JULY 1971 ** THE DX'ER ** VOL. XXI NO. 7

THE NORTHERN CALIFORNIA DX CLUB, INC.
FOUNDED 1946 - CLUB CALL W6TI

President	WB6UJO
Vice President	K6KQJ
Secretary	WA6ISX
Treasurer	K6AUQ
Directors	WA6AID W6PTS WA6AHF
DX'ER Editors	K6AUC and K6HIH
W6TI Trustee	W6RCQ
Membership Committee	K6AUC, WA6BVY, K4BVD/6 WB6CAB, W6CDJ
Calif. Award Manager	K6AQ

The purposes for which this Club is organized are to bring together radio amateurs interested in DX; To elevate the standards of practice and ethics in the use of amateur radio communications; To paricipate in the exchange of knowledge methods or any other expedient that would be mutually beneficial to the members in achieving DX accomplishments.

DX Bulletins are sent Sundays at 1800 GMT or Mondays at 0200 GMT on 14002 MHz by W6TI.
2-Meter repeater Frequencies are; Input 147.96 MHz

Output 147.18 MHz

Simplex 147.90 MHz

NEWS--ALL contributions must be received by the 25th of the Month. Items may be sent to.

Clifton T. Beck K6HIH
2523 O'harte Rd.
San Pablo, California 94806
PHONE: 758-3144

MINUTES - JUNE 1971 MEETING - NCDXC

The June 1971 meeting of the NCDXC was held on June 11th at the Black Angus in San Mateo. Present were 43 members, XYLs, YLs and guests. The meeting was called to order by President, Don Schliesser, W6MAV.

It was motioned to dispense with the reading of the May minutes which appeared in the current issue of the DX'er.

Treasurer, Vince Chinn, K6KQN reported a May 31st of $854.00 in the treasury.

Recognition was given to Larry Boyle WA6LHN who has generously contributed his time in building several vital parts for the club repeater.

Don, W6MAV reported to the membership that the repeater is now in service. It was advised that the members who are now on the repeater and the members who will be getting on the repeater have crystals to simplex on the output channel (147.18) and also simplex on 147.90. This is to avoid using the national frequency of 146.94....and overcrowed frequency. The repeater frequencies are 147.96 (input) and 14718 (output).

Election of new officers were conducted and the following were elected to the forth coming term:

President	Wes Louden WB6UJO
Vice-Pres	Vince Chinn K6KQN
Secretary	Harley Licht WA6ISX
Treasurer	John Jarson K6AUC

Among the guest introduced was John, ZS5JM who elaborated briefly on his activities from Africa.

Jim W6CUF motioned that the NCDXC sponsor a CQ Magazine Trophy for the highest scorer in the CQ DX Contest from ASia. This trophy whould be a perpetual award covering SSB & CW. It was seconded and passed by the membership.

It was suggested by Don, W6MAV that the NCDXC have a breakfast at the ARRL Convention in July.

The finale and highlight of the meeting was the activities reported by the members in the DX Roundtable.

The meeting was adjourned at 11:35 P.M.

Vincent M. Chinn K6KQN
Secretary - Treasurer

REPEATER TALK

Well, its up, it works - and from all indications, rather well.

It seems worthwhile to answer a few questions that have arisen and suggest some basic operating procedure until the Board of Directors sets up a formal set of procedures.

The repeater input is 147.96 MHZ, output 147.18 MHZ. The reason for the high-in-low-out is because of other repeater outputs near our output. If the input was low - the chance of interference from other repeaters would be great. The frequencies came from the California Amateur Relay Council which coordinates, for the benefit of all concerned, frequencies in the areas.

Deviation of the repeater is about 7KHZ and your transmitter should be set for 7KHZ also.

It is located at the home of Lee Shaklee, W6BH, who has given us the space and power at no cost to the Club. Lee's site is 1200 feet in the Oakland Hills. The antennas are currently 3DB ground planes and eventually 6DB ground planes will be used.

The repeater presently is using a Curtis ID'er supplied at cost by our friend Jack Curtis. We have a 3 minute timer which will eventually be installed. This was built and donated by Larry Boyle, WA6LHN, who isn't even a member as yet. When the timer is installed, if anyone station gets windy and transmits over 3 minutes at anyone time, the repeater will shut off and be reset automatically when the carrier on the input is dropped. The main purpose for this timer is to guard against outside interference keeping the transmitter on.

