

**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.

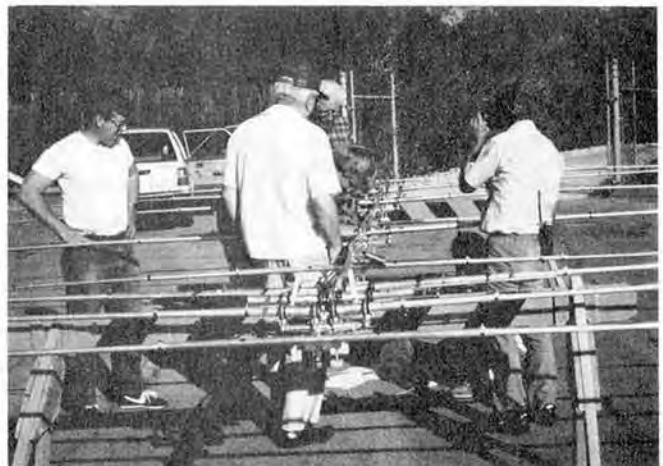
We are still looking for club members to serve on the Field Day Committee. If you are interested, please call me at X43036 or drop me a note at 233-420. Field Day will be held on June 25 & 26th.

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.

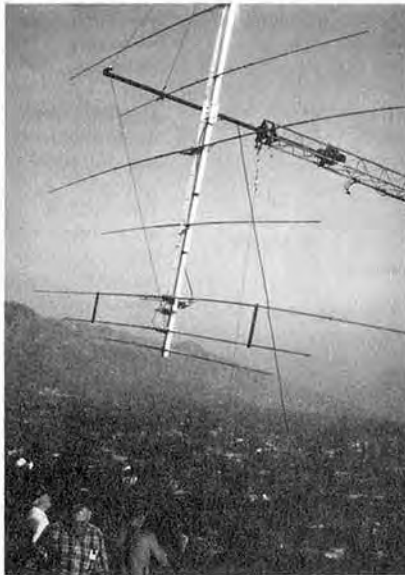
Courtney Duncan, N5BF  
M/S 238-600  
354-8336

## 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 FORM 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.

ALINS

With the mid March success of the European Space Agency's V-21 launch, it appears that the current 26 May launch date for Phase III C is still holding. W6VIO will be participating in the AMSAT Launch Information Network, ALINS as a bulletin and launch day broadcast station. Beginning in the first or second week of May and continuing through the time when the satellite is released for public use, in early or mid June (according to the current schedule) operators will be needed to read information bulletins over the air to a local and worldwide audience from W6VIO.

Bulletins will also be posted to local packet radio and telephone bulletin boards where there is interest.

After launch, we will be using club's OSCAR facilities to monitor the new satellite's beacon and follow its progress first hand.

The ALINS bulletins will be brought into the club station either by packet radio, telephone modem, or hand carried paper. If you want to be part of this state of the art information dissemination team, contact me or one of the club officers to sign up.

SKITREK

The Soviet - Canadian team of skiers has begun their walking trip across from the Soviet Union to Canada, via the North Pole. Position reports have been transmitted on the UoSAT - 11 digitalker daily from the beginning. Four or five position updates are transmitted every week.

Departure was on 3 March 88 at 07:31 UTC from 81 degrees, 15 minutes north latitude and 95 degrees, 45 minutes east longitude, Cape Arctic. Progress of zero to 25 Kilometers per day has been made in varying weather conditions with temperatures to -45 degrees C. Late reports, around 20 March have the skiers north of 83 degrees north latitude, having successfully crossed at least one area of open water. The main problem encountered so far seems to be that their clothing is not staying dry on the inside as it should. They are unable to take their clothes off for drying, any water inside would freeze instantly!

The team has confirmed reception of UoSAT-11 digitalker position reports. The ICOM Micro 2 AT radios appear to be working properly. Celestial navigation is used to supplement the digitalker reports.

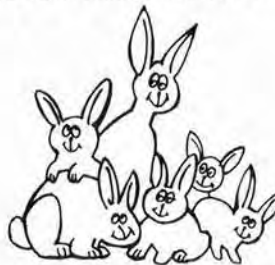
UoSAT-11 reception from southern California is varied but educational teams around the country are reporting that use of a handheld radio that can be moved around for best quieting on the FM signal is usually superior to use of an FM base receiver with a outside vertical antenna.

