

Results of the

1962 CQ World-Wide DX (C.W.) Contest

BY FRANK ANZALONE*, W1WY

CONDITIONS for the c.w. week-end were a repetition of what we experienced a month earlier in the phone section. "Poor to fair" as George Jacobs put it in his contest post-mortem. "W3ASK's propagation forecast for below normal was right on the button," remarked W1UUK. Personally, we found them rather poor on 21 mc, with some fair openings to Europe in the morning, but the rest of the time we had to dig for everything we worked.

A look at some of the scores would indicate, however, that some of the fellows didn't have cause for complaint. Our own Don Miller took full advantage of his rare location and I'm sure it comes as no surprise to see HL9KH at the top of the totem pole. During one of the better periods on 20 he averaged 80 contacts per hour, and on 40 he was working the East Coast late in the afternoon. Fifteen was productive and 80 also added to his multiplier, but 10 was a complete wash-out.

With three element beams on 10, 15, and 20, three quarter-wave phased verticals on 40 and an extended zepp on 80 Don was well prepared for the brawl. Power (?) pair of 6146s. That's what the man said. So where do we send the Larry LeKashman, W9IOP Trophy, out there in Korea or back home in Chicago?

Next in line is 4X4KK, Micky Monastirsky, son of Sam, 4X4BX who was quite a contest man himself not too many years ago and has a trophy to prove it.

By way of equipment comparison Micky used a BC-610 and a Siemens receiver. Antenna farm, three elements on 14, dipoles on 3.5, 7 and 21 mc and a ground plane on 28. Not to forget that desirable geographical location.

And the third "Top Toner" to break a million was HK1QQ, operated by Dale Strieter, W4DQS. Equipment was the same as Herman used in the Phone contest, GSB-101, 75A-3, tri-band beam for the higher frequencies and trap inverted V for the lower bands. Dale's contact total is the highest ever made by a single operator. Unfortunately he didn't have the multiplier to back it up.

The call UT5AA might be a new one in contest circles but not the man behind the key. Leo was the chief operator on the team at UB5KAB, winner of the W3AOH Trophy back in 1960.

With the exception of W3GRF, W4DHZ and W4YHD who upheld the honors for the Poto-

mac Valley, Virginia Century and the USA, the rest of the calls are new to the Top Ten but not in contest competition.

Missing this year was KH6IJ. It just didn't seem like the same contest without Nosey's rapid fire exchanges.

There was plenty of activity in the single band category with most of it and the top scores concentrated on the 14 mc band.

After many years of participation PY4OD finally came up with a winning combination and T. D'Angelo Drummond became the first Trophy winner for Brazil. The John Ryan, W7KVU Cup for the highest score on a single band will soon be on its way to you D'Angelo, congratulations.

An excellent performance was also turned in by Vic Clark (who else). W4KFC looked like a sure winner until we received PY4OD's log.

There were many other fine scores in six figures on 14 mc, among them and deserving special mention are UC2AA and ST2AR. Said Eric, "Conditions generally poor with periods of no signals but did better than anticipated."

Because of the lower m.u.f. the openings on 21 mc were of short duration and it was a mad scramble when the band was open. Missing this year was the ole perennial on 15 meters, W2WZ. Al was temporarily grounded and spent the prior week-end in the hospital. I thought I had a clear field in this one, only to have a new menace. W2HTI and my old rival W3LSG take me over the hurdles.

Evidently the openings over in Africa lasted a little longer because the only six figure scores



Don Miller, HL9KH, top all band single operator station for 1962. Don only had about a month to set up this lay-out.

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on 21 mc came from that area.

ZS61W gave all hands a try but finally settled on 15 and came up with the highest score on the band. And 5N2JKO, Dr. Mike gave up his usual round the clock operating and settled for a single band so that he could get a little "shut eye."

