

NEWSLETTER OF THE NORTHERN CALIFORNIA CONTEST CLUB 44 Toyon Terrace Danville, CA 94526

SEPTEMBER 1987 No. 183

PRESIDENT: VP/CC:

W6RGG SEC/TREAS:

NCCC REPEATER:

K4UVT VE2AQS

147.24 (+600)

AWARDS:

JUG EDITOR: DIRECTORS:

K6ZM

W6SZN

KA6ING, WA6VEF, NV6Z,

W7MAP

COMING EVENTS

North American Sprint (SSB) NCCC Meeting -- Dinner Meeting at Miguel's in Hayward 1987 California QSO Party

September 20

September 25 October 3-4

THE PREZ SEZ

What a picnic! Special thanks to Gary, WA6VEF, for inviting us to his home and coordinating the food, beverages, and entertainment. You will find an article by Gary on another page of this issue wherein he gives credit to the folks who helped to make the event such a success.

Our September meeting will be a dinner at Miguel's Restaurant in Hayward. Mark Friday the 25th on your calendar, and check the announcement elsewhere in this JUG for the time, menu, prices, and RSVP information.

The Sprints are here once again, along with the usual late challenge from the SCCC. Rusty, W6OAT, has done a great job rallying the teams to the fray at the last minute. I hope to have worked many of you "Sprinters" by the time you read this. It's not too soon to start planning for the February Sprints!

The Club's major effort this year, in case you didn't know, is the CALIFORNIA QSO PARTY. Last minute details are still being worked out by Gary and his merry band of coordinators. Most of the final details will be announced at the September dinner meeting, and a supply of logs, summary

sheets, and rules will be there for the taking. If you have yet to hear from your coordinator, give Gary a call.

I'm looking forward to seeing you all at Miguel's.

KB, Bob, W6RGG

FROM THE VP/CC . . .

A few more summary sheets have trickled in for WPX '87, so we have a revised club entry with a combined 42.2 Meg score. That should help us K some B!!

Some members have also sent in more summaries toward the Five Million Point Award, along with corrections to my initial pass at getting it all on my database. The condensed listing is given in this issue, with totals only given. Gary, WA6VEF, still holds on to the first award all by himself. But K6ZM and W6FSJ are hot on his heels, only a few points shy of the fabled 5Meg mark!

The BIG one is coming up on October 3-4, our own CQP! WA6VEF has been doing a great job getting it coordinated. There are still a few counties unaccounted for; if anyone can mount an effort in these, get in touch with Gary soon. This year's CQP will see quite a few scoring records broken, so let's go break 'em up good!

Several other DX contests are on tap for October, including the VK-ZL DX Contest and the Radiosporting Championships. RSGB is also sponsoring its annual 21/28 MHz events. The ARRL International EME test will be of interest to the moonbouncers in our midst.

And on October 24-25 is the CQ WW Phone. Is anybody going off on a DXpedition to some exotic clime?? For those remaining on the continent, I'll try to coordinate getting operators and stations together -- some stations will need ops, and some ops may be looking for a station. I'll keep tabs on who needs what.

