have such other powers and duties as may be assigned by the President.

The **Secretary** shall keep the Minutes of the meetings of the Board of Directors and of the membership, record the votes in all elections, maintain the records of the membership of the Club, and authorize the issuance of each key to the Club Station and keep records thereof. The Secretary shall have such other duties as may be assigned by the President.

The **Treasurer** shall be responsible for administering Club funds as directed by the Board of Directors and maintaining the financial records of the Club. The Treasurer shall have such other duties and responsibilities as may be assigned by the President.

SECTION 2. BOARD OF DIRECTORS

The **Board of Directors** is charged with the management of the affairs and business of the Club. It shall determine and set policy and shall act upon proposals and recommendations submitted by the membership. All members of the Board of Directors shall make every effort to attend every Board meeting and shall have one vote on each matter to be decided. A quorum shall be required and shall consist of a simple majority of the Directors.

The **Trustees** shall hold FCC Licenses for the Club, supervise the operations of their assigned station or repeater and be custodian of the Club equipment and associated property involved.

The **Emergency Communications Manager** shall be responsible for the management and coordination of all Emergency Communication activities of the Club.

The **Director-at-Large** shall provide advice and consultation to the Board of Directors as the need arises.

ARTICLE VII OPERATING PROCEDURES

SECTION 1. Management of the affairs of the Club shall be vested in the Board of Directors.

SECTION 2. The President shall appoint a nominating committee and/or a committee chairperson and announce the members of the committee no later than the membership meeting preceding the November membership meeting.

The nominating committee shall prepare a slate of officers for the ensuing year. The slate shall be presented at the November meeting at which time additional nominations may be made from the floor.

SECTION 3. Elections shall be held by ballot of the members. Ballots shall be sent out by the Secretary within one week after the November meeting. Ballots shall be counted only if returned within ten (10) days following mailing of the ballots. If there is but one nominee for each office the ballot may be dispensed with and the election held by VIVA VOCE (voice) vote.

SECTION 4. The new officers shall be presented and installed at the January meeting.

SECTION 5. Should a vacancy occur in any office, the President, with the concurrence of the Board of Directors, shall appoint a regular member to fill the unexpired term.

SECTION 6. The following shall be presented by the Board of Directors to the Club members for approval by a majority of the members voting:

- a. Annual budget
- b. Applications for Honorary membership
- c. Other monetary commitments in excess of 15% of the total expenditures in the approved annual budget.

Notices of proposed votes must be included in meeting notices per Article VIII, Section 3.

SECTION 7. All parliamentary procedures in conducting business of the Club not herein provided for, shall follow Robert's Rules of Order.

ARTICLE VIII MEETINGS

SECTION 1. There shall be one regular membership meeting each month. However, the President may call special membership meetings.

SECTION 2. There shall be one regular Board of Directors meeting each month. However, the President may call special Board meetings.

SECTION 3. Notices for all meetings shall be sent by the Secretary at least five days in advance of said meetings. The notice shall state date, time, place and purpose of the meeting.

SECTION 4. The majority of the Board of Directors and five Regular Members who attend the regular or special membership meetings of the Club shall constitute a quorum, capable of transacting all business properly brought before the meeting.

ARTICLE IX AMENDMENT AND EFFECTIVITY

SECTION 1. Any Regular Member may submit proposed amendments or changes to these Bylaws at any meeting of the Club.

SECTION 2. Proposed changes to these Bylaws shall be communicated to the members of the Club for consideration and discussion at a membership meeting prior to ballots being sent to Regular members for voting.

SECTION 3. Final wording of amendments shall be approved by the Board of Directors and sent by the Secretary to all Regular Members for voting. Ballots shall be counted only if returned within ten (10) days following mailing of the ballots.

SECTION 4. The Secretary shall provide a copy of the proposed Bylaws to the JPL Employees Recreation Club (ERC) Subclub chair for submittal to the ERC Council for approval.

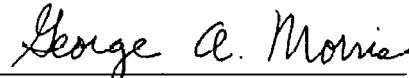
SECTION 5. Amendments to these Bylaws shall become effective only after: (1) approval by the Board of Directors, (2) passage by a two-thirds affirmative vote of those Regular members returning ballots, and (3) approval by the ERC Council.