For best results, take a handheld two meter rig out to an open area during a UoSAT pass, and hold it in different positions at different attitudes until the signal is clear enough to copy. I've done this myself with good results. Digitalker position reports alternate with digital data at two to three minute intervals. Either is unmistakable once the signal is acquired.

I've prepared a short list of the very best UoSAT -11 passes through April. AOS is acquisition of signal time. LOS is loss of signal time. MAX is time of best elevation during the pass. Usually, signals will be best a few minutes before and after MAX. All times and the date are UTC; 30 Mar 88 at 0520 is, for example, 9:20 p.m. on 29 Mar 88 PST.

DATE	AOS	LOS	MAX	ORBIT#
28 MAR 88	1742	1756	1749	21743
30 MAR 88	0520	0534	0527	21765
31 MAR 88	1758	1812	1805	21787
01 APR 88	0458	0511	0504	21794
04 APR 88	0513	0527	0520	21838
05 APR 88	1751	1805	1758	21860
07 APR 88	0528	0542	0535	21882
08 APR 88	1806	1820	1813	21904
09 APR 88	0506	0520	0513	21911
10 APR 88	1744	1758	1751	21933
12 APR 88	0521	0535	0528	21955
13 APR 88	1800	1814	1807	21977
14 APR 88	0459	0513	0506	21984
17 APR 88	0515	0529	0522	22028
18 APR 88	1753	1807	1800	22050
21 APR 88	1808	1822	1815	22094
22 APR 88	0508	0522	0515	22101
23 APR 88	1746	1800	1753	22123
25 APR 88	0523	0537	0530	22145
26 APR 88	1801	1815	1808	22167
27 APR 88	0501	0515	0508	22174
30 APR 88	0516	0530	0523	22218

Finally, Skitrek operations have been heard on about 14.125 MHz upper sideband. This is in the Canadian phone band of 20 meters, not the U. S. one, but the base station operators will ordinarily QSY to the U. S. phone band for contacts once they have completed their Skitrek 'business.'



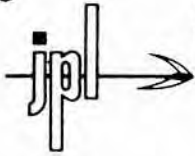
March 21, 1988  
R.P. McKinney

#### MEMBERSHIP SERVICES AVAILABLE

The JPL Amateur Radio Club Board of Directors voted at their February 24, 1988 meeting to create to position of Membership Services Chairman. Rick McKinney was appointed to fill the position.

The newly created position of Membership Services Chairman has been assigned responsibility for handling the following items:

1. JPL Amateur Radio Club Memberships: including new membership applications, renewal notices, membership cards, maintenance of the primary club database and forwarding address changes to the club secretary.
2. ARRL Membership: including information literature and new member applications and renewals.
3. Affiliated Memberships: maintain memberships in affiliated organizations such as WESTLINK, AMSAT and LAACARC.
4. FCC Renewal: maintain a stock of FCC Form 610s, maintain a list of location and times for upgrade exams.
5. Training Tapes: maintain a lending library for code instruction and practice for loan to club members and others interested in learning code.



This month marks the 11th. Anniversary of the Repeater's Initial Operation. Merv MacMedan submitted this page from that time frame

Amateur Radio Club



W6VIO

Newsletter

CALLING

JET PROPULSION LABORATORY

4800 OAK GROVE DRIVE,

PASADENA, CALIFORNIA 91103



AMSAT

Vol. 7 No. 3

MARCH 1977

PRESIDENT:	Jim Lumsden	WA6MYJ	VICE-PRESIDENT:	Dick Piety	K6SVP
SECRETARY:	Jack Patzold	WB6TXG	TREASURER:	Ron Ploszaj	WA6TPW
DIRECTOR-AT-LARGE:	Stan Brokl	K6YYQ	EMERGENCY COMMUNICATIONS MGR:		
TRUSTEE:	Jay Holladay	W6EJJ	EDITOR:	Merv MacMedan	W6IUW

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CLUB MEETINGS: 2nd Wednesday of each month at 12:00 noon, in 238-543. All welcome. NEXT ONE: MARCH 9!

BOARD OF DIRECTORS MEETINGS: 4th Wednesday of each month, 12:00 in 198-111. Club members invited.

