

jpl → W6VIO

CALLING



MAR 1988

MAIL STOP

Jet Propulsion Laboratory
W6VIO Calling M/S 264-419
Eileen McKinney - Editor
4800 Oak Grove Drive
Pasadena, California 91109

PRESIDENT: Walt Mushagian K6DNS
VICE PRES: John Tallon N6OMB
SECRETARY: Sid Johnson WB6VWH
TREASURER: Joel Mosher KB6RXE
TRUSTEE: STAN SANDER, N6MP
EDITOR: Eileen McKinney KA6DGV

Club Meetings: Second Wednesday of the month at 12 Noon in 301-271. Everyone is welcome - Bring your lunch!

Board Meetings: Fourth Wednesday of the month at 12 Noon in 301-271. Everyone is welcome - You don't have to be a Board member. Bring your lunch!

Newsletter Article Deadline: The 7th. day of each month. If the 7th. falls on a weekend, the following Monday will be the deadline.

Your articles, ads, photos, diagrams, instructions or Letters to the Editor should be submitted to the address above.

Permission is granted to copy enclosed articles providing credit is given to "W6VIO Calling".

PRESIDENT'S MESSAGE

by

WALT MUSHAGIAN K6DNS

As Stan Sander N6MP puts it, we have set a new world's record. Our new HF Beam was up for 2 weeks when an unexpected Santa Ana wind came up and took some elements off and bent some others. John Repar WA6LWD is in the process of getting the bent elements reinforced. John advises that there will be a work party to complete the repairs on the damaged antenna. Bill Fesler KA6TCL reports a 3 to 1 SWR on the TH6 Tribander and the 40 & 75, 80 meter dipoles. That would seem to indicate that we have a problem with our hard line running up the hill. More things to do for our up and coming work party.

Well the L.A. Marathon is now history. Sid Johnson WB6VWH reports that there were over 200 hams that assisted in this event and many were from the JPL ARC. Good job guys and gals.

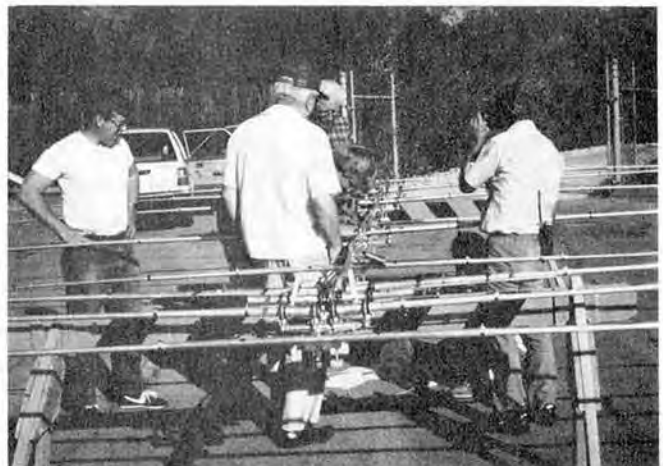
We are still looking for club members to serve on the Field Day Committee. If you are interested, please call me at X43036 or drop me a note at 233-420. Field Day will be held on June 25 & 26th.

Congratulations to Jerry Hawkes W6WXL who recently upgraded to Extra Class.

73's Walt K6DNS

**ARRL BULLETIN 18 FROM ARRL HEADQUARTERS
NEWINGTON CT FEBRUARY 16, 1988
TO ALL RADIO AMATEURS**

MORE ON 220 MHZ. ON JANUARY 29 THE UNITED PARCEL SERVICE FILED A MOTION FOR ACCEPTANCE OF LATE FILED COMMENTS AND THE COMMENTS THEMSELVES IN GENERAL DOCKET 87 14. THIS FCC DOCKET PROPOSES TO REALLOCATE 220 TO 222 MHZ EXCLUSIVELY TO LAND MOBILE FOR A NEW NARROWBAND SERVICE. UNITED PARCEL PROPOSES TO BUILD A NATIONWIDE DATA NETWORK FOR ITS DELIVERY TRUCKS USING AMPLITUDE COMPANDED SINGLE SIDEBAND EQUIPMENT. THE UPS PETITION COMES SIX MONTHS AFTER THE FINAL DEADLINE FOR FILING COMMENTS IN THE DOCKET. ITS ACCEPTANCE FOR FILING WILL BE STRONGLY OPPOSED BY THE ARRL, NEEDLESS TO SAY. ARRL EFFORTS TO PRESERVE THE ENTIRE 220 TO 225 MHZ BAND FOR AMATEUR USE CONTINUE UNABATED ON SEVERAL FRONTS. (DE Art, WA6SAL)



