## RESULTS

OCTOBER 1-2, 1988



What A Difference a Year Makes Incredible conditions! Great activity! Lots of fun!

These are just a few of the ways that participants described the 1988 running of the California QSO Party (CQP), sponsored each year by the Northern California Contest Club (NCCC). The mediocre propagation which plagued the 1987 CQP, as well as the 1984, 1985, and 1986 Parties, gave way to some super band conditions in 1988. With the solar flux hovering near the 200-mark, the A at 5 and the K at zero, and low geomagnetic activity, it's no wonder that CQP entrants were able to form a 125 KC wide wall of RF on 10 sideband during both days of the contest!

Not only was propagation superb--so was activity. A record 364 logs were received from 56 of 58 California counties, 46 states, 7 Canadian sections, and 21 DXCC countries. It was another year of record-setting performances, as no less than 42 entrants set new single-op scoring marks--13 in CA and 26 out of state.

Many of the participants in the Cal QSO Party have concluded that the CQP is much more than just a contest. For most, it's plain and simply FUN! Unlike most other radiosporting events, in the CQP you don't need big antennas and an amplifier to make a good score. The Party provides out-of-state ops with the opportunity to work lots and lots of W6s, and to contact most or all of the counties they need for the NCCC-sponsored "Worked All California Counties" Award. And, for stations in the Golden State, it gives them the chance to "be DX," to be the "hunted" rather than the "hunters."

Long Live Ten Meters

Without a doubt, the story of the 1988 CQP was ten meters, the band on which just about every active participant made most of his/her QSOs. Ten was a "bottomless pit" of contest activity, especially so with all of the Novices and Technicians roaming the SSB portion of the band. In fact, those who tuned 15 and 20 during the day looking for stations to work may have thought that the CQP had been cancelled!

A few very interesting notes about the '88 Party-first, despite the great conditions, scores from California remained about the same as they were in 1987. In fact, the average California Top Ten score rose just a bit from 216K in '87 to 218.4K in 1988. One reason for this may be that 15, 20, and 40 meters went largely ignored

# 1988 CALIFORNIA QSO PARTY

until ten meter rates dwindled. As such, unlike the past few years where CQP activity shifted smoothly from band to band, CA entrants were not as likely to QSY and work the same station on four or five different bands and modes. In general, as it turned out, most California stations benefitted only a little bit from the fantastic propagation!

Outside CA it was a similar situation. The average Top Ten score actually declined from 82.8K in 1987 to 76.8K in 1988. However, when we rank the scores for the '88 Party, we find that 60 stations broke the 20 kilopoint mark, while only 50 did so in 1987. It seems that the better propagation made the medium and little gun stations more competitive, while providing the big guns with no extra advantage!

California Single-op Competition
Leading the pack of California
single-ops this year was Gary Caldwell (gee,
that's me!), WA6VEF, operating from station
N6BT in Santa Clara County. Gary's 326.8K
final score represents the biggest tally ever
made from California, eclipsing the previous
293K record set back in 1981 by N6TR. The
secret to his success was, you guessed it, 10
meters, where his 1,587 QSO total was 330
contacts higher than any other entrant in the
contest!

Ahead of the competition by 50 QSOs at 2300Z on Saturday, Gary chose to stay on 10 SSB until the band closed at 0215Z, disregarding activity on the other bands until 10 was completely dead. During this period he was able to maintain rates exceeding 110 QSOs per hour. And, by 0500Z, after devoting time to 15, 20, and 40 meters, he had built up a 300 QSO lead! Ultimately, Gary's decision to linger late on 10 meters, while most of the other serious CQP participants had QSYed to lower frequencies, won the contest for him.

Capturing second place was Kurt Andress, NI6W, guest operating from N6ND's QTH in San Diego County. Certainly no stranger to past CQP Top Ten boxes, Kurt compiled a personal best 278.8K score as well as his highest-ever finish in a CQP. And, taking third place was Duane Ausherman, W6REC, with a fine 263K and a new Modoc County record.

Congratulations are in order to these CA single ops who set new county scoring records: K6HTM, K6RK, K6AAW, W6NAT, K16CG, W6JTI, W6REC, W6TKV, KG6GF, WA6VEF (at N6BT), WB6MBF, AA6DX, WJ6Q/M (yes, that's right--MOBILE!), and W6BSY. A special mention should also be made of the efforts of

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N6NF, W6JTI, N6GC (at W6AB), and W6UQF, who all managed to position themselves in the California Top Twenty while running 200 watts or less.

The California Multi-ops

Multi-single and multi-multi efforts enjoyed a resurgence in the 1988 CQP. No less than 15 CA stations submitted scores in these two categories, compared with nine entries in the 1987 Party. The top multi-single spot goes to the Colusa County expedition ably manned by NB6G, N6IG, and W6GO. Dave, Jim, and Jay set up a modest three element tri-bander and wires atop the football grandstand at the Colusa Co. fairgrounds, and managed to break the CA multi-single record with a fantastic 275.5 kilopoint score! Finishing in second were WX6M and K6HIH at 256K, while KA6W, operated by KI6EZ and K4UVT, placed third with 207K.