SECTION 6. The Secretary shall distribute copies of the approved Bylaws to all members.

ARTICLE X CONFORMANCE

SECTION 1. These Bylaws shall not conflict with nor take precedence over the "Procedures for Subclubs" and the "Bylaws" of the JPL Employees Recreation Club and shall in no way conflict with or alter any applicable California Institute of Technology or Government Regulation.

I certify that the above Bylaws are a true and correct copy, as approved by the membership of the JPL Amateur Radio Club on 20 February 1995.



George A. Morris
Secretary



Merv MacMedan
President

I certify that the above Bylaws were approved by the JPL Employees Recreation Club Council on 22 February 1995.



Jeff Packard
ERC Subclub Chair

JPL ARC Questionnaire

The JPL ARC would like to get your opinions on what activities should be pursued by the Club to best meet the desires of it's members. Please take a minute to fill out this questionnaire. This will help in determining the directions the Club should pursue.

Areas of Interest (Check all that apply):

- Repeaters:
- 10 Meters 1200 MHz
- 6 Meters Linking
- 2 Meters Autopatch
- 220 MHz Shuttle Audio
- 440 MHz Remote Receiver
- Packet/Portable Packet
- Satellite
- Repeater Emergency Communications
- HF Emergency Communications
- Commemorative
- Microwave
- HF Communications
- DX Communications
- Contests
- Field Day
- SSTV
- ATV
- Club Station Layout
- Antenna Design
- HF Awards
- VHF/UHF Awards
- VHF/UHF Weak Signal
- Other(describe below):

Activities you will support. (Indicate hours per month):

- | General: | Hours/Mo. |
|--|-----------|
| <input type="checkbox"/> Field Day Planning | _____ |
| <input type="checkbox"/> W6VIO Trailer Reorg/Cleanup | _____ |
| <input type="checkbox"/> Antenna/Station Fabrication | _____ |
| <input type="checkbox"/> Antenna Parties | _____ |
| <input type="checkbox"/> Public Services (foot/boat/bike races, Parades, etc.) | _____ |
| <input type="checkbox"/> Station Training Activities | _____ |
| <input type="checkbox"/> Disposal of Obsolete Gear | _____ |
| <input type="checkbox"/> Education of New/Potential Hams | _____ |
| <input type="checkbox"/> Volunteer Examinations | _____ |
| <input type="checkbox"/> Antenna Planning | _____ |
| HF: | |
| <input type="checkbox"/> HF Station Planning | _____ |
| <input type="checkbox"/> HF Station Reconfiguration/Repair | _____ |
| Satellite: | |
| <input type="checkbox"/> Satellite Station Planning | _____ |
| <input type="checkbox"/> Satellite Station Reconfiguration/Repair | _____ |
| Repeater: | |
| <input type="checkbox"/> Repeater Planning, Reconfig, or Repair | _____ |
| <input type="checkbox"/> Emergency Network Operations Support | _____ |
| Packet: | |
| <input type="checkbox"/> Station Computer Planning or Maint. | _____ |
| <input type="checkbox"/> Station RF Planning or Maintenance | _____ |
| Administrative: | |
| <input type="checkbox"/> Club Program Planning | _____ |
| <input type="checkbox"/> Club Budget Planning | _____ |
| <input type="checkbox"/> Fund Raising Activities | _____ |
| <input type="checkbox"/> Club Newsletter Articles | _____ |
| <input type="checkbox"/> JPL EOC/ARC Emergency Planning | _____ |
| <input type="checkbox"/> Pasadena Emergency Comm. Group | _____ |
| <input type="checkbox"/> LA County Disaster Comm. Services | _____ |
| <input type="checkbox"/> Awards Management/Bookkeeping/QSL's | _____ |
| <input type="checkbox"/> LA Area Council of Amateur Radio Clubs | _____ |

Please mail your completed Questionnaire to George Morris at Mail Stop 144-201.

Prepared by (call sign): _____



Jet Propulsion Laboratory Amateur Radio Club
Attn: Bill Wood, Editor, Mail Stop DSCC-33
4800 Oak Grove Drive
Pasadena, CA 91109-8099

«NAME», «CALL»

«COMMENTS»