73 & KB, Bob, K4UVT/6

P.O. Box 61733 Sunnyvale, CA 94088 Home: (408) 247-4043 Office: (408) 744-5243

CQ WPX - 1987 NORTHERN CALIFORNIA CONTEST CLUB CLUB ENTRY

TOTAL SSB		
TOTAL CW	10,144,067	
NCCC TOTAL	42,204,197	
SSB SCORES		
		80° Left 1
CALL	SCORE	OPERATORS
PJ2FR	9,252,307	PJ2FR, N6KT
6 Y 4 V	6,405,750	AI6V
KI6P	5,825,328	WA6VEF, K3EST, N6RO
KI6CG	1,979,572	KI6CG, NU6S, WA6AZP
K6HNZ	1,844,208	K6HNZ
WC6H	1,625,972	WC6H, W6REC
NV6Z	1,301,580	NV6Z, K6ZM, K4UVT,
11102	1,301,300	KIGEZ, AKGT, NP4IW, WB6MZC
AG6D	1,129,536	AGGD, KGXO, NIEE, KGWJ
WX6M	769.860	WX6M
N6CCL	610,155	N6CCL, N6IYI
4X/K6KLY	555,345	K6KLY
WR6R	400,860	WR6R
KS6H	258,024	KS6H
WE6G	56,615	WE6G
WZ6Z	38,592	WZ6Z
AJ6V	4,032	AJ6V
K6SIK	2,394	K6SIK
TOTAL	32,060,130	
CI. 000000		
CW SCORES		
CALL	SCORE	OPERATORS
KI6P	2,226,860	WA6VEF
AI6V	2,041,848	AIGV, NGTR
AG6D	1,463,820	AGGD, WCGI, NIEE, WGNWS
WC6H	1,337,182	WC6H, AD6E
AJ6V	1,246,840	AJ6V
VE2AQS/AC6	868,530	VE2AQS/W6
AK6T	436,563	AK6T, K4UVT/6, K6ZM,
		KIGEZ, NBGL, NP4IW
NEEK	322,772	N6EK
NS6G	162,162	W6REC
WE6G	19,838	WE6G
WZ6Z	14,352	WZ6Z, W7IL
K4TKM/6	3,300	K4TKM/6

TOTAL ----- 10,144,067

NCCC FIVE MILLION POINT AWARD STANDINGS

AD6E	760004		W60AT	46	55358
AG6D	1201144		W60SP		13150
AI6V	2160358		WEREC		48322
AJ6V	1359041		W6RGG		51192
AK6T	564541		W6RJ		06600
K3EST/6	1949650		W6SYL		15840
K4TKM/6	3300		W6SZN		22062
K4UVT/6	557840		W6UA		49134
K6CSL	72144		W6YG		4556
КбНІН	169764		W6WB	15	34920
K6HNZ	1844208		W6XX		88083
K6KLY	185389		W7XA		98404
K6KM	41446		WAGAUE		10982
K6LRN	154058		WAGVEF		2845 ****
K6MBV	13298		WB6MZQ	28 COLUE	35940
K6MO	972		WC6H		37186
K6PU	83985		WC6I		06871
K6RK	138156		WE6G		78556
K6SIK	474070		WR6R		88187
K6TMB	2046823		WW6F		75362
K6WJ	282384		WX6M		23633
K6X0	295012		WZ6Z		3033
K6ZM	4959129		H202	3	2944
KD6XY	1408				
K16CG	1397278				
KI6EZ	728605				
KN6K	245797				
KS6H	361328				
N1EE	1089532	-			
N6BIS			CDDING	550000	
N6BT	5550		SPRINT	SCORES	
N6BV	258738	0			
N6CCL	1251055 810283	Out of	Area		•
N6EK		DINI A VIVAL			4.5
N6GG	959392	WN4KKN		08	41
N6JM	313917	K5G0		12	38
N6JV	83015	K3LR		09	??
N6KT	57942	KM5H		96	39
NGOM	988083	K5MR		06	39
N6QR	368416	K5RX		31	43
N6RO	171171	NGTU		74	43
N6ZB	3867266	K6LL		10	42
NB6L	136416	WOUA		97	41
NP4IW	396621	N2IC		20	??
NU6S	258700	KlKI		03	42
NV6Z	1677142	N4RJ		02	45
	1323315	W2GD		39	40
VE2AQS/W6	1169181	W9RE		32	40
W6BIP W6BSY	959834	W2RQ		78	??
W6DPD	496298	N6TR	33	3 7	40
	11016				
W6FSJ	4973804				
W6GO	2854116				
W6ISQ	382416				
W6KZJ	19680.				
W6MFZ	50880				
W6NWS	365955				

LETTERS TO THE EDITOR

Dear Kip,

At the September NCCC Board meeting, we discussed what the Contest Club might look like if we could shape it any way we wanted. I volunteered to write this letter to share with readers of the Jug some of the changes that I personally would like to see. My objective in tossing out these ideas is to stimulate thought and, hopefully, to open a dialogue among NCCC'ers who also might want to change the future direction of the club. The NCCC has done well these past fifteen years, and there is no reason to change the club's format unless we have a clear consensus that there still is something better to be had.