First place among the multi-multis belongs to Jim, KS6H, and Bob, N6ZB, who turned in a 161K score operating portable from Merced County.

Out-of-State Participation

The Cal QSO Party traditionally attracts fierce competition from outside the Golden State--and the 1988 Party was certainly no exception. Moving from fourth place in 1987

#### Special Awards

The Top Twenty-Winners of a personalized bottle of
California wine direct from the
cellars of the Northern California
Contest Club

California: WA6VEF, NI6W, W6REC, NE6I, AA6DX, N1EE, K6AAW, KGGGF, K6RK, N6NF, W6UJI, WA6FGV, W6BSY, N6GC, W6UQF, K16CG, N6PE, W6TKF, N6HC, and W6TKV.

Outside California: KVOI, WX4G, WAOAVI, N6TR, AA4NC, KB9S, WAIJVV, VE7DLM, NC1E, N8BJQ, NB1B, W3HDH, W2GD, W5TZN, NW2J, K4MF, N6CQ/3, W5ASP, KE9I, and N2AZS.

Chairman's Award: CA single-op with the most CW QSOs--Charles G. Oakes, w6UQF.

Out-of-state single-op with the most CW QSOS (sponsored by K4TKM)--Bill Lumnitzer, N6CQ/3.

CA mobile single-op or team with the most QSOs (sponsored by the Redwood Empire DX Assn.)--Alan Brubaker,

Low power champions (200 watts or less) (sponsored by K4TKM)
--California: Thomas E. Gehman,

-- Out of state: Will Roberts. AA4NC.

High scoring Novice/Technician (sponsored by KA6ING)
--California: Bill Philpott, KB6NJV.
--Out of state: Paul Rahfield,
KB5ECK.

Top Club in California (sponsored by the Palo Alto (CA) ARA)--Redwood Empire DX Assn. (3 entries)--105,474 pts.

to a first place finish in 1988 was Bill McClellan, KV0I. Logging an amazing 1,039 QSOs and all of California's 58 counties, Bill's 132.1K from the state of Nebraska established a new out-of-state scoring record. His victory underscores the fact that one should NEVER give up until the contest is over, as he began Sunday morning of the CQP in second place, trailing by 110 QSOs! Taking advantage of the great 10 meter conditions, Bill was able to work 432 contacts on Sunday, almost all of them on 10 sideband. He finished the contest 60 Qs ahead, with a staggering total of 700 ten meter QSOs!

Capturing the number two spot for the second consecutive year was Bob Brockman, WX4G. Bob's 125K effort set a new record for the state of Georgia, and is the biggest CQP score ever made from east of the Mississippi. And, rounding out the Top Three was Scott Zucker, WAOAVI, who squeaked past N6TR/7 to take third place honors with a 73.9K finish.

Special mention should be made of the many W and VE ops who established new out-of-state scoring marks. They are: WA4VEK, KL7AF, WOIZV, NC1E, K3HBP, WX4G, KE9I, N0FMR, AB4JP, NB1B, KB6LO/O, KV0I, W2GD, AI9X, NW2J, AA4NC, N8BJQ, W5TZN, KD0EE, WA1JVV, KD8SE, K7MM, VE3BQL, VE5FN, VE6DZ, and VE8CM. As well, congratulations are in order to WA1JVV and NC1E who both cracked the Top Ten from New England. It is usually very difficult for stations from the first call area to do this--and it's not surprising that their scores are the biggest ever made from W1 land.

Another notable achievement was that of Will, AA4NC, who finished fifth overall running just 100 watts output! The most competitive state in '88 was Colorado, where three stations (WOIZV, NOFFZ, and ACOS) all broke the existing single-op record.

## Top Ten Band Breakdowns

Out-of-	State				1,									
Call	Score	105	10C	155	15C	20S	20C	40S	40C	75S	80C	160S	160C	
KVOI	132,124	645	55	72	43	77	57	29	38	16	7	. 0	0	
WX4G	125,106	535	61			108		. 42	12	33	15	0	0	
SYOYA	73,975	302	38	35	- 38	133	28	18	4	0	7		- 0	
NETR	73,617	26	12	45	50	202	38	95	47	45	13	16	17	
AA4NC	68,264	200	46	130	73	22	17	1	35	0	0	. 0	0	
KB9S	65,395	191	39	80	41	58	34	24	28	15	9	0	0.	
WA1JVV	63,918	107	68	73	71	40	58	5	47	0	8	0	0	
VE7DLM	61,656	35	11	167	41	64	33	60	23	32	15	2	4	
NC1E	52,832	130	35	82	56	44	49	0	14	0	14	0	. 0	
N8BJQ	51,993	184	56	42	46	52	28	1	11	. 0	0	0	0	

