

NOVEMBER



1986



W6VIO

CALLING



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MAIL STOP

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

PRESIDENT: Carl de Silveira KG6LG
VICE PRES: Walt Mushagian K6DNS
SECRETARY: Sid Johnson WB6VWH
TREASURER: Richard McKinney KA6DAN
DIR. AT LG: Jon Adams N46H
TRUSTEE: Jay Holladay W6EJJ
EDITOR: Eileen McKinney KA6DGV



Dr. Nakajima - seated Photo by Norm Chalfin K6PGX
Mr. Naguro - standing

VISITORS FROM JA LAND

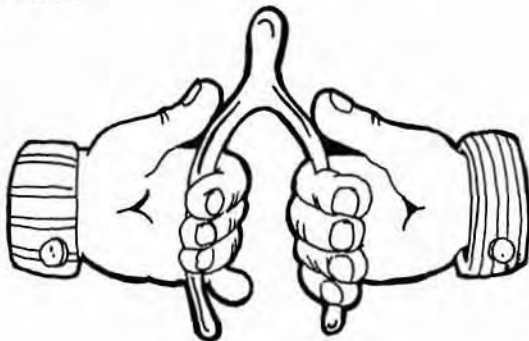
HEAR YE ALL CLUB MEMBERS !!!!!!!!

THE TIME OF YEAR HAS COME AGAIN TO SUBMIT NOMINATIONS FOR CLUB OFFICERS. THE OFFICES ARE PRESIDENT, VICE-PRESIDENT, SECRETARY AND TREASURER. ANY MEMBER WISHING TO BE NOMINATED SHOULD CONTACT ME, JEROME HAWKES X42542 or X42034, BEFORE THE DECEMBER MEETING OR BE AT THE DECEMBER MEETING.

THE VITALITY OF THE CLUB IS IN YOUR HANDS.

GO FOR IT!

BE THERE!



HAPPY THANKSGIVING and may all of your wishes for the holidays come true.

The JPL ARC Shack was honored recently by a visit from Dr. Isao NAKAJIMA, JH1RNZ a well known Amateur from Japan. Isao was here following the delivery of a paper at a conference in Washington, D.C. on medical imaging techniques. He is connected with Tokai University Department of Emergency and Critical Care Medicine. He is also associated with the Japanese Ministry of Posts and Telecommunications, Satellite Communications Division Radio Research Laboratories where he has been engaged in activities relating to the use of SARSAT to establish whether or not there are survivors of a catastrophic event such as an aircraft crash or other event. The principal area being studied is: can one determine from a satellite that there are survivors by sensing vital signs.

Dr. Nakajima gained some recognition recently when he made the first two-way Slow Scan TV contacts with the Shuttle Astronauts during the recent SAREX experiment.

Kazufumi Naguro who is with TRIO-Kenwood in Compton accompanied Dr. Nakajima. During the visit here the Japanese hams were shown the SSTV installation at the shack, the Medical and Mission Imaging Labs, and the Exhibits in Von Karmann Auditorium. They were also treated to a performance of the latest edition of Welcome to Outer Space, the multimedia show in Von Karmann. (K6PGX)

DX NEWS

This is real production! I just received my W6VIO CALLING today and am typing my new DXNEWS article for next month--all on the same day. It turns out that my DX information source will be out of the country for the next several weeks, so I won't have access to the next issue of the LIDX Bulletin in time for the traditional "last minute" update. Conditions have been reasonably good, based on my observations for the past few weeks. I even worked many Europeans during the CQ Phone Contest from the ole cabin with 100 watts and a low dipole on 20 meters. Now that's an accomplishment! Now for the news:

ABU AIL - JF1IST sporting a J20/A call is expected to operate from this rare location within a few weeks.

ALGIERS - 7X2LS conducts daily schedules from 2100Z on 14160, 14183, and 14227 kHz.

CAMEROON - TJ1AP can be found operating cw near 14008 kHz from 1700Z.

CYPRUS - 5B4SC, with a big signal, operates daily near 14228 kHz from 1830Z.

DIEGO GARCIA - VQ9GB can be found as follows: 3505kHz-1300Z, 21025kHz-1630Z, 14030 or 14220 to 14224kHz-1900Z.

DJIBOUTI - J28DS operates on 21006 kHz from 1700Z.