Although 40 didn't produce the record breaking scores of last year it did create its usual activity. Surprisingly enough the high score is VK3AZZ. With only modest power and conventional antenna system for 7 mc Bob proved that it can be done from "Down Under." The Israel Amateur Radio Club please note, if you are still giving a Trophy for the highest score on 7 mc it goes to Robert J. Gray, VK3AZZ. 18 York St., Reservoir, Victoria.

Bob Martinez, K2DGT made his usual fine showing but the European openings were not as productive as last year and he ran short of contacts. Right now Bob's interests are in other fields and even a long path opening to the JA's wouldn't budge him. But don't relax fellows, I have a hunch DGT will be giving you guys the usual hard time come next November, his YL is very tolerant and understanding.

And speaking of YL's how about JA1YL's score on 7 mc. As I said fellows, just don't relax.

Once again most of the 80 meter activity came from Europe with OK1MG leading the pack by a close margin. Over here, W1BU and his superior antenna farm lead the boys on this side of the pond by a wide margin. This year the man at the key was Ralph, W1HGT.

Although the Single Band entries were few the All Banders used 3.5 to good advantage to fatten up their multiplier but "Oh, those long calls on 80," moaned Ed of the W3MSK crew.

The Top Band enjoyed a good season this year and the few who concentrated on 160 in our contest finally had something to show for their efforts. W2FYT had 8 countries to his credit, nice going Tony. DL1FF will probably be disappointed to see DJ2KS ahead of him. Armin admits he fell asleep while Hans was taking advantage of a good opening on the band.

Ten meters? Forget it, the band was a total washout. Where HK7ZT dug up 65 contacts we don't know.

As in the past, the Multi-Operator Single Transmitter division was dominated by the European and USSR club stations, but it was an old familiar call down South America way that picks up the marbles. This year Ricardo Jr. took on a pardner, Daniel CX7CO. Add another Cup—the Tony Susen, W3AOH Trophy—to the Sierra collection.

It was not a runaway victory for them, the team at UA9KDP made an excellent showing. This is a new group organized by Vladimir. UA9DN also a Trophy winner as single operator the past two years.

The station that everybody was calling. HK0ZU was a DX-pedition to San Andres by three members of the Florida DX Club. Ray



Daniel Sosa (CX7CO) and Ricardo Sierra, Jr. at the operating position of CX2CO, this year's winner in the multi-operator single transmitter division.

W4BJ, Bev W4CKB and Ed W4QVJ. Besides having a ball (they submitted a fantastic bar bill to prove it), the boys had the satisfaction of knocking off the most contacts ever made by any station in our contest.

The gang at LZ1KSV improved their score over last year and at the rate they are going they might still land on top one of these days.

Over here the most impressive score was turned in by W1BIH who teamed up with WIJYH to do it. A couple of years ago this duo copped the Trophy.

The club members of W3ADO at the U. S. Naval Academy got special permission which excused them from all week-end assignments and found the contest so exciting that they are planning bigger things for the next one. We had a station from the U. S. Air Force Academy, K0MIC in the phone contest. Now if we could stir up some activity up at West Point we could have an intraschool brawl.

The "Big Boys" had quite a time in their own section. A lot of fellows were wondering where 4X9HQ was located and took credit for a new country, but it was only a club station over in Israel, not just another station but a dream that Bruno, 4X4DH had planned for the past three years. During this time the club members had operated individually in contests and gained valuable experience. For months prior to the contest they had worked on week-ends equipping their Headquarter station 4X9HQ with 5 transmitting positions and 7 different antennas. "Finally this effort came to a climax during the contest," wrote Bruno, "and I hope the score speaks for itself." It sure does Bruno, your boys and YL proved what can be done by a properly organized Multi-Operator, Multi-Transmitter station. With that call and location, how could they miss? Dust off a place of honor for the Buzz Reeves, K2GL Trophy in your club room.

The gang at W3MSK again proved that it is the top Multi station over here and added substantially to the Potomac Valley score.