California Call Score 160S 160C 75S 80C 40S 40C 20S 20C 15S 15C 10S 10C VHF 326,830 278,864 76 92 205 124 229 100 1507 88 109 221 61 427 118 1043 NEBT 56 N6ND 12 19 28 28 6 68 169 129 125 126 1229 83 189 155 489 155 531 : W6REC 263,088 25 15 47 74 13 0 243,426 216,514 531 112 NF61 0 57 43 58 35 207 119 17 164 101 50 286 AA6DX 89 41 0 15 27 693 117 W6BIP 186,447 85 71 20 0 58 45 .97 712 99 0 134 49 200 171,854 69 227 123 33 210 90 K6AAN 64 71 17 37 33 79 ٥ 638 KG6GF 169,534 396 123 KERK 164,604 64 . 26 190 140 104 160 409 21 22

## Top Five CA Multi-Single

					1.5									
Call	Score	1605	160C	75S	80C	405	40C	205	20C	155	15Ç	105	10C	VHF
NB6G	275,500	20	16	59	23	35	49	257	91	295	83	1202	76	0
WX6M	256,418	0	0	29	24	73	81	369	130	193	84	954	76	0
KA6W	207,234	0	0	19	0	30	45	272	0	564	0	834	0	0
n6ee	179,220	0	0	50	51	41	63	25	84	91	73	744	125	0
KB6RXF	168,606	0	0	6	0	75	0	263	0	293	8	803	1	0

DX Competition

With the great conditions in the 1988 CQP, many California entrants commented that this year's Party seemed to be as much a DX contest as a stateside event. As it turned out, they were right, as almost 10% of the logs received after this year's contest came from outside the USA and Canada!

First place in Europe goes to Gintas, UP2BKW, who operated station UP1BWW to a 34K finish and a new European record. As an indicator of just how well he did, Gintas fell only 50 QSOs short of making the out-of-state Top Twenty! Right behind at 28K was LA8PF, while DL4RX placed third with 23K. Other continental leaders included Sakae, JA1MZM, in Asia; Wien, YB2CTW, in Oceania; and Jim, PY5ZBA, in South America. Sakae, Wien, and Jim all set new continental scoring records during the weekend.

The Novices and Technicians

One of the best things about a wide-open ten meter band is that it gives Novices and Technicians a chance to really try their hand at radio contesting.

The top spot among the CA
Novice/Technicians goes to 15-year-old Bill
Philpott, KB6NJV, operating from Amador
County, who made 412 QSOs and 44 kilopoints
in his first major attempt at contesting!
Following closely behind Bill was 11-year-old
Kari Reiring, KB6EEK. Kari is the daughter
of Chuck, KD6FW, a CQP regular, who
unfortunately had to work during the weekend
and thus spent little time in the Party.
Kari took over, and her 35K score not only
beat Dad, but also netted her a second place
finish!

Outside California, Paul Rahfield, KB5ECK, took top honors with 21K, a score just 2,000 points shy of a new Mississippi state record. And, in second place with 16K was Linda Mayenschein, KA9CHM. Linda, by the way, also placed in the Top Ten in the 1988 Novice Roundup.

The CA County Expeditions

Once again we take our hats off to the dedicated folks who pack the rig and antennas into the car and travel far and wide to activate those rare California counties. Without a doubt, the CQP would be a lot less fun without the efforts of these 37 mobile and portable expeditioners. They are:

The mobile specialists -- Alan Brubaker, K6XO, operating from six rare counties in the central, eastern part of the state. His 325 QSO total is the most by a mobile single-op or team . . . N6NKN, who journeyed from the very top to the very bottom of the state, operating from 14 different CA counties! . WJ6Q, who set a new scoring mark for Trinity Co. This is the first time in many years that a mobile station has set a new county record . . . K6YK in Tuolumne, Stanislaus, San Joaquin, and Calaveras . WAOYQM, who visited four central CA counties . . . and K6MO and N6KG, who braved rough weather and sea sickness while operating maritime mobile from the middle of San Francisco Bay . . .

and N6AU, who turned in separate portable efforts from Sierra, El Dorado, Alpine, and Nevada . . . N6LL in Kern . . . N86G, N6IG, and W6GO in Colusa . . . W6BSY, who drove several hundred miles from the San Francisco Bay Area to put on an existing station in Yuba County . . . K56H and N6ZB in Merced . . . N6ESV in Glenn, Yolo, and Sutter . . . K6XS in Kings . . . and K6TMB and W6SZN in Placer County.

The Folks Who Make It Happen
The continuing success of the
California QSO Party is certainly no
accident—it is the direct result of the
efforts of a dedicated and hard working team.