HEARD ISLAND - An operation from here will be attempted, weather permitting, starting either 9 or 29 November. The departure date, in either event, will be 20 or 21 January, 1987. No calls or other information is available at this time.

JAN MAYAN ISLAND - JX5AG is reported from 14006 to 14010 kHz daily from 1400Z. This may be a bit early for West Coast propagation to this area.

SPRATLEY ISLAND - Mark your calendar for this one. K6EDV is leaving to join some DU amateurs on a Spratley Island DXpedition on 15 January. I'll publish more information on this one as soon as I receive it. You may remember that several radio amateurs were killed by gunfire during the last attempt to operate from Spratley.

TANZANIA - 5H3ZO is available on 21025 kHz from 1630Z and 14025-14030 kHz from 1800Z.

That's all folks. Now let's get in there and work 'em!
Good DXing, Bob, N6ET

CLASSIFIED ADS SECTION

FOR SALE: 220 MHz HANDHELDS

ICOM IC-3AT, extra battery & charger.
\$150.00

KENWOOD mini (2 months old), extra
battery & charger \$150.00

Call Skip W6PAJ

X-39108 Home (714) 592-6107////////////////////

MINUTES OF BOARD
OCT 29, 1986

PRESENT: Jon Adams, Harry Enmark, Sid Johnson, Merv MacMedan, Rick McKinney, Walt Mushagian, JohnRepar.

Meeting conducted by W. Mushagian, Carl de Silveria on travel.

OLD BUSINESS:

1. A discussion was held regarding new clubstorage facilities. R. McKinney and J. Repar stated that the ERC plans to install a steel cargocontainer, one half of which could be used by the radio club. Location of the storage trailer has not yet been decided.

2. Discussion was held on the application for club membership by an off-lab requestor. Since the applicant has no affiliation with the lab it was decided to deny the request at this time, but invite him to participate in all club sponsored activities.

NEW BUSINESS:

1. Jerry Hawkes stated a call for nominations for 87 officers would appear in the Nov. issue of W6VIO calling. The new slate of officers will be presented at the December general meeting.

2. Station equipment upgrade was brought up and the following actions were decided. Jerry Hawkes to procure and install a dual filter in the present Kenwood TS 820. John Repar will procure a MFJ949C antenna tuner which will be used for field day use. Merv suggested we replace the Kenwood TS-130 with a rig that has better dynamic range as the 130 cannot be used in close proximity of other transmitters, such as during field day or commemoratives. It was decided to purchase a Kenwood TS 440 in 1987 and use the 130 as a "loaner" rig for new novices.

3. The Robot 1200 has been disconnected from the TS 820 due to AC hum problems associated with it. John Repar to contact Stan Sander regarding return of this unit to Robot. Sid Johnson Secretary

SUMMER FUN
de NW6H

Imagine yourself being at the very top of the world on a cool summer morning, the air so still that you can hear the very sounds of the mountains themselves. You feel confidence and power knowing that from your lofty position you are in absolute command of the dominions that lay sprawling below. After dining at a sumptuous breakfast table, you take yet another deep draught of clear mountain air and prepare yourself for the event for which you have been waiting a year ... FIELD DAY 1987 ! This is the Field Day you have all been awaiting... high atop the Blue Ridge in the eastern San Gabriels, the site of the 1985 JPL Field Day, the very same location that so many complained of the difficulty of reaching and yet so many attended ! This year it will be bigger and certainly better planned than in 1985... still 3A and still with the world's best food but with better antennas and more CW operators !

Mark your calendars for the weekend of June 27 and 28, 1987. This one you won't want to miss !

W6VIO CALLING
 PALOMAR AMATEUR RADIO CLUB
 TO W6VIO via W6HCD & N6NO

2 METER HANDY-TALKIE ANTENNA TESTS

On August 4, 1985, Bob Gonsett (WA6QQQ) and Dee Crumpton (N6ELP) set up a homebrew antenna range and used professional test gear to determine the relative gains of various handy-talkie antennas. Simply put, they pooled their collection of HT antennas, chose one at random as a "standard" (a stock Icom IC-2A rubber duck) and tested each of the remaining antennas on two radios and in two environmental settings (antenna ranges "A" & "B"). The results of their tests are attached.