JPL ARC ANTENNA PARTY SATURDAY FEB 6, 1988

Faces in the photos include Bill Fesler KA6TCL, Bob Deem N5DPU, Jerry Hawkes W6WXL, John Repar WA6LWD, Joel Mosher KB6RXE, Sid Johnson WB6VWH, Sam Weaver WB6EMO and Walt Mushagian K6DNS
Photos by Bruce Beaudry N6IRZ

DX NEWS

DX NEWS
by
Jay Holladay, W6EJJ

Your regular DX columnist, N6ET, is taking a well-earned vacation in Ireland and the U.K., so I volunteered to be "guest-columnist" for this month. As this is being written (mid-March) spring conditions are in full swing, and lots of good DX was workable in the ARRL DX Tests, both CW and phone weekends.

The "How's DX?" column in April QST has some great tips on "DXing for Little Guns", written by WA2EKK. I can relate to a lot of what he says, because I started out anew as a "little gun" in 1966, just after we moved to La Canada. In fact, the first weekend after we moved in I went out, bought a ladder, and proceeded to install a ground plane for 20 meters on the roof. The S-line was quickly unpacked and I fired up in the ARRL CW DX contest. Best DX worked that weekend was YU (Yugoslavia). A small tri-bander (TA-33 Jr.) was added that Fall, but the first 100+ were worked for DXCC before I added a linear. So it can be done with simple antennas and an exciter, and WA2EKK's article give a lot of good pointers on how it's done.

This month's DX tips, courtesy of LIDX:

BAKER I. - The KH1 operation by Jim Smith, VK9NS, is slated to begin on Mar. 24.

KINGMAN REEF - Should open for one week beginning Apr. 23. Seven operators including WA2MOE and W0RLX plan round the clock operation. From there the group plans one week from Palmyra (KH5) beginning May 1.

LORD HOWE I. - Scheduled for March 20-27 by a group led by JI3ERV. Operation is planned in the CQ WW WPX SSB Contest on March 26-27.

Check with N6ET or W6EJJ on the 224.08 repeater for updates on the above operations. Here are some recent entries from the log of W6EJJ:

2-28	9V1OK	21018 kHz	0130Z
	A22BW	7007	1459
2-29	DF1DN/EAB	7001	0104
3-08	HZ1AB	14028	1450
3-14	3D2VU	21007	0237
3-17	VS6UP	7005	1457
	3B8CF	7004	1507

Remember, I'm only using an inverted vee on 40 meters. Conditions have been great!

73, Jay - W6EJJ



PACKET RADIO

The W6VIO packet station is on the air full time, in fact, for several weeks, it was the only part of W6VIO that was fully operational. The 2 meter Ringo Ranger and an old homebrew satellite antenna now mounted behind the shack at the east gate are both dedicated to the packet station. The station is capable of operation on 145.01, 145.03, 145.05, 145.07, 145.09, and 145.36. It is left on the air 24 hours a day on 145.01 except when an operator present in the shack is using a different frequency. The alias for digipeating is JPL. The Packet BBS used for sending messages to W6VIO is WB6YMH-2. The net/rom we use is LAX:WA8DED-3. The terminal currently in use does not support hard copy or disk capture. This has not been a problem yet, but will be soon as activity picks up.

The shack is not in a good location for VHF. As time and resources permit, we will be adding a pair of net/rom packet stations at the 224.08 repeater site, one on 145.01 and another on a 220 frequency. They will be connected to provide a gateway between the two bands and will also, automatically, operate as packet repeaters on their respective bands. As such, they will provide a service to the local packet community on both frequencies and provide a solid link from W6VIO into the regional digital network.

Immediate goals for our digital capability are to add hard copy and disk capture in the shack utilizing computer equipment that has already been purchased for this purpose.

The packet station sees daily use, both from local users, remote connections, and digipeating. Regular operators to date include Bill Fesler, John Tallon, Jon Adams, and me. Remote checkins include the above, K6OEF, WA6SAL, and others. If I've left anyone out, it was inadvertent, let me hear from you and I'll add you to the 'packet users roster.' For a demonstration or more information about packet radio, contact any of us.