The Northern California Contest Club extends its appreciation to these individuals for their help with the '88 CQP: WW6F, K6LRN, WC61, K16CG, W6BSY, W6REC, and NC7K, who all served to co-ordinate CQP activity in the NCCC; NIEE, KIGEZ, KAGING, WGBSY, and WA6AHF for helping with publicity; N6EK for his usual first-rate job on the certificates and wine bottle labels; W6OSP for procuring the wine awards; W6SZN for maintaining the all-time CQP records list; K6XO and VE7NKI for assisting with the contest results; W7MAP for helping with the photocopying, as well as serving as interim NCCC newsletter editor for the two issues preceding the CQP; and N6BT, WZ6Z, and AI6V for their generous financial support of the California QSO Party.

Thanks are also in order to K4TKM/6, KA6ING, the Palo Alto Amateur Radio Association, and the Redwood Empire DX Association for sponsoring Cal QSO Party awards.

Ten Meters is Bound to be Wide Open...
...the first full weekend in October of
1989, so be sure to mark your contest
calendar for the next running of the
California QSO Party. It's slated for
October 7th and 8th, 1989, with the usual
starting time of 1600Z on the 7th.

By the way, it's ok to tell all of your ham friends about this Party. They certainly don't need an invitation to "attend," and we don't mind crashers one bit!

See you in the contest!

73. Gery

Gary Caldwell WA6VEF 1988 CQP Chairman Soapbox Out-of-state....

Great contest! Last year we got 1' of snow during CQP--power and all ants came down with the trees. This year no snow and XYL wasn't home on Sat.! (NW2J) . . . Had a great time--wasn't even planning on entering--but the excellent conditions and heavy participation by all those other stations "pulled" me into it! (KB5ECK) . . . It is amazing the difference in activity patterns in this contest compared to two years ago. This time there just wasn't anyone on 40 meters during the day!! (N6TR/7) . . . Enjoyed this contest very much! Look forward to meeting everybody next year! (UP2BKW, op

of UP1BWW) . . . . Do you Californians know that there is spectrum below 20M? Low bands weren't too good, but I expected to hear SOMEONE on 40, . . . 80, or 160! HI! (WA5VBE) . . . I would like to commend the W6 hams for their courtesy and good operating practices. It's also fun to be considered as a rare multiplier—had a few pile ups going—good practice for the fall DX contests. (VE5FN) . . Number of DIFFERENT California stations worked this year was 145—an increase of 20 over last year. (W3HDH) . . . Always nice meeting the ops who recognize my call (N6HC, W6BIP, W6OAT, N6BT, etc.) and say "TMX for Dele" even before I give the exchange—HI! (K3HBP) . . .

Got a 60/hr rate on Sunday from 1840-1940 by CQing into CA on 10M (NB1B)... What a great QSO Party--couldn't be any better. Great CA operators. 10 meters was fabulous. Fone only this year--CW only in '89 (KV4F)... A fitting end to 15 years of hamming from Connecticut--I turned 40 during the CQP weekend, and move to Florida in two weeks. Will take down the vertical now that the "California Sweepstakes" is over. (K1TN)... I wish my life was as organized as the CA QSO Party! (K1CLN)...

And from California....

Wonder what NCCC's connections are to be able to have the solar flux peak on CQP weekend?(N6LL) . . . I lost my voice Saturday so couldn't work 40M that evening. Really enjoyed all the contacts I was able to make. (KA6CZS) . . . Europeans were louder than the East Coast on 10 and 15, quite a thrill for a fairly new ham who has not been through a complete sunspot cycle. (WU6I) . . . I think this was one of the best CQPs in a good many years. (W6NAT) . . . Murphy struck twice--SB 220 amp got hot and suffered a "meltdown." Fan didn't start and plastic fan drooped! Switched over to Drake L-7 amp. About 8 pm Sat. nite--big fireworks in power supply. Finally pulled old 30Ll out of its hiding place and finished the contest. (K6RK) . . . Happiness is having VE8CM call you

early in the contest! (W6UQF) . . . Darrel, KB6RXF, made a little over 80% of the contacts (in the KB6RXP multi-single effort). Darrel is 11 years old and now has his General license. He really liked the Cal QSO Party, and his stated goal is to set a new Orange County record next year! (W6TMD) I had a blast! Thanks for sponsoring this great CA SS, and thanks for the wine in '86 and '871 (W6JTI) . . . When I turned on the rig Sunday morning there was N6EE telling his contact that he didn't know how to spell Tuolumne because he was just visiting. able to get through to him as his next contact, giving him my number and T-U-O-L-U-M-N-E County--and we both had a good laugh. (KI6PG) .

Last year I only had 225 QSOs, so decided to really go at it this year. I had a ball due to terrific band conditions, and managed to work all states in just 6 hours 40 minutes, a new personal best. (W6TKV) . . . Worked all over the world with a 40 mtr dipole up 20 feet-barefoot! (N6TV) . . . Many thanks to Tom, N6BT, for cleaning the bottle. (WA6VEF) . . . SK

Final Scores
Call, score, total QSOs, total
 CW QSOs (in parentheses),
 multiplier. An \* = new
 single-op contest record;
 (M/S) = multi-single; (CE) =
 single-op CA county expedition; (MCE) = multi-op CA
 county expedition; (N/T) =
 Novice/Technician; /M =
 mobile.