Over on the West Coast W6RW greatly improved its score over last year's. "The new start-



Herman Olarte, HK1QQ and Dale Strieter (W4DQ5) who operated the station in the c.w. contest for the highest contact total by a single operator.

ing time is too early for the poor working man in California." complained Roger, so we don't know what to credit their improvement. The other Southern California power house, K6EVR added more operators to its crew so I guess that's the answer to their much higher score.

The German DX Team sent us a complete list of their membership and also an itemized list of the scores of the members that participated in the contest. With 69 stations out of a membership of 109 taking active part, and the Potomac Valley with a close score from their smaller membership, we had quite a job in checking out this one. But there is no question as to where we're sending the CQ Club Plaque, its across the sea to DL-land!

The Southern California gang took a giant step forward and made a very impressive showing, as did some of the other USA clubs who made substantial increases over previous years. That is, all except one; the once mighty North Jersey DX Association, who like the Roman Empire has grown lax and lazy and sunk to the depths of oblivion.

Our experiment of trying to increase activity in Central America and the Caribbean didn't work out. The reaction of the rule change of giving 2 points for contacts between stations in North America was about equally divided. W3JTC is very much against it, said Larry, "it didn't generate any more activity and now we can't make a comparison with our scores of previous years." Right you are on both counts Larry, maybe we had better forget the whole idea. Actually with the little activity south of the border it didn't do much to anyone's score—except maybe HKØZU.

Well, that just about does it. With only three of us carrying the load it was a rough one this year. We've just got to educate the boys of the

USSR and some of the other overseas countries how to keep and score a contest log. Some of you guys over here could stand a little prompting too. Especially when you have to be told by an overseas station that you're in Zone 4 or 5 and not the progressive numbers you keep sending. And those duplicate contacts, one of these days we are going to give out penalties for duplicates in excess of a prescribed percentage.

If you want to show your appreciation, give a vote of thanks to Andy, WIGYE and Ben, W2JB when you hear them on the air. They will probably be on more now that we have put this one to bed. As for me I don't care if I ever see another contest log, except maybe my own.

73 for now, Frank, W1WY

United States Club Scores

Potomac Valley Radio Club	4,052,481
Southern California DX Club	3,458,228
Florida DX Club	1,074,480
North Eastern DX Association	1,058,099
Virginia DX Club	869,178
Northern California DX Club	544,001
Ohio Valley Amateur Radio Ass'n	322,480
Nashua Mike and Key Club (N.H.)	293,673
U. S. Naval Academy	260,615
North Jersey DX Association	232,564
San Diego DX Club	200,312
West Gulf DX Club	197,790
Frankford Radio Club	84,560
Lockhead Radio Club (Calif.)	57,134
DX Club of QCWA (New York)	56,282
Willamette Valley DX Club	54,920
Boiled Owls of New Mexico	24,117
Brookhaven Amateur Radio Club (N.Y.)	9,072
U. S. Air Force Academy	8,624

Foreign Club Scores

Deutches DX Team	4,200,192
Uruguay DX Club	2,548,661
Central Radio Club of Czechoslovakia	1,892,928
Swiss DX Club	1,350,280
Radio Club of Sofia (Bulgaria)	757,393
Far East DX-ploiters (Japan)	725,220
SP DX Club (Poland)	344,096
Kharkov Radioclub DOSAAF (Ukraine)	217,919
Coral Isle Amateur Radio Club (Guam)	115,080
Warsaw Short Wave Radio Club	103,845
DX King Radio Club (Japan)	96,744
DM Contest Buro (East Germany)	79,971
Narodna Tehnika Radio Club (Yugoslavia)	52,555
Radioway DX Klub (Poland)	35,816
Okinawa Amateur Radio Club	32,821
Tiger Amateur Radio Club (Pakistan)	31,881
Japan DX Radio Club	25,185
Shizuoka Radio Club (Japan)	19,760
Wroclawski Radio Klub (Poland)	19,440
Keihanshin Radio Club (Japan)	14,706
Odawara Amateur Radio Club (Japan)	10,266
Kagoshima Radio Club (Japan)	10,229
Nikola Tesla Radio Klub (Yugoslavia)	10,065
Linkoing Radio Club (Sweden)	6,525
O.S.A. CW DX Club (Belgium)	5,586
Kanazawa Radio Club (Japan)	5,551
Radio Club of Gdansk (Poland)	5,043
Radio Club of Bacau (Roumania)	1,560