HT antenna gain measurements are difficult to make because of the variations in the ways the radios (and therefore the antennas) are held and the way individual radios tend to load into a given antenna. Indeed, the operator is part of the antenna system and imparts directional characteristics to the radiated pattern. Keeping this in mind, an attempt was made to "average out" any directional properties by having the HT operator (N6ELP) transmit continuously while walking around the perimeter of a 10-foot diameter circle. The receiving antenna (a 20' AGL quarter wave ground plane about 100 feet away) was thus exposed to all sides of the transmitted signal. Two HTs were used to test the idea of PA loading variations.

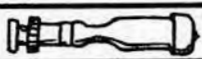

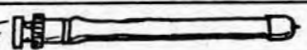
The ground plane receiving antenna was connected to half inch diameter hardline coax and terminated in a Potomac Instruments Type FIM-71 field strength meter which in turn was connected to an Esterline Angus Model MS401BB servo driven strip chart recorder. WA6QQQ supervised the measuring program and analyzed the data in order to determine the median strength of each antenna tested. The gain of the reference IC-2A antenna was measured at the beginning, middle and end of each series of measurements and the median of these values was defined as 0 dB gain (against which the other antennas were compared). This procedure also permitted the HT's output powers to be checked for stability (no significant variations were found).

Finally, two supplemental tests were run. First, when the reference ICOM IC-2A antenna was used, the apparent antenna gain dropped by 11 to 27 dB when the HT's were belt mounted. (Don't belt mount your HT and expect to be able to transmit any distance!) However, when the antenna was clipped to a metal headband and connected to a belt mounted HT with a short length of coax (this assembly made by a company in Dayton, Ohio), near normal antenna gain was restored. In both cases, however, increased multipath was noted on the strip chart recorder.

Enjoy the results of the measurements. While they're not elaborate, they will help you separate fact from fiction in a field where rumors abound.

HANDY-TALKIE ANTENNA GAIN MEASUREMENTS, XMIT MODE (LOW POWER), 146.55 MHz
 AUGUST 4, 1985 - WA6QPP & NGELP

dB GAIN RELATIVE TO STOCK IC-2A ANTENNA

ANT #	— ANTENNA TESTED —	LENGTH	WEIGHT (OZ.)	PERFORMANCE ON IC-2A		PERFORMANCE ON TR-2600A		INTERPOLATED MEDIAN OF ALL RUNS	
				RANGE A	RANGE B	RANGE A	RANGE B		
RUBBER DUCKS	1	STUBBY DUCK, TUNED ANT. CO. 	4"	1.1	-0.4	+0.4	0.0	-2.9	-0.2
	2	STUBBY DUCK, TUNED ANT. CO. (LOOKED LIKE AN OLDER MODEL)	4"	1.1	-0.4	-1.0	-2.1	-3.1	-1.6
	3	LARSEN SHORT CUT 	10 1/2"	1.8	-0.4	-0.8	-0.4	-1.0	-0.6
	4	LARSEN KÜL DUCKIE 	7 1/2"	1.4	-2.9	-3.3	-1.7	-2.5	-2.7
	5	STOCK ANT. FOR KENWOOD TR-2600A	7"	0.8	-2.9	-2.9	-4.6	-3.7	-3.3

	ANTENNA	LENGTH	WEIGHT (OZ.)	PERFORMANCE ON IC-2A		PERFORMANCE ON TR-2600A		INTERPOLATED MEDIAN OF ALL RUNS		
				RANGE A	RANGE B	RANGE A	RANGE B			
TELESCOPING ANTENNAS	FULLY EXTENDED	6E	MODUBLOX SP-146 SKY PROBE	43"	3.3	+3.3	+13.7	+10.8	+10.8	+12.1
		7E	AEA HOT ROD (RED SHRINK TUBING ON COIL) ^{MODEL HR-1}	40 1/2"	1.8	+3.7	+13.3	+10.0	+10.0	+11.7
		8E	SUPER-STICK II (1/8-WAVE), TUNED ANT. CO.	55"	4.0	+7.9	+7.5	+7.9	+7.5	+7.7
	9E	SUPER STICK II WITH MODIFIED COIL: SHRINK TUBING REPLACED WITH #33 SCOTCH ELECTRICAL TAPE	54"	4.0	+6.4	+7.5	+7.9	+6.6	+7.1	
	FULLY COLLAPSED	6C	MODUBLOX SP-146 SKY PROBE	8 1/2"	3.3	-1.7	-2.9	-9.1	-7.5	-5.2
		7C	AEA HOT ROD (RED SHRINK TUBING ON COIL) ^{MODEL HR-1}	8 1/2"	1.8	-5.0	-3.7	-1.7	-1.7	-2.7
		8C	SUPER-STICK II (1/8-WAVE), TUNED ANT. CO.	10"	4.0	-4.6	-4.6	-3.7	-3.3	-4.2
		9C	SUPER STICK II WITH MODIFIED COIL: SHRINK TUBING REPLACED WITH #33 SCOTCH ELECTRICAL TAPE	10"	4.0	-4.2	-5.0	-1.7	-4.2	-4.2