#### California

K6YK/M

California			
Alameda			
N6DA 91,20	0 627	(346)	57
W6RGG 39,33	0 285	(285)	46
K6ARE 1,62	0 30	(30)	18
K6CSL 15,66 K6ARE 1,62 WA0YQM/M 1	.6 4	(0)	2
Alpine	4.7		
K6XO/M 11,01	6 111	(84)	36
N6AU/6 (CE)			
5,24	9 66	(49)	29
N6NKN/M	8 7	(0)	7
Amador			
	8 424	(424)	49
KB6NJV (N/T)			
	3 412	(39)	51
N6NKN/M	14 7	(0)	6
Butte			
*K6HTM 59,28	520	(0)	57
Calaveras			,
*K6RK 164,60	4 1210	(418)	58
VEVV/M			

198

11

(0)

	COLUSA				
	*K6AAI	(CE)			
		171,854	1353	(257)	58
	NB6G	(+N6IG, W6GO			
		275,500	220 <b>6</b>	(338)	58
	Contra	Costa			
<b>t</b>	AK6T	44,414	354	(130)	53
	K6ZM	(+N60P) (M/S)		<del></del>	

	47,682	404	(75)	54
Contra Cos	ta/Marin/	Solar	o/Son	oma
K6MO/MM	(+N6KG)			
,	28,938	260	(222)	39
Del Norte				
*W6NAT	62,358	547	(0)	57
K6HY	57,996	451	(172)	54
NK6Z	1,860	62		
El Dorado				
WV6M	54,432	463	(82)	54
WAOYOM/M	918	27	(0)	17
	7 2 2	- :	121	

El Dorado				
WV6M 54	,432	463	(82)	54
WA0YQM/M	918	27	(0)	17
N6NKN/M	72	6	(0)	6
N6AU/6 (CE)	42	5	(4)	3
Fresno				
*KI6CG (CE)				
	,692	1187	(0)	58
WB61TM 28	,752	2 <b>78</b>	(43)	48
Glenn				
N6ESV (CE)				

	2,115	46	(0)	23
Humboldt *W6JTI	162,052	1128	(538)	58

26,312

KB6FIW

	Imperial				
	W5VGF/6	(+N6PME)	(MCE)		
		57,273		(287)	51
	N6NKN/M		8		
	Kern				
	WW 60	29,574	279	(0)	53
	N6LL (CI				
-	بمعيده والمراجد	24,480	255	(0)_	4.8
	KA6CZS	18,500	185	(0)	50
	Kings				
	K6XS (CI				
		18,573	163	(127)	41
	T also				
	Lake KR6G	96,512	832	(0)	E 0
	KKOG	90,512	032	(0)	20
	Lassen				
	K6JKC	72,800	604	(92)	56
	N6NKN/M		9	(0)	6
	Los Angele				
		243,426		(515)	
		118,262		(321)	
		20,026		(167)	
	KI 6VC	13,674	152	(138)	43
	Madera				
	KB6EEK	(N/T)			
		35,518	413	(0)	43
	KD6FW	8.610	105	(0)	
		.,			
	Marin				