I believe there is something better, and it will come from a return to the smaller, more intimate membership that characterized the NCCC's first few years of existence. In those early years, we devoted a lot of time to analyzing the art of contesting and we spent a lot of time getting to know each other as good friends. In the late 70's and early 80's, we expanded the club from about 50 to 200 members to ensure that we'd be competitive in the Sweepstakes. Scores became more important to us than the people who generated them. We succeeded in achieving our SS goal, but the price of that expansion was the loss of membership camaraderie and personal identification with the club.

I think it's time now to concentrate upon the quality of our association with each other rather than upon just generating large aggregate scores. The club must give something worthwhile to the individual member in exchange for his or her participation. Things I consider worthwhile include intellectual stimulation, competitive challenges, an innovative environment, enjoyable social interaction and just plain fun. The present structure of the NCCC is too large and too impersonal to deliver most of these things.

My idealized NCCC, then, would be a club of from 50 to 75 members. Membership would be open to anyone having a genuine interest in contesting, but it would not be easy to join. A prospective member would have to have an established record of contest participation and achievement. Further, a prospective member would have to attend meetings and other club functions for a minimum of one year before he or she even could be nominated for membership. Once in, each member would have to demonstrate an ongoing commitment through participation in club activities and contests to retain his or her membership.

My idealized NCCC probably would meet every month or so, but its meetings would take a variety of forms. There would be a lot of "social" type get-togethers such as picnics, pool parties and barbecues where we could spend time really

getting to know each other. There would be educational meetings where, for instance, we discussed things like antenna design, station layout and how to run rate. And there would be meetings where we plotted our group contest plans and conceived new things to do (such as establishing a packet spotting network, planning contest DXpeditions or creating an "Armadillo Run").

What's true for me right now is that it's not particularly fun to be an NCCC member. I think a smaller, more selective and more interactive club might change this. We probably will be accused of being elitist, but I'd rather see the club provide something of value to a smaller membership than nothing of value to a larger one.

How do we get from here to there? For starters, I propose that we don't make much effort to entice present members to renew. Rather, let the ones who want to stay associated with the club take the initiative to renew and let the others drop by the wayside. We should impose a requirement that each member must attend a minimum of two meetings (so as to comply with the new ARRL club competition rules) and must expend enough effort on the club to satisfy some minimum activity level which the Board should predetermine and publicize. We should freeze temporarily new membership applications until we see how the present membership shakes out and until we have agreed upon what will constitute the minimum criteria needed to join.

73, Rusty, W60AT

PICNIC POSTSCRIPT

It was an afternoon of fun and friends, lots of food and lots more to drink.

NCCC would like to express its sincere gratitude to these fine folks who helped with the August 29th Club picnic: Marlise Cook (Mrs. AI6V), who provided the dessert and supervised the kitchen; Salie Rueter, who also helped in the kitchen; Louese, KA6ING, for contributing the salad; Peggy Frazier (Mrs. K6ZM), for cooking the chili; Bob, VE2AQS/AC6, for taking care of the garlic bread; Rich, N6KT, and Carl, AI6V, for helping set up the morning of the picnic; Ron, NV6Z, for bringing all the folding chairs; and Chuck, W7MAP, for collecting the dinner dues.

Thanks to all for your help!

73, Gary, WA6VEF

CQP '87 -- THE LATEST WORD

Get ready to run 'em, because we're only two weeks away from the 1987 edition of the California QSO Party!!