The repeater is accessible 24 hours a day by putting a carrier on the input. The ID'er is ready at all times, and when stations are operating through the repeater it will identify W6TI/6 every 7 minutes. When stations have not gone through the repeater for 7 minutes, the ID'er will remain quiescent and will instantly ID when a station comes through and then every 7 minutes thereafter until no more traffic through for 7 minutes.

Lets suggest some procedures:

1. When you initially come on proper ID is "W6TI/6 DE W6MAV". You are talking to the repeater and your 2 meter log should show W6TI/6 on and off.

2. After you have done (1) above, then call whoever you want or just talk. You need not identify your station again until you hear the ID'er. At that time you should Identify again as in (1). Listening the past week there has been much more ID'ing than is necessary. Let's use the time to pass DX info.

3. When you are leaving the frequency proper ID is "W6TI/6 DE W6MAV Clear".

Anymore ID than the above is redundant and useless.

Remember, in dealing with repeaters, you are only talking to the repeater, legally, and other Identifying should, and is for convenience only.

The repeater is a Club Repeater and therefore non-club members should, in general, be discouraged from operating, "just to be on a repeater".

Occasional transients and/or special cases should be welcomed, however, the basic reason for the repeater should be kept in mind and, the fact that there are a number of other repeaters in the area for general conversation.

Along with your repeater crystals you should have 2 other channels. First - a transmit crystal on the repeater output 147.18 MHZ. The same receive crystal can be used via a jumper. The purpose of simplex on the output is that it gives flexibility of operation when the repeater is down for repairs, and can be used when a mobile station is close to someone he wants to contact and since most of us will normally leave our 2 meter rigs on the repeater channel it is a common frequency one can be called on.

Second, you should have a transmit and receive crystal on a third channel 147.90 MHZ. This is a simplex frequency assigned by the CARC to be used for 2 or more stations to pass traffic directly - traffic not of general interest to the repeater listeners.

If you want to have a discussion with one or more stations the procedure should be to call them on the repeater and then move to 147.90 MHZ simplex.

In the near future I hope the Club will have test equipment available for all members' use to set frequency, deviation, etc.

Remember that the repeater can only accept one signal at a time and as more members appear we must all keep in mind to keep our transmissions short.

You will note there is a 3-4 second delay before the repeater drops out. This is to keep the relays in the repeater from cycling each time a station goes through. There is no need to wait until the repeater drops out to transmit, however, it will help to pause before talking to allow other stations to break in and out.

I see a lot of good can come from use of the repeater and many more stations will be heard from and be able to hear than ever could have on AM.

Any suggestions will be appreciated on repeater operation.

W6MAV

P.S. Included in this month's DX'er is a schematic on how to modify your AM transmitter for FM. Also a good circuit appeared in 73 Magazine April 1971, page 121. The coil referred to in this article can be an XR-50, locally available. The paper that comes with the coil tells how many turns to use for a given frequency.

MAV

ADD to your roster's:

K6UXV Robert J. Saleeby
304 Rio Del Mar Blvd.
Aptos, California 95003
PH: 408-688-5836

W6JHV
John P. Nelson
P.O. Box 541
Lower Lake, Cailf. 95457

5BDXCC

	10	15	20	40	80
W6AM	133	164	210	137	112
WA6AHF	64	98	100	4	0
K6AHV	124	147	210	118	108
W6BH	134	166	230		
WA6BVY	85	127	100	34	6
W6CYX	116	112	117	47	32
W6DOD	58	91	103	31	18
W6ITD	27	62	110	11	
W6JHV	100	76	140	51	23
W6JKJ	124	145	170	110	42
WB6KBK	101	137	154	79	26
W6KG	102	112	166	91	33
W6NKR	27	80	130	115	33
W3NU	171	204	229	165	134
WB6WAV	49	87	100	16	2
WK6WR	100	100	100	55	56
W6WX	139106	176139	176	139	108
W6YVK	66	101	124	19	7

FOR SALE
MARS linear Amp. 4 811-A's Good Cond. See Don W6MAV Phone 223-9654

2 METER FM ADAPTOR

This article describes the FM adaptor used by W6ZYC to convert his AM Rig. Although it was designed for use with an ARC-3, it should work well with most any of the common transmitters that use 8-24 MHz crystals.