WR6APQ ON THE AIR!

On Friday evening, February 4th, Walt Diem WA6PEA was feverishly putting on the finishing touches to his adjustments of the repeater in its temporary location at JPL. Now it was time to put it on the air. He applied power, and, as is characteristic with this equipment, a brief squelch tail was sent out on the air during the powering-up instant. Immediately two stations came back: K6KVC and WA6TPW. Walt was flabbergasted and grabbed the station mike to reply. We can really say these guys were on the repeater from the moment it went on the air!

It operated for the next few weeks with a number of band-aid patches. The 4-cavity duplexer didn't seem to give enough isolation to permit running on one antenna, so two antennas were used until two more cavities could be built and installed. Some problems were noted in the repeater timer being erratic, and this was finally traced to a leaky tantalum capacitor which was replaced. A hum in the audio was cured by shielding certain audio cables, and a swishing signal that appeared to pass through the repeater signal was found to be caused by an IC regulator chip that was oscillating intermittently. Special thanks go to Bill Wood, WB6FXJ, for his technical assistance in tuning up the cavities properly, and help in debugging a number of other problems that plagued the early repeater operation.

Right now the machine seems to be operating well, and we have some leads on getting a weatherproof enclosure to house it up the mountain. As soon as that is placed in position and facilities are approved, we will be moving it there, and besides the improved coverage from the higher location, we expect to have the 6 db gain 4-dipole antenna in operation to further help. So, those experiencing spotty coverage right now, don't despair - just have patience!

The club's 220 MHz transceiver had some problems, so it was returned to the manufacturer under warranty for repairs. It has been received back now and, as soon as the repeater committee checks it in the lab for performance (mainly tests of receiver sensitivity and transmitter power output) it will be installed in the trailer for members' use.

WR6APQ provided the first QSO for a newly licensed member, Don Lawson, WA6SQF. When Don got home on

February 25th, his ticket was waiting and he pushed the mike button for his first solo contact, which was with WA6PEA. I hope Walt and WR6APQ provided the proper orientation for Don and that he will enjoy ham radio and WR6APQ for many years hence.

It would seem reasonable to chronicle in these pages other calls that have been heard on the repeater. As more come on, let me know and I will try to list them, either here or as a directory. During the first month's operation so far, we can count the following as users:

WA6PEA	WA6TPW	WB6TEB
WA6HHU	W6IUW	K6PGX
WB6MJK	W6EJJ	WB6FXJ
K6CYY	WA6JBZ	WA6SQF
W6ZH	K6JUB	
K6KVC	WB6WXX	

Several members are still awaiting delivery of their gear, so we expect the list to grow quite soon, as they, too, join us. It would seem that there is certainly no question as to whether or not there is enough club interest to support a repeater! And, the autopatch machine is well underway too. If you'd like to join and don't yet have 220 gear, see last month's issue - Steve Bednarczyk, WB6MJK, is putting together another group purchase. His Ext. is 7749. [Tnx WA6PEA, W6EJJ, W6IUW]

SUBSCRIPTION BARGAIN - 73 MAGAZINE

For those interested in subscribing to 73 Magazine, the publishers are offering a special deal to clubs. Newsstand price is \$2 per copy; regular subscriptions are \$15/year, and the club deal is \$10/ year for new subscribers only, but the club must submit 5 or multiples of 5 to get the rate. As a club bonus, they will send 30 back issues of the magazine free to the club (except the club pays \$3 postage for that shipment) for every group of 5 new subscriptions it digs up for Mr. Green. If this sounds like your bag and you'd like to take advantage of the offer, contact the club Secretary, Ron Ploszaj, WA6TPW, at Ext. 4429.

ARRL HQ INSTALLS HOT LINE or "THIS IS A RECORDING"

ARRL HQ in Newington, Conn. has installed a hot line to receive important amateur radio news with them at any time, day or night, on a recording machine. They will spread the word as appropriate. If you have news call "ARRL Newsline" at 203-667-0138. [Tnx W6EJJ]

# The Foundation For Amateur Radio



Washington, D.C.