By all indications, this year's contest should be the best one ever. No fewer than 71 NCCC'ers have indicated that they'll be active during the weekend -- and 18 of those are planning CQP county expeditions. Expect lots of participation from Southern California as well, as the SCCC will be out in force in support of the CQP effort. And, personal invitations to operate in this year's Party have gone out to some 250 members of the Northern and Southern California DX Clubs. The bottom line is that the amateur bands should explode with W6s at 1600Z on October 3!!

As of this writing (September 15), I've confirmed activity from 53 of California's 58 counties. Counties not spoken for at this time include Del Norte, Shasta, Lassen, Monterey, and, believe it or not, San Luis Obispo. I'm still awaiting word of operation from most of these counties, however, so it's likely that all 58 will be on for the test.

Our massive contest publicity campaign, in which we have individually reached some 2,000 potential CQP participants, should result in some rather large pile-ups, especially at the beginning of the test. We're indebted to several publications and organizations for providing mailing lists to us, among them the NCJ, the SCCC, the NCDXC, the SCDXC, the organizers of the Pennsylvania QSO Party, and the ARRL. A special mention should go to Ron, NV6Z, who generated a special mailing list of about 350 1986 CQP participants who made at least 25 QSO's but did not submit a log.

A few operating reminders -- be sure to hit the CW sub bands on the half hour. If W6s show up en masse at the published half hour times, it will generate more out-of-state activity, which will in turn result in CA stations staying on CW for longer time periods. Don't forget that CW QSO's are worth three points, while phone Q's count two. Also, sked times are important because you can make a lot of contacts in a short period of time. The sked time for 160M is 0500; 80M at 0700; 10M on the hour 1700-2000; and 147.54 MHz at 2000, 0000, and 0400.

We'd like to get preliminary scores, for publication in the JUG, right after the CQP ends, so please check in on 147.84/24 or 3815 KHz with your numbers.

In sum, everything is pointing toward a very successful Cal QSO Party. CQP Co-Chairman Duane, W6REC, and his Area Coordinators have done a Herculean job of organizing NCCC activity for the test. The fruits of their labors appear elsewhere in this issue of the JUG. Also in this month's JUG are a master log and summary sheet for you to use for the CQP.

CU at the meeting, and hope to work you on October 3rd and 4th!!

73, Gary, WA6VEF

CALIFORNIA COUNTIES AND THEIR ABBREVIATIONS

Alameda Alpine Amador Butte Calaveras Colusa Contra Costa Del Norte El Dorado Fresno Glenn Humboldt Imperial Inyo Kern Kings Lake Lassen Los Angeles	Ala Alp Ama Butte Cala Col CCos DelN ElD Fres Glenn Humb Imp Inyo Kern Kings Lake Las LA	Marin Mariposa Mendocino Merced Modoc Mono Monterey Napa Nevada Orange Placer Plumas Riverside Sacramento San Benito San Bernardino San Diego San Francisco San Joaquin	Marin Marip Mend Mer Modoc Mono Mont Napa Nev Org Pla Plu Riv Sac SBen SBer SDgo SF SJoa	San Mateo Santa Barbara Santa Clara Santa Cruz Shasta Sierra Siskiyou Solano Sonoma Stanislaus Sutter Tehama Trinity Tulare Tuolomne Ventura Yolo Yuba	SMat SBar SCla SCruz Shas Sie Sisk Sol Son Stan Sut Teh Trin Tul Tuol Vent Yolo Yuba
Los Angeles Madera	LA Mad	San Joaquin San Luis Obispo	SJoa SLO		

SEPTEMBER DINNER MEETING

This month's NCCC meeting will be a dinner meeting at Miguel's, 22865 Atherton Street, Hayward. The festivities begin with a no-host bar at 7:00 p.m., with dinner at 8:00 p.m. No one can complain about the choice of entree, since Miguel's has graciously offered to permit us to order off the menu. The program will be WA6VEF on the California QSO Party. Please RSVP to KA6ING on the repeater or W6RGG no later than September 22, 1987.