The basic circuit constists of an 8 MHz crystal oscillator, phase-modulated by a varicap diode, followed by a buffer/multipler stage. The buffer can be operated at the crystal freq. or used as a multiplier, depending on the requirements of the A.M. rig. The crystal oscillator in the ARC-5 uses 8 MHz crystals and doubles in the plate circuit. Best results were obtained from the adaptor by doubling in the multipler and using the original crystal oscillator as a straight through amplifier at 16 MHz. For output frequencies other than 16 MHz L-2 should be selected to resonate with approximately 60 pf capacity of the RG-58 cable and oscillator input. RF output at 16 MHZ is about 10 volts with 18 volts of B plus.

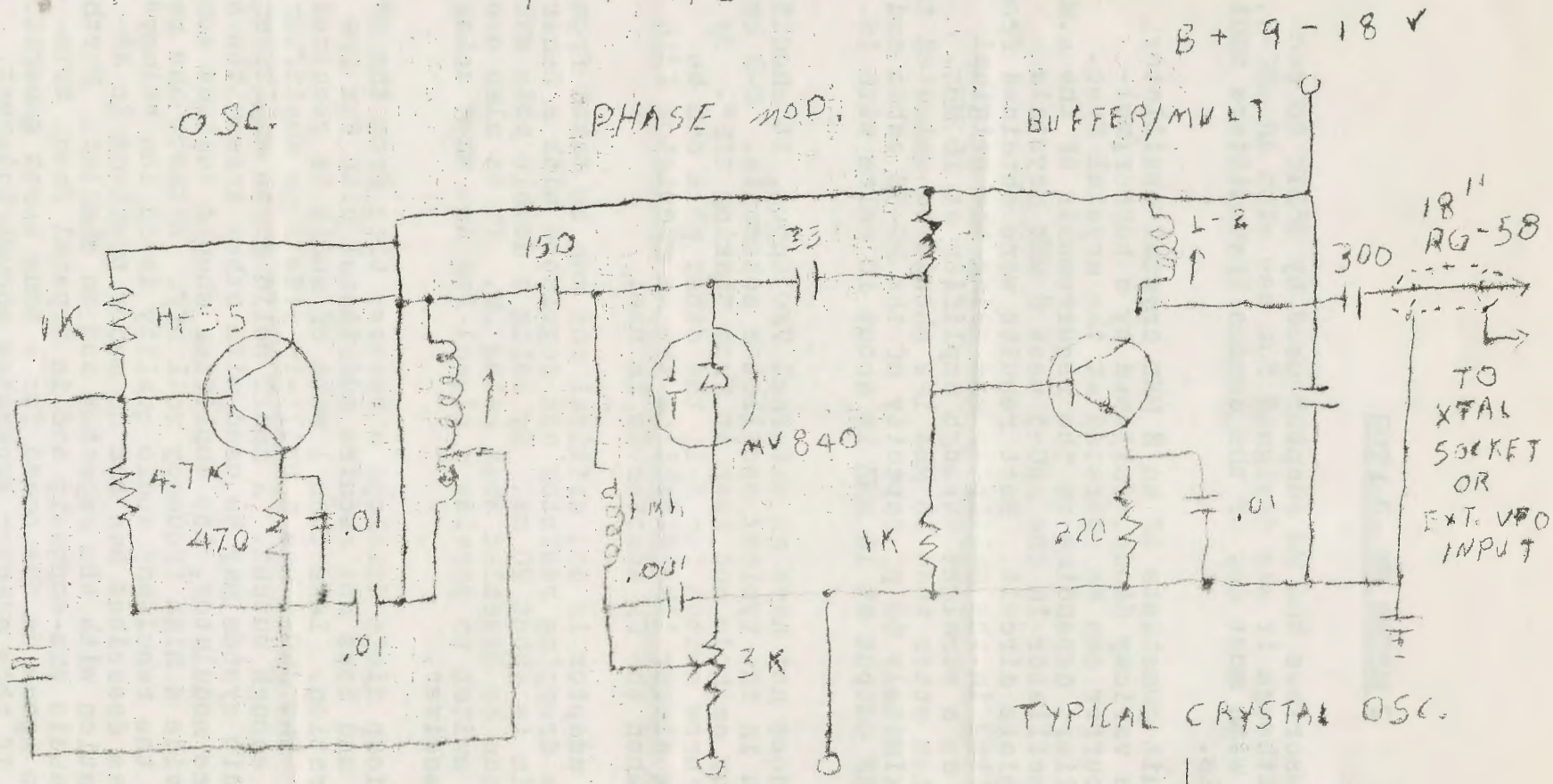
If the AM rig does not have an external VFO input, it should be modified as shown in the typical oscillator schematic. C-1 bypasses the oscillator cathode and keep it from "taking off". By selecting a double throw switch for S-1, the other pole can be used to do something clever like disabling the AM modulator filaments or cathodes when the FM adapter is in use.