84,274

WB5VUL ops) (MCE) 59,292

K6YA (K6MA, N6IIU, WA6ROM, WA6LIJ, WA6TKV, N6GAL,

629 (195) 58

487 (124) 54

															5
Mariposa						San Luis	Obispo				Tulare				•
K6XO/M	4,788	69	(33)	28		WB6HJW	(+WA6MSN)				KD6WW	87,808	708	(152)	56
							124,178	1005	(131)	58	W6IFC	40,050		(267)	
Merced															
	100,166		(225)			San Mateo					Tuolumne				
K6XO/M	162	., 9	(0)	9	*	N <b>6NF</b>	163,212		(394)		KI6PG	9,248	136	(0)	34
KS6H (+N						W6OAT	102,258		(296)		K6XO/M		47	(0)	24
	161,646	11//	(433)	58		K6KLY	87,464	754	(0)	58	K6YK/M	374	13	(8)	11
Modoc						KA6ING			4		NEEE (	+AD6E) (MCE	:)	e more as a v	
	263,088	2040	(440)	E 0	1		11,433	154		37		179,220	1347	(396)	58
N6NKN/M	98	7				W6KZJ	2,457	63	(63)			(4.6)	42.4	1.4	
NOMAN/M	70	,	(0)	7		W6ISQ	1,290	33	(20)	15	Ventura				
Mono					.					141	WETKF	119,073		(295)	
K6XO/M	5.952	80	(32)	21		Santa Bar		1201	(78)	E -7	NEMA	60,768		(422)	
N6NKN/M	264	12	(0)		1		161,880 N6GC op)	1381	(/0)	3'	K6MP	30,384		(177)	
	201		(0)		1	MOND (I		1251	(278)	E 0	n6VR	3,250	50	(25)	26
Monterey					Ì	AC6T	161,240 46,206		(302)	10000000	Yolo				
WAGODR	99,760	860	(0)	58	- 1	ACOL	40,200	302	(302)	I	N6ESV	(CE) 70	7	(0)	5
0.000 (0.000)			,-,	-	I	Santa Cla	272			**	NODDV	(CL)	,	(0)	
Napa					1		WA6VEF OD)			ľ	Yuba				
W6FSJ	76,095	542	(251)	57	l l	11021 (1	326,830		(465)	58	*W6BSY	161,762	1318	/1521	50
		-, • -	,,	•		WC6I	80,666		(506)		-W0831	101,702	1310	(155)	20
Nevada						NOTY	56,567		(319)					٠	
AI6V (WA	GAUE op)					KB6GV	48,785	443		55					
* 1	107,103	808	(263)	57		K <b>6YT</b>	28,905		(235)		8				
N6NKN/M	84	7	(0)	6		W6PRI	17,605		(163)						
N6AU/6 (4	CE) 21	. 3	(1)			KB6MTT			,	1	Out of Si	ate			
							14,212	183	(8)	38	OUL OI ST	-u -c			
Orange	100 00 00					AJ6V	12,960	153	(18)		Alabama				
	132,012		(448)			K6XO	12,580	138	(64)	37	*WA4VEK	33,100	331	(0)	50
N4ARO/6	67 <b>,392</b>	5 <b>09</b>	(230)	54	ı	WAGHRK	1,188	27	(0)	22	WA4NAT	5,841	71	(35)	-
WAGFIT	40,278	411	(0)	49		AA6BS	(+N6RCE, K	(D6WG)	(M/S)	i	*********	3,012		100,	
	20,582		(152)	41			31,344	287	(79)	48	Alaska				
KB6RXF (										1	*KL7AF	21,574	176	(117)	46
	168,606	1449	(9)	58		Santa Cri	uz				NL7D	8,436	111	-	38
						NS6V	83,105	623	(265)	55		.,		(-,	••
Placer						K <b>J6A</b> P	43,160	415	(0)	52	Arizona				
N4KS/6	37,812		(274)			KA6W (	KI6EZ, K4U				AK7J	988	25	(2)	19
WERFF	15,207		(137)		1		207,234	1764	(45)	58				1-7	
N6NKN/M	24	4	(0)	3							Arkansas				
K6TMB (+					- 1	Shasta		5.			KY5M	14,444	157	(0)	46
,	149,698	1158	(265)	58		W6BJH	33,660		(255)		WASVBE	12,470	145	(0)	43
-1					1	WB6SRQ		103		36					
Plumas	27 672	100	(	47		n6nkn/1	M 198	11	(0)	9	Colorado				