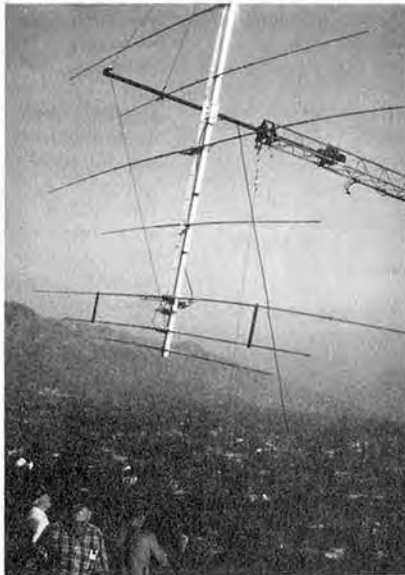
Courtney Duncan, N5BF
M/S 238-600
354-8336

HAMS ACROSS AMERICA

Don Lawson, WA6SQF has slipped into retirement from JPL and will be enjoying his time traveling across the U.S. with his wife Betty, KA6JEX.

They are mobiling in a fully equipped 4x4 mini motor home complete with IC730 rig and built-in 35 foot aluminum push up. First stop will be Texas around 3-25-88 to do some camping, then on to Florida and up to Ohio around 4-20-88. Later it's on to Canada, Utah and home by July.

Don would enjoy working schedules with the club members and will try to be on the air Tues, Fri, and Sun nights at 7:00 P.M. our time. 40 will be primary at 7.225+ but will try all bands as conditions allow. Some freqs he will try are: 28.425, 21.300, 14.225, 3.850. For more info please call Dick Wetzel lab 4-2257 or home (818) 952-6181.



NOTES FROM THE SECRETARY.

This has been a bad month for me. I thought I had submitted the Feb board minutes to Eileen but a recent call from John tells me that I probably didn't. Worse yet I can't find them. I lost a floppy disc last week due to a coffee spill, so they may have been a victim of caffeine poisoning. I can't find the hand written notes either meaning they are on my desk, mixed up with my tax papers, lost in the Marathon files or in a land fill. Since there is more hope of finding them in a land fill than the other three places (especially my desk) I consider them gone forever. Here we go from memory.

MINUTES OF THE BOARD
FEB ? 1988

PRESENT: Most were, some were not.

OLD BUSINESS: Yes!

NEW BUSINESS: Yes!

ADJOURNED: I'm almost sure that we did.

Oh well.

Also I had intended to write an article on the Los Angeles Marathon for this months news letter but JPL had other ideas so I spent my article writing time (the weekends) in my lab. Fortunately Randy KB6FDS came to the rescue with an article to be printed in the Universe which you should all have read by now. Let me at least list the JPL ARC club members who participated this year. Art Zygielbaum WA6SAL, John Tallon N6OMB, Walt Diem WA6PEA, Kirk Johnson KA6RKX, Jim Kesterson KA6IBF, Rick McKinney KA6DAN, Bill Fesler KA6TCL, Larry Ruple N6QZI, Patti Heller KB6VPO, Jim Erickson N6PGC, Harry Enmark WA6IUR, Kerry Erickson N6DSG, Jon Adams NW6H, Ron Ploszaj WA6TPW, Jay Holladay W6EJJ, Barbara Basta KB6VGV, Booth Hartley N6BH, Phil Smith WB6LQP, Joel Mosher KB6RXE, Jan Tarsala WB6VRN, Tom O'hara W6ORG. Jim Lumsden WA6MYJ and Stan Sander N6MP couldn't make it at the last minute due to sickness etc. Danette Erickson, Chris Zygielbaum and Kathie Reilly also pitched in over in the Family Reunion center. Hope I didn't miss anyone but I can't find my Marathon notes either. I will try and do better next month.



73's

Sid Johnson
Secretary

COMMUNICATING

by

COURTNEY DUNCAN N5BF

AMATEUR SATELLITES

It is generally considered these days that to make nominal use of the amateur satellites available requires certain equipment prioritized as follows:

- 1) sideband and CW transceivers for 145 and 435 MHz with 10 dB gain class antennas for each band,
- 2) a computer for orbit predictions,
- 3) a 29 MHz sideband and CW receiver and antenna,
- 4) a 21 MHz sideband and CW transmitter and antenna, separate from 3) above,
- 5) a packet station with at least a terminal, TNC, AFSK modulator for uplink and PSK demodulator for downlink,
- 6) a 1269 MHz sideband and CW transmitter with 15 - 20 dB class antenna, and
- 7) an S-band receiver and antenna (2.4 GHz).