B plus for the adaptor is not critical and can be taken from the AM rig through a dropping resistor and regulated with a Zener diode. Current drain is about 20 ma. By using a double pole switch for S-1, FM B plus can be disabled when using AM. It is also useful to add a "spot" switch to provide a signal for use when using a variable tuning receiver.

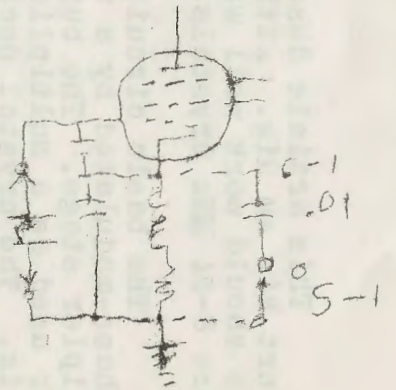
The MV 840 varicap diode develops a reverse bias from the RF voltage across L-1 and does not require additional bias for reasonably linear operation. Less than 1 watt of audio is required for full deviation. The ARC-5 has a built-in side tone amplifier which has more than enough output. A small solid state amplifier module or the AM audio system may be used with other transmitters. Since this is a phase modulator, the amplifier should include some pre-emphasis to provide a high frquency roll off. Without the required pre-emphasis the resultant audio quality is on the "timmy" side. The adaptor as described has had no major problems in adjustment or in operation with the repeater and on simplex. Further work is planned in audio pre-emphasis and in crystal freq. trimming. There is also space on the board for a tone burst generator when it is needed. If this adaptor generates enough interest, perhaps on of our enterprising members may wish to repackage it on an etched board which could be duplicated inexpensively to simplify construction

Good luck W6ZYC

FM ADAPTOR



TYPICAL CRYSTAL OSC.



	FREQ.	XTAL
RPT. INPUT	147.46	8.2200
SIMPLEX	147.18	8.1766
ALT.	147.90	8.2166

AUDIO INPUT
1 WATT MAX
~ 3K

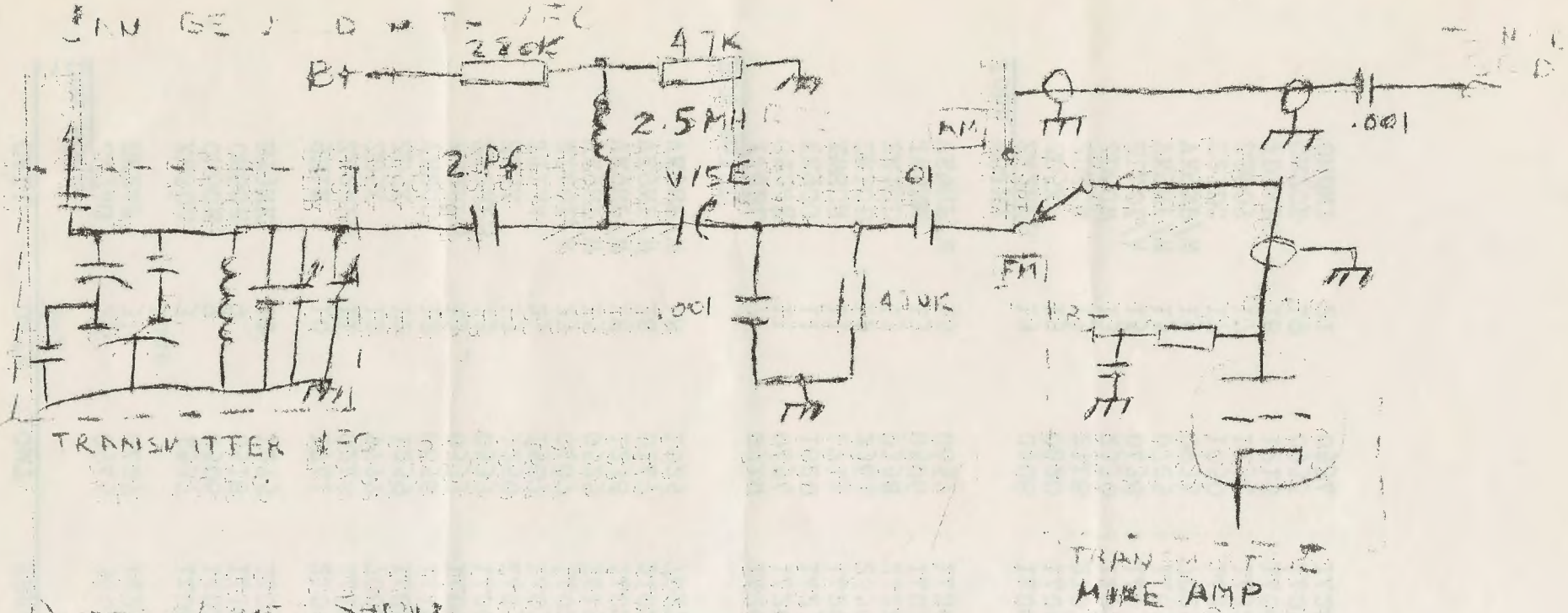
L-1 APPROX. 4 MH MILLER 20A476 RB1
TAPPED 2 TURNS FROM B+ END