ITEMS OF INTEREST

- -- VP5 will again be well represented in the CQ Worldwide this fall. K6ANP, WW6F, KK6X and W6OSP are off to Provo to operate in the CQ Worldwide CW weekend, multi-single, signing VP5W. Be sure to listen for them and give them a call.
- -- The National Contest Journal has long been a "must" for any serious contester. Publication of the NCJ was recently assumed by the ARRL and the appearance and content of the first issue since the change were much improved. The NCJ is now available at all Ham Radio Outlet locations.

CQP 1987: PRESENTING THE NCCC ACTIVITY ROSTER

Marin County and North Report de Doug, WW6D

W6FSJ -- Look for Wendell to be on full bore from Napa County.

W6OSP -- Bruce also plans activity from Napa.

KK6X -- Jim will be joined by KM6N for an all-out expedition to Mendocino County.

K6LRN -- Dick is gunning for a new single-op Marin County record.

Sonoma County -- Sonoma will be well represented with CQP activity by Lyle, WW6F; John, N6QC (operating multi-single from WB6EGE); and Doug, WW6D.

SF and Upper SCV Report de Dick, K6LRN

 ${\tt K4TKM}$ -- Brook plans to be active from San Francisco County.

 ${
m N6BV}$ -- Dean intends to try out the new stacked yagis on 40 meters with an all-out KB effort from N6RO in Contra Costa County.

W6SZN -- Kip will be joined by Lou, K6TMB, for a 2-man, 2-xmtr expedition to Placer County.

K6MO -- Stan plans a maritime mobile operation, covering the 4 major counties in the San Francisco Bay, with help from N6KG.

San Mateo County -- John, K6BR, plans radio activity, as does Larry, W6KZJ.

Middle SCV Report de Tim, NU6S

N6BIS -- Patty will be on mobile from Madera County.

N6BT -- Tom will be hosting hired gun WA6VEF.

W6OAT -- The perennial guest operator comes home; boasting a new tower and antenna system, Rusty intends to try the Cal QSO Party from his home in San Carlos.

N6OM -- John will be on either from Calaveras County or Santa Clara County.

 ${\tt K4UVT}$ -- Bob is going to try to be on from Tahiti, where he'll be vacationing.

Santa Clara County -- Rare and unpopulated Santa Clara County will be ably represented by Jack, W6ISQ, Stan, K6MA, Ron, WA6ITV, Ed, AJ6V, and Fred, K6YT.

Lower SCV and South Report de Ron, NV6Z

NIEE/6 -- Scott returns to Sierra County for a single-op effort.

W6CF -- Jim will be operating from home in Santa Cruz County.

KI6EZ -- Listen for George's portable signal from Tulare County.

N6TU, N6RZ, and WA6OCV -- Rumor has it that Bruce, Dave, and Susan are gearing up for a big multi-multi from Santa Cruz County.

AA6T and NS6G -- Lloyd and Karen will be expeditioning to Tehama County.

K6XN -- Ted plans activity from Santa Clara County.

AG6D -- Al will also be a part of the Santa Clara County CQP contingent.

K6PU -- Ken intends to activate Amador County.

N6ZB -- Another of this year's CQP county expeditions, Bob, along with Jim, KS6H, will be journeying to Merced County for a full bore multi-multi effort.

K6XO -- Al, our mobile specialist, will ensure that Glenn, Colusa, Sutter, Mariposa, and Stanislaus Counties are all on for the CQP.

Lower East Bay Report de Mike, WE6G

County Expeditions -- Mac, W6BSY, plans to activate Yuba County, while K7PXX will be mobile in Alpine County on Sunday of the test.

Alameda County Activity -- Expect CQP participation from Bob, W6RGG, Bill, K6SIK, Chuck, AA6G, Steve, WV6U, Larry, WA0YQM/6, and, if their rigs are repaired in time, Don, N6DA, and Will, WA6JCZ.