K <b>P7AM</b> N6NKN/M	27,072		(192)		- 1	01					*W0IZV	34,200	259	(166)	50
WANNAN	72	6	(0)	•	1	Sierra				1	NOFFZ	31,200	231	(162)	50
Riverside	*1					N6JM ((		210	/1001	. 1	ACOS	27,232		(150)	
	116,464	1004	(0)	50		WE3716	37,600	310	(180)	4/		0 6,320	73	(12)	40
WOIN	110,404	1004	(0)	20		NGAU/6		20	(10)	33 I	KOGAS	(+KJ0G) (M/			
Sacramento					- 1	N6NKN/I	2,090 M 1,364	38 31	(19)	22		37,632	307	(154)	49
KOOL/6	52,773	359	(359)	49		NORKK/ F	u 1,304	31	(0)	**					
N6JV	51,474		(367)		1	Siskiyou				1	Connection				-1
W6NKR	10,791		(109)		1	*WB6MBF	63,580	501	(154)	55	*NC1E	52,832		(168)	
K6DR	3,555		(79)		1	KI 6NB	22,160		(182)		WE6G	18,753	189	(21)	
N6 <b>ES</b> V	176	11	(0)			N6NKN/N		9		77	WAIFCN	12,255	116	(53)	
WAOYQM/M	40	5	(0)	- 5					(0)		Kltn	10,959	105	(71)	39
						Solano				1	Deleware				
San Benito						KJ6FY	25,041	245	(1)	51	*K3HBP	28,150	228	(107)	50
*KG6GF	169,534	1294	(335)	58		WX6M (	+K6HIH) (M/	S)	to sale at		KJADP	20,130	220	(10/)	20
	ter in " in Mini					1 1 2	256,418	2013	(395)	58	Florida				4.
San Bernard										. 1	K4MF	46,300	358	(210)	50
W6HAL	17,082		(96)		.	Sonoma		g. (com-		1	KO4J	31,450		(109)	
KJ6JO	11,316	138	(0)	41		WW6P	47,700	450		53.	N4OKD	13,325	115	(95)	
C		٠,		- 11	ŀ	WW6D	42,728		(236)		KN4Y	12,870		(110)	
San Diego	CW1				ļ		/6 18,800	200		47	WASDIK	12,426	139	(49)	
N6ND (NI		2244	(386)	60		KEGWL	2,400	46	(28)	20	WK4F	3,600	60	(0)	
	278,864 149,350		(635)			WB DEGE	(NGOC, WB	OWPO,			WA4HXZ	1,872	39		24
KI6ZH	53,418		(67)		, 1	VIOL	P ops) (M/S		/8 **		KC4GED	32	4	(0)	4
WA6UFY	34,839		(131)				4,224	69	(54)	22					
W6GG	24,087		(217)		Ì	Stanislau	10			1	Georgia				
AA6EE	22,714		(166)			K6YK/M	270	15	/03	9	*WX4G	125,106		(195)	
WA6YOO	5,800	100	(0)		1	K6XO/M	144	12		8	KB4GID	28,688		(192)	
	-,		,		ļ	au/M	744	7			AB4HR	14,014	143	(0)	
San Francis	sco				1	Sutter					KA7LKV	8,604	87 107	(65)	
W6BIP (N				2 1	i	N6ESV	(CE) 308	14	(0)	11	AB4HQ	7,918 1,575	107	(0) (25)	
	186,447	1469	(333)	57				-4	, , ,		K4BAI	1,575	25	(43)	C.T.
KEILM	45,845		(215)		ļ	Tehama				· I	Idaho				
K4TKM/6			(48)		I	*AA6DX	216,514	1685	(363)	58	WO7Y	26,010	224	(130)	45
						WBGKOE	80	8			W7RH	14,240		(82)	
San Joaqui	n ,		4000	4	-	AAGT (4	N86G, N6J			I	14 1 5767	.4,640		,047	
NEKZW	58,352	521	(0)				81,730		(70)	55 🚣	Illinois				
NENMM	7,437	100	(1)		*		¥ .			-	WAOAVL	73,976	603	(115)	56
	1,155	27	(1)			Trinity	12	PACCONIC N. 1900	-		WD9AFL	36,015		(165)	
WAOYQM/M	50	5	(0)	5		*WJ6Q/M		256	(89)	50	KD9OT	21,804	237	(0)	
						W6TVP					N9JF	14,112	139	(58)	
							19,992	196	(196)	34	NJ9Q	12,892	138	(17)	
												•			-