L-2 FOR 16 MM L - APPROX - 2 MH - MILLER
20A226RB1

W6FYC

** NCDXC MEMBERS ACTIVITY REPORT **

CALL	DATE	GMT	FREQ	MODE	REMARKS
	May				
Don W6AM					
ZM7AG	27	0945	3802	SSB	
ZK2AF	31	0427	14236	"	Nive
	June				
XW8DZ	3	1537	14066	CW	
ON6CE	9	0506	14029	"	Rundy op.
ON6CE	9	0518	14188	SSB	QSL to W3ZA
BY3NK	10	12?5	14007	CW	Chen QSL to MP0.32 Canton.
9H1R	10	1741	21050	CW	
ZA2RPS	11	0246	14196	SSB	
ZD5X	12	????	7002	CW	
ZD5X	12	1259	14027	"	
VR2CC	12	0658	14195	SSB	
ZA2RPS	13	0333	14009	CW	
ZA2RPS	13	0533	14009	CW	
ZD5X	13	1250	14035	"	
JT1AA	23	1507	14033	"	
ZL4OL/A	23	0407	14027	"	
VK9NP/W	15	0525	14190	SSB	
VK9NP/W	18	1238	14026	CW	
VK9NP/W	18	0147	21027	"	
VK9NP/W	18	1025	7027	"	Willis Is.
Bob W6ITD					
YJ8BL	7	0710	14207	SSB	Bob
CT2AK	11	0454	14204	"	John
VK9GG	11	1620	14230	"	George via KL7GRF
XW8CN	11	1711	14207	"	Ban via DL7FT
ZK1CD	12	2341	28560	"	Barry via ZL2FA
ZK1CD	13	0358	21225	"	" " "
JW5NM	13	0506	14012	CW	Mat via LA7RB
VK9NP/W	15	0657	14209	SSB	
John W6JHV					
ZA2RPS	13	0506	14009	CW	#257
ZD5X	13	0620	14050	"	
ZD8CW	13	2146	21035	"	#258
ZD8CW	13	2330	14035	"	
ZL4OL/A	15	0438	14036	"	Campbell Is via ZL2GX
VK9NP/W	15	0725	14032	"	#259
VK9NP/W	15	0935	7025	"	
C21DC	17	1050	14308	SSB	
ZS6OY	17	1134	14320	"	LP
JD1ABO	18	1215	14068	CW	
CR7CD	19	0935	14053	CW	
OHØNI	21	0534	14280	SSB	



1/ DOTTED LINES SHOW EXISTING CIRCUITRY

2 VISE - VARICAP, TRW SEMICONDUCTOR

THIS CIRCUIT WILL EM A 2 METER VFO - EITHER EXTERNAL OR BUILT-IN.

THANKS TO K6AMA FOR THE CIRCUIT

.16 MAY

ACTIVITY REPORT (Continued)