# NEWS RELEASE

FOR IMMEDIATE RELEASE

THE FOUNDATION FOR AMATEUR RADIO, INC., a non-profit organization with headquarters in Washington, D.C., plans to award twenty-eight scholarships for the academic year 1988-89 to assist licensed Radio Amateurs. The foundation, composed of fifty local area Amateur Radio Clubs, fully funds six of these scholarships with the income from grants and its annual Hamfest. It administers without cost to the donors, seven (7) scholarships for the Quarter Century Wireless Association, two (2) each for the Dade (FL) Radio Club, the Baltimore (MD) Amateur Radio Club, the Department of State Amateur Radio Club, the Amateur Radio News Service, the 10-10 International Net, the Radio Club of America and one (1) each for the Richard G. Chichester Memorial, the Young Ladies' Radio League, the Columbia (MD) Amateur Radio Association, the Frederick (MD) Amateur Radio Club and the Vienna (VA) Wireless Society.

Licensed Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled or have been accepted for enrollment at an accredited university, college or technical school. Some of the scholarships require the holding of at least an FCC GENERAL Class license or equivalent. The awards range from \$500 to \$2000 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs.

Additional information and application forms can be requested by letter or QSL card, postmarked prior to May 31, 1988 from:

F A R Scholarships  
6903 Rhode Island Avenue  
College Park, MD 20740

The Foundation for Amateur Radio, incorporated in the District of Columbia, qualifies as a non-profit organization under Section 501(c) (3) of the Internal Revenue Code of 1954. It is devoted exclusively to promoting the interests of Amateur Radio and those scientific, literary and educational pursuits that advance the purposes of the Amateur Radio Service.



AFFILIATED

# **SCHOLARSHIPS**

*THE DAYTON AMATEUR RADIO  
ASSOCIATION IS NOW ACCEPTING  
APPLICATIONS FOR ITS ANNUAL  
\$1,000 SCHOLARSHIPS.*

*LICENSED AMATEURS  
GRADUATING FROM HIGH SCHOOL  
IN 1988 ARE ELIGIBLE. PLEASE  
MAKE THIS KNOWN TO ANY  
AMATEURS IN YOUR AREA  
WHO MAY QUALIFY.*

*FOR FURTHER INFORMATION AND  
APPLICATION FORMS WRITE  
DARA SCHOLARSHIPS,  
317 ERNST AVE.,  
DAYTON, OHIO 45405*



# A Bureaucrat's Guide to Chocolate Chip Cookies

by Susan E. Russ

Reprinted with permission of the Washington Post.

For those government employees and bureaucrats who have problems with standard recipes, here's one that should make the grade—a classic version of the chocolate chip cookie translated for easy reading.

Total Lead Time: 35 minutes.

Inputs:

- 1 cup packed brown sugar
- ½ cup granulated sugar
- ½ cup softened butter
- ½ cup shortening
- 2 eggs
- 1½ teaspoons vanilla
- 2½ cups all-purpose flour
- 1 teaspoon baking soda
- ½ teaspoon salt
- 12-ounce package semi-sweet chocolate pieces
- 1 cup chopped walnuts or pecans

Guidance:

After procurement actions, decontainerize inputs. Perform measurement tasks on a case-by-case basis. In a mixing type bowl, impact



heavily on brown sugar, granulated sugar, softened butter and shortening. Coordinate the interface of eggs and vanilla, avoiding an overrun scenario to the best of your skills and abilities.

At this point in time, leverage flour, baking soda and salt into a bowl and aggregate. Equalize with prior mixture and develop intense and continuous liaison among inputs until well-coordinated. Associate key chocolate and nut subsystems and execute stirring operations.

Within this time frame, take action to prepare the heating environment for throughput by manually setting the oven baking unit by hand to a temperature of 375 degrees Fahrenheit (190 degrees Celsius). Drop mixture in an ongoing fashion from a teaspoon implement onto an ungreased cookie sheet at intervals sufficient enough apart to permit total and permanent separation of throughputs to the maximum extent practicable under operating conditions.

Position cookie sheet in a bake situation and surveil for 8 to 10 minutes or until cooking action terminates. Initiate coordination of outputs within the cooling rack function. Containerize, wrap in red tape and disseminate to authorized staff personnel on a timely and expeditious basis.

Output:

Six dozen official government chocolate chip cookie units.

Sid - After your CCC article in WBV10 calling and ensuing on-the-air discussions, I thought you'd enjoy this one.  
 —Mam.