Depending on the goals of the operator, some would move priorities 5, 6, and 7 up ahead of 3 and 4. Ten years ago, the 29 MHz receiver was most important followed by 145 and 435 MHz transceivers. Computers and orbital calculation software were not yet available at the hobbyist level.

Ten years from now, the 435 MHz rig will be most important, followed closely by 1.269 and 2.4 GHz; 21, 29, and even 145 MHz will be nearly if not entirely out of the amateur satellite picture.

What is most important, satellite based communications will then play a much larger role in general amateur radio. Its role now is more advanced and experimental.

Even the simplest emergency preparedness plans will not be able to overlook the need for satellite communications capability (and a presence on local and regional digital networks for that matter). Routine and priority traffic handling, both analog and digital, will rely on and may be dominated by satellite based backbones. Conventional operations, rag chewing, DXing, and keeping schedules with buddies will be occurring on the satellites more routinely, and more dependably, than on the HF bands now.

This last will be particularly true among those of us living in the more densely populated areas of the U. S., Japan, and Europe. An individual doesn't need a couple of acres for an antenna farm or a couple of kilobucks for a kilowatt to operate satellite DX regularly, for example. In the coming years dependable, routine worldwide communications will be achieved via satellite from apartments with balcony antennas, not much more elbow room than is needed now to dependably operate the local repeater.

To the end of re-establishing a W6VIO presence in the amateur satellite community and possibly assuming a leadership role for the club in satellite based emergency preparedness and conventional operations, club members have begun to take a number of decisive steps.

Recently, Walt Mushagian, Stan Sander, Jay Holladay, Jerry Hawkes, and I met to see what the club could do to refurbish and improve the club satellite station. The club station as a whole has equipment to cover priorities 1 - 4 listed above, but not all of the equipment is functioning.

The ICOM IC-211, which appears to be the club's only two meter rig (except for the radio used in the packet station which has crystals only for packet frequencies) malfunctions in certain transmission modes. It has been returned to ICOM for repairs, for the third time.

The two meter satellite antenna blew down in a recent windstorm when the horizontal boom holding it up broke at the elevation rotator. A replacement horizontal boom has been acquired. Larry Smith and Larry Ruple have repaired the two meter antenna in preparation for an antenna party that should have occurred by the time you read this.

At that event, the plan is to get both the two meter and seventy centimeter antennas and the rotators back into tip-top shape, recalibrated and retuned. We will also check out the polarization switches and preamps on each band.

As we get the station put back together, I will be setting up one of the club's Commodore 64s (which was purchased for this purpose) at our OSCAR operating position and installing AMSAT satellite tracking software.

The club has reinstated its membership in AMSAT, The Amateur Satellite Corporation.

The club HF stations have had problems of their own, but as the problems are resolved, satellite operators will be able to 'borrow' 29 MHz receive and 21 MHz transmit capabilities from one or two of the three HF operating positions.

For a variety of reasons, the club does not have money for a major new equipment purchase this year, but in the future when it does, I will strongly recommend consideration of a 1.2 GHz multi mode rig such as an ICOM IC-1271. This assumes that the rest of the station, satellite and HF positions, is operating satisfactorily and is not in need of expensive repairs at that time.

The amateur Phase III C satellite to be launched this summer has a large uplink band at 1269 MHz with corresponding downlink on 436 MHz. It's digital repeater also has an uplink near 1269 MHz. According to current projections, the Phase III C satellite may be operated in 'mode L' which requires use of this uplink band as much as 1/3 to 1/2 of the time.

Justification for this particular radio extends beyond the satellite station. Novices have an allocation at 1270 MHz which would then be available to them at W6VIO. The 1271 is compatible with fast scan TV transmission if there is interest in FSTV operation from the club station.

At this writing, the OSCAR station at W6VIO is not operational. If you would like to help with station maintenance or upgrade, contact me or one of the club officers.

Satellite availability occurs at various times throughout the day, before and after working hours and during lunch. If you would like to operate the satellite station or see it in operation, let's get together and do it! As its various components are put back on the air, I'll be setting up operator training programs and operational goals.