CALL	DATE	GMT	FREQ	MODE	REMARKS
Tom W6KWE	June				
PY2BJH	5	0808	1804	CW	449 Both ways.
PY1DVG	5	0817	1804	"	His 56/79 My 579.
PY1DVG	5	0825	1804	SSB	" 45, My 56.
PY1DVG	12	0816	1801	CW	His 559 My 469.
PY1DVG	19	0814	1801	CW	" 339 My 459.
Who says 160 is dead in June! Above solid contacts were first PY-W6. My 19th country on 160.					
Bill K6LQA					
9E3USA	11	0119	14027	CW	via VE3IG.
UA2CV	12	0550	14070	"	Kaliningrad
JT1AA	19	1604	14037	"	Gan
George K6MHD					
KA2AS	5	1525	14	SSB	Wkg for Cal Award
DU7ER	10	1514	14	"	" " " "
ZK1CD	11	1522	14	"	
VK9NP/W	16	0144	21	"	
KA2SF	18	1549	14	"	
ZK1MA	20	0412	14	"	
Creston W6OKK					
BV2A	11	1441	14020	CW	JIM
ZL4OL/A	18	0444	14026	"	via ZL2GX Ascensin Is.
EA8HB	24	0204	14018	"	Joe
VR7TC	24	0237	14015	"	Meat via W1HRJ
JD1AB0	24	1315	14065	"	Dick Marcus Is.
James K6OZL					
ZM7AG	13	0656	14210	SSB	#293 FINALLY
VK9NP/W	16	0639	14290	"	#294
[illegible]C1EG	27	0010	14	CW	#295
Ted K6TP					
EIØDX	7	0345	14	SSB	Mike
ZL4OL/A	7	0515	"	"	via ZL2GX
LZ2AW	9	0426	"	CW	Kiro
EA8HB	10	0424	"	"	Joe
GW6YQ	11	0237	"	"	Geo.
UO5OAN	11	0357	"	"	Yura
ZA2RPS	13	0537	14008	"	VERY FORTUNATE!
CN8CE	13	0637	14	SSB	
VK9NP/W	17	0436	"	SSB	Willis Is Geo.
W					
Wesley WB6UJO					
KC6WS	15	1210	14332	SSB	Bill
JR1EDE	15	1230	14218	"	Ko via JARL
9V1QJ	15	1707	14203	"	Jack via WA5UHR
9M8FMF	16	1300	14226	"	Dick via W1YRC
9M8SPD	16	1620	14226	"	Mary
JD1AB0	21	0644	14210	"	John via JA1BA
YB5AAQ	22	1440	14224	"	John via W5ADZ
PZ9AC	26	0406	14308	"	Tjon

ACTIVITY REPORT (Continued)

CALL	DATE	GMT	FREQ	MODE	REMARKS
Brad K6WR	May				
IZ2EE	1	0524	14216	SSB	
VR5DK	1	1447	14202	"	
VU2KV	1	1553	14241	"	
XW8AX	2	1500	14235	"	
DX6GI	8	1554	14268	"	
VS6DO	9	1252	3807	"	
KD4ITU	15	1346	14214	"	Rudy W3ZA
VK4CGB	16	1339	14205	"	Larry
WZ6SNI	16	2352	7258	"	via WA6WWC
YJ8BC	20	0651	14248	"	
WM8ICH	23	1452	14233	"	
JW5NM	24	0509	14206	"	via LA7RB
VP1EJ	30	0039	21262	"	
FO8BS/W6KNH	30	0428	14202	"	Clyde on tour
CX4AQ	June 4	0533	7019	CW	
CX8BBH	5	0538	7018	"	
PJ2DS	5	0556	7010	"	
ZL2OY	5	0607	7012	"	
EIØDX	7	0551	14202	SSB	via EI5BX
YN1CW	10	0440	7003	CW	
5W1AI	10	0520	14212	SSB	Clyde on tour
OE2ASL	12	1720	21023	CW	
ZC4CB	12	1907	21003	"	Clive
9H1CL	12	2008	21023	"	John
CN8CG	13	0614	14213	SSB	
ZL5AX	15	0505	7005	CW	via ZL1SW
VK9NP/W	16	0236	21291	SSB	
VK9NP/W	16	0456	14189	"	
K2RM	20	0511	14221	"	Ex W6RM old club memb.
JD1ABO	20	0558	14204	"	
3B9DK	23	1421	14298	"	Darlene
UA9VH/JT1	23	1508	14289	"	
Everett W6YVK	May				
FG7TD	24	0445	14	SSB	Jack
KC4AAE	24	0507	"	"	Vostok-Dale
SP5DBW	25	0511	"	"	Andrelo
9M2DX	26	1426	"	"	Tara
ZK2AF	31	0456	"	"	Wally
IT9SPJ	June 1	0456	"	"	Luciano
HS4ACN	3	1457	"	"	Bob
9M8OEA	14	1407	"	"	Chuck
JD1ABO	21	0457	"	"	
IT9JT	21	0513	"	"	Frank
GI3JIM	21	0608	"	"	JIM