Upper East Bay Report de Mike, K6MBV

K6CSL, N6EK, WR6R (multi-single with WZ6Z), and W6MFZ all will be on the air from Alameda County.

WI6Y and WB6MZQ will be on from Contra Costa County.

Eastern East Bay Report de Gary, WA6VEF

N6VV, K6XV, and K6PJY -- Lew, Bob and Dan are planning a multi-multi effort from the Toulumne/Mono/Alpine tri-county line. Word is that they're taking towers and monobanders with them.

K6HIH -- Cliff is representing Solano County in this year's Party.

The Contra Cost Contingent -- K6ZM, NB6L, VE2AQS/W6, and NP4IW/W6 will be active from Contra Costa County.

K6RK -- Look for Chuck to again be operating from Calaveras County.

Sacramento Valley Report de George, K6SG

K3EST/6 -- Bob will be on from home in Yolo County.

K6SG, KV6H, KF6A, and other members of the River City Contesters group are attempting to get permission to return to the site they operated from last year in Colusa County. If unsuccessful, they intend to activate El Dorado for the '87 CQP.

AI6V -- Other commitments will limit Carl's Nevada County operating time this year.

SJV Report de Duane, W6REC

W7MAP/6 -- Chuck plans to operate from San Joaquin County.

W6REC -- Duane will be on from his mountain retreat in Modoc County.

NC7K -- Tim is going to try the CQP from the home QTH in Reno, Nevada.

WC6H -- Rich's station will be operated by Alex, KI6EZ.

N6GG -- Rich plans to be active from Amador County.

Log Sheet____of___

CALLSIGN____

STATE/PROV/COUNTY

BAND TI MHz UI	TIME		SENT		RECEIVED			
Hz	UTC	STATION	NR + V	NR	STATE/CTY	MULT	PCINTS	
			1					
			2					
			3					
			4					
			5			1	 	
			6			•		
			7					
			8					
			9					
			0	- 1				
			1					
\rightarrow			2					
			3					
			4					
-			5					
			6					
			7			-		
			8 9	-				
_			0			-		
			1					
			2			-		
			3			-		
			4					
			5					
		i.	. 6					
			7					
			8					
			9					
			0					
			1					
			2					
			3					
			4					
			5					
-			6					
-			7					
_			8					
-			9					
-			0					
_			1					
-			2					
-			3					
-			4					
-			5					
-	-		6					
-			7			-		
-			8 9			+		
			1 9 1			1		

CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY

ADDRESS

ZIP

TEL. #

CITY, STATE/

PROVINCE

CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY CALIFORNIA QSO PARTY

established for amateur radio in my country. My report is correct

and true to the best of my knowl-

edge. I agree to be bound by the

decisions of the Contest

Committee."

Sponsored by THE NORTHERN CALIFORNIA CONTEST CLUB

CALL	*	******	* ST	**************************************
BAND	QS CW ******	Os PHONE ******	CLASS	
VHF	* * *	*	* * *	SINGLE OPERATOR
10	********** * * *	********* * * *	* * * * * * * * * * * * * * * * * * * *	MULTI-SINGLE
15	* * * * * * * * * * * * * * * * * * *	* ********* * *	* * * * * * * * * * * * * * * * * * * *	MULTI-MULTI
20	*********	~ * * * * * * * * * * * * * * * * *	** ** **	SINGLE-OP COUNTY EXPEDITION MULTI-OP COUNTY EXPEDITION
40	* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * *	***	SINGLE- or MULTI-OP MOBILE
80	* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	OPERATOR(S):
160	* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * *	* * * * * *	POWER LEVEL:
OTAL QSOs	* *********** * *	* * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	CLUB COMPETITION:
	******** * x 3= *	********* *	* * * TOTAL * MULTIPLIER	FINAL SCORE
TOT QSO P	**************************************	******* * * * * *	* ******** X * * * * * * * *	= **************** * * * * * * * * * * *
AILIN	IG ADDRESS	4		
AME			""I	have observed all competition