															6	
WA9AXL WA9MRU K9KKX/M K9HRC	10,640 6,142 4,488 3,528	115 71 66 49	(36) (24) (0) (49)	37 34		New York *NW2J N2AZS N2UN K2AU	47,372 42,200 24,112 17,136	331	(185) (182) (146) (78)	50 44		KA9CHM K9JIG WA9RIR	(N/T) 16,014 13,904 12,032	157 158 128	(0) (0) (0)	51 44
Indiana *KE9I KB0C NU9C	42,612 19,686 1,281	371 193 30	(62) (0) (1)	51	*	WJ2O W2HG W2DUN W2KTF N1CC	16,892 9,675 6,510 6,432 4,205		(100) (37) (70) (67) (31)	41 43 31	*	NI9C WA9ZSO W9HE NOBSH/9 W9WI/M	9,660 8,692 8,316 3,538 2,125	105 106 84 49 40	(66) (0) (84) (24) (5)	35 41 33 29
Iowa KCOGM KOSRL WOJTC	15,648 2,730 2,475	163 49 33	(0) (7) (33)	26		W2WSS WB2TKD	1,800 1,496	30 34	(30)	20		Wyoming *K7MM	26,145	218	(145)	45
Kansas *NOFMR NWOF	34,416 12,978	287 129	(163) (51)	48		*AA4NC KF4GW KJ4TI KS4S	58,264 17,664 7,350 2,376	524 192 105 44	(171) (0) (0) (11)	46 35		Maritime VO7AW VE1BZO	11,736 3,198	117 82	(92) (0)	
Kentucky *AB4JP	31,100	268	(74)			North Dake	• • • • • • • • • • • • • • • • • • • •	43	(12)			Quebec VE2MS	6,592	104	(0)	32
WA4EBN K2UPD N4OHW	15,750 10,530 2,208	125 100 46	(125) (70) (0)	39	1.	Ohio *N8BJQ K8MR	51,993 39,538		(141) (124)		,	Ontario *VE3BQL VE3TJL VE3BXY	30,550 2,208 2,080	46 40	(186) (0) (0)	24 26
Louisiana NO5W	11,328	118	(118)	32	=	W8IQ Oklahoma	112	8-	- (0)	<b>7</b>		VE3LFH Saskatche		13	(0)	
Maine KA1ZX KA1EAP	944 180	28 10	(3) (0)	16 9		*W5TZN Oregon	48,336		(112)			*VE5FN VE5AGM Alberta	31,200 14,625	325 120	(0) (85)	
Maryland/D KD3IW	C 480	. 16	(0)	15		N6TR N7IXI	73,617 8,658	104	(26)			*VE6DZ VE6BMX	17,511 243	15 <b>9</b> 9	(131)	
Massachuse *NB1B K1CLN	50,284 12,052		(137) (24)			Pennsylvai W3HDH N6CQ/3 KC3M	49,588 45,900 19,890	340 178	(238) (340) (86)	45 45		British C VE7DLM VE7NKI	61,656	487	(127)	
Michigan W8WVU K8CV W8YL	17,802 15,372 1,170	138 142 26	(138) (82) (26)	42		K3WW W3FJY KY3M WA3KOI	18,612 10,720 7,740 4,959	166 134 86 57	(64) (0) (86) (57)	40 30 29		VE7EKS NWT-Yukon *VE8CM	1,080	26	(20)	. 15
Minnesota NOHJZ	34,074	30 <b>8</b>	(15)	.54		N3CZB WB3IFE WA3JXW W3TDF	4,950 1,900 900 264	50 38 23 12	(50) (0) (14) (0)	25 15		Asia *JA1MZM JA9CWJ	11,583 4,536	118 54	(61) (54)	39
KOMPH WONGB WFOV	8,855 6,300 3,000	10 <b>5</b> 70 50	(43) (70) (0)	30		Rhode Isla KA1QIA		16	(0)	- 14		JH1UUT JI1JVG JG7LBN	2,600 912 8	50 26 2	(0) (5) (0)	26 16
Mississipp KB5ECK ( N5KGY		244 197	(0) (0)			South Dake			(131)		1.	Europe *UP18WW	(UP2BKW o			
Missouri *KB6LO/0	24,274	229	(0)	53		Tennessee KV4F AB4CA	34,020 11,266	315 106	(0) (50)			LA8PF DL4RX F6BEE	34,080 28,714 23,715 14,826	218	(164) (150) (161) (89)	49 45
WBOZSS NOIZZ WAOOTV	15,372 6,232 1,020	122 78 20	(122) (0) (20)	38		Texas W5ASP	45,414	354	(133)	54	Park I	G3WPF YO2BP N4QIV/I		85 79 82		36 33
Montana N7HFU	8,056	106	(0)	38		KY5N NX5Z W5NR	32,976 30,350 25,152	257 192	(133) (93) (140)	50 48		DL1ZQ SP6HEK DL7CS LZ2AX	5,841 4,950 4,356 3,000	63 50 44 44	(51) (50) (44) (37)	33 33
Nebraska *KV0I AK0G	132,124 31,875	263	(200) (99)	51		WASIYX NSCOP KSLZO WFSE	23,088 23,030 22,795 18,533	222 220 211 178	(0) (50) (43) (75)	47 49		EA4BVE LA3CG OK1DKS	2,050 1,656 1,280	41 36 32	(0) (0)	25 23
NOGMR WOOLL WOZYJ	14,432 3,136 1,440	164 49 30	(0) (0)	3'2			5 17,100 (N/T) 7,708	142 94	(58)			DJ5GG DF2HL G0DYO	1,122 714 560	22 21 20	(22) (0) (0)	17 14
Nevada AE7K WA7UTM	9,953 6,916	90 91	(89) (0)			Utah WE7B WB7TJI	15,703 14,432	155 135	(73) (58)			YU7FT YU7SF LA4TG ON8WN	336 192 98 98	14 8 7 7	(0) (8) (0) (0)	8 7 7
New Hampsh NR1M	nire 20,944	204	(68)	44		Vermont *WA1JVV KA1RRX	63,918 1,320	47 <b>7</b> 30	(252)	53 22			(W4KM op)	4 2	(4) (3) (0)	4 4 2
New Jersey *W2GD W2KHT	49,452 22,088	200	(207) (102)	44		Virginia W4XD	10,368	96	(96)	36		SP6DVP Oceania *YB2CTW	2,425	40	(17)	
W2NZH K2PF WA2UDT K2EWA	18,840 15,265 6,786 5,040	122 87 72	(0)	43 39 35	<b> </b> ★	N4JED West Virg *KD8SE	2,496 inia 17,766	172	(34)	26	*	South Ame *PY5ZBA PY4VD	23,920 6,230	225 89	(70) (0)	35
NR2I New Mexico *AI9X KN5S	3,219 32,634 4,290	255 65	(156)	23	• •	Wisconsin KB9S N9HDE K9OSH	65,395 21,805 17.940	519 180 170		49	55 J. 18	ZP5XFA Check logs Co.), E.		65 . WJ60	(0) )/M (Sì	