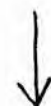
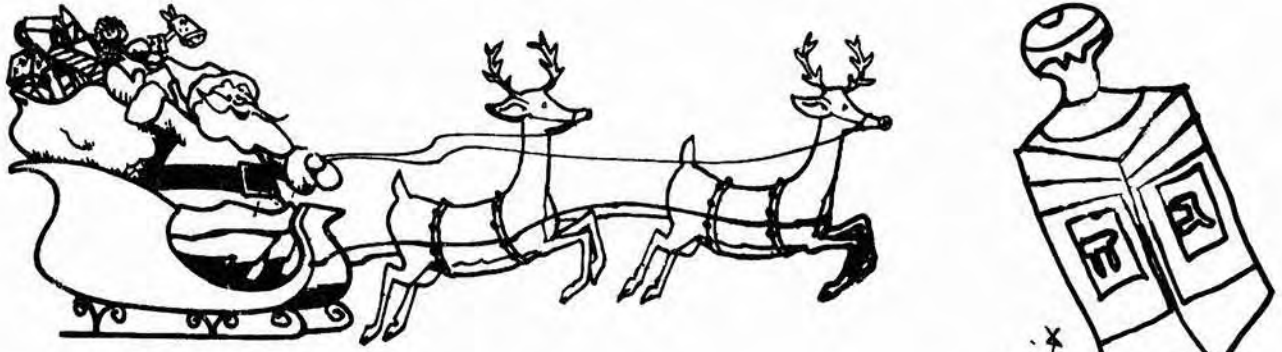
OUT-OF-BAND ANTENNAS	10E	SUPER STICK III (1/8 WAVE FOR 220 MHz), TUNED ANT. CO.	34 1/2"	3.4	+4.6	+4.2	+6.2	+5.8	+5.2
	10C	SAME AS ABOVE, BUT COLLAPSED	9"	3.4	-7.9	-7.9	-4.6	-5.8	-6.9
	11	BEARCAT 101 SCANNER ANTENNA	6 1/2"	1.5	-8.3	-9.5	-4.6	-7.9	-8.1
	12	ICOM 3AT (220 MHz) STOCK DUCK	7"	1.1	-12.5	-12.0	-9.5	-10.0	-11.0

W6VIO CALLING

COOKIE RECIPE OR LEAVING CARROTS FOR SANTA'S REINDEER OR WALKS TO CHURCH AT MIDNIGHT OR GOING UP TO THE SNOW EACH YEAR

HOLIDAY TRADITIONS

WHAT DO YOU AND YOUR FAMILY DO FOR THE HOLIDAYS?



Please don't forget, I'm writing this on my lunch!
Eileen

I NEED IT BACK BY DEC. 8TH.

PLEASE WOULD YOU JUST TAKE A MINUTE AND FILL THIS OUT NOW, THEN JUST DROP IT INTO THE MAIL - ADDRESS ON FRONT, THIS IS FOR THE DECEMBER ISSUE AND IT WILL BE SUCH A NICE ARTICLE IF WE CAN GET BACK EVERYONE'S FORM. 88'S EILEEN

NAME: _____ CALL SIGN: _____

FOR THE HOLIDAYS MY FAMILY HAS THE FOLLOWING TRADITION AND/OR RECIPE THAT WE CHERISH:

USE BACK OF THIS FORM IF YOU NEED EXTRA ROOM - PLEASE DON'T FORGET TO MAIL IT