Thanks to Howard, WZ6Z for providing the following:

BREAKDOWN FOR THE PETER I DX EXPEDITION 1987

Compiled by LA2GV

SUMMARY

	QSO's	SSB	CW	RTTY	COUNTRIES WKD
3Y1EE	9.486				97
3Y2GV	6.355				92
TOTAL	15.841	10.090	5.703	48	112

Band by band pr call

	3Y1EE	3Y2GV	TOTAL
10	116	43 .	159
15	3.668	902	4.570
20	4.001	5.306	9.307
40	1.114	75	1.189
80	587	29	587
160			29
TOTAL	9.486	6.355	15.841

USA pr call areas

	1	2	3	4	5	6	7	8	9	0	Total
3Y1EE	383	326	175	751	381	560	222	331	358	232	5.503
3Y2GV	215	602	322	1.076	625	968	323	392	500	312	3.551
TOTAL	598	928	497	1.827	1.006	1.528	545	723	858	544	9.054

EUROPE

	EU	LA	SM	OH	OZ	TOTAL
3Y1EE	1.077	163	176	248	51	1.715
3Y2GV	753	84	71	84	29	1.021
TOTAL	1.830	247	247	332	80	2.736

OTHER

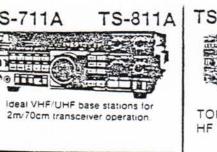
	VE	ZL	VK	AF	JA	ASIA - JA	PAC	LATIN SOUTH AM	OTHER	TOTAL
3Y1EE	207	45	12	39	1.441	11	20	443	50	2.268
3Y2GV	105	88	84	50	864	54	29	474	35	1.783
TOTAL	312	133	96	89	2.305	65	49	917	85	4.051

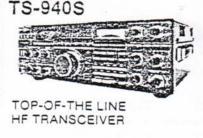
USA 57.1 %
EU 17.2 %

JA 14.5 %

Lat + South AM 5.7 %

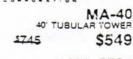
Other 5.5 %











MA-550₽ 55' TUBULAR TOWER

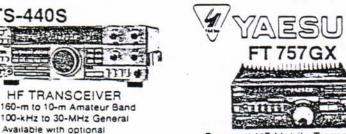
\$899 \$1245 · Handles 10 sq. ft. at 50 mpn · Pleases neighbors with tubular streamlined look

●TX-455 55' FREESTANDING CRANK-UP

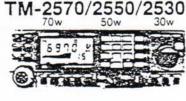
· Handles 18 sq. ft. at 50 mpn No guying required

OTHER MODELS AT GREAT PRI

 Extra-strength Construction Can add raising and motor drive accessories



Compact HF Mobile Transceiver CALL FOR PRICE



Compact FM Mobile Transceivers

R-751A

built-in Antenna Tuner.



ALL MODE TRANSCEIVER

TM-3530A



The First Comprehensive 220 MHz FM Transceiver

TH-215A

Full-featured 2m Hand-held Transceiver with 10 memories



Heavy Duty (handles 16 sq. ft.) HG54HD - 54' Tower

Single Strength (handles 9 sq. ft.) HG37SS - 37' Tower

HG52SS - 52' Tower

HG70HD - 70' Tower All steel

Includes base & rote plate No guying required

Hot dip galvanized

Accessories availab

WORLDWIDE DISTRIBUTION

LINGAME, CA 94010 bward Ave. 342-5757 e. Mgr. WB60SV south on 101 from SFO LAND, CA 94606 ivingston St 34-5757

WASSYK



E CONTEST JUG Published Monthly By NORTHERN CALIFORNIA CONTEST CLUB Toyon Terrace iville, CA 94526

> FIRST CLASS FIRST CLASS FIRST CLASS





WEGAT Charles Epps 651 Handley Trail Redwood City, CA 94062