Top Ten ALL BAND—SINGLE OPERATOR

4X4KK	1,039,724	UF6FB	721,112
HK1QQ	1,002,042	W3GRF	445,884
UT5AA	816,408	5A1IW	437,376
HC1DC	759,000	W4DHZ	436,322
W4YHD	405,876		

Top Five MULTI-OPERATOR SINGLE TRANSMITTER

UX2CO	1,103,721		
UA9KDP	1,033,184	LZ1KSV	604,385
HK0ZU	791,280	UA9KCA	456,351

Top Five MULTI-OPERATOR MULTI-TRANSMITTER

4X9HQ	1,681,988		
W3MSK	1,043,415	DJ3JZ	815,490
W6RW	820,725	K6EVR	763,569

Continental Leaders SINGLE BAND

28 Mc		7 Mc	
HK7ZT	3,276	VK3AZZ	82,284
21 Mc		K2DGT	71,040
ZS61W	153,200	JA1YL	60,532
W2HTI	50,730	OK2KOJ	57,024
OK3DG	48,108	YV5ANT	34,476
JA0SU	27,156	3.5 Mc	
PY4BC	11,254	OK1MG	21,000
VK3RJ	1,664	W1BU	12,349
14 Mc		ZL2GS	1,417
PY4OD	219,230	JA2WB	990
W4KFC	187,142	1.8 Mc	
UC2AA	183,580	DJ2KS	2,576
ST2AR	166,635	W2FYT	416
VK5NQ	137,917		
JA1BWA	107,064		

U. S. A. Runners-up

All Band	K6VTQ	372,252
21 Mc	W3LSG	39,900
14 Mc	W4WDI	129,220
7 Mc	W6JZH/6	43,068
3.5 Mc	K6BPR	4,832
1.8 Mc	W0CDP	171

Number groups after call letters denote the following: Band (A-all), Final Score, Number of QSOs, Zones and Countries. Certificate winners are listed in **bold face**.

C. W. Results SINGLE OPERATOR North America

	United States				
W1FZ	A	24,153	86	38	59
W1ACB	"	13,534	70	23	44
W1UUK	"	12,040	64	31	39
W1PLJ	"	5125	43	17	24
W1AJG	"	2112	23	14	18
W1WY	21	36,708	173	24	52
KN1VSC	"	315	23	8	7
W1PIV	14	88,181	278	28	81
W1GYE	"	48,616	164	30	73
W1AGS	"	18,630	80	29	52
K1NHR	"	12,871	76	21	40
W1ZJK	"	12,660	73	19	41
K100J	"	4576	52	13	19
K1RKH	"	1127	20	11	12
W1GVZ	"	518	14	6	8
W1JNV	"	442	12	6	7
K1SDX	7	9550	73	21	29
K1M1L	"	6762	50	21	28
W6KFV/1	"	4988	42	17	26
K1PMY	"	198	9	4	5
W1BU	3.5	12,349	87	16	37
W2A0JD	A	145,550	254	76	129
W2TVR	"	100,480	228	50	107
W2FZY	"	48,670	117	54	101
W2A1EK	"	38,936	122	55	69
K2CPR	"	16,038	71	47	52
W2GKZ	"	5886	42	25	29
W2JB	"	1850	26	10	15
W2JHK	"	1189	15	14	15
K2YFE	28	442	12	8	9
W2HTI	21	50,730	201	25	64
W2ACYQ	"	9163	68	19	30
K2B0K	14	89,505	263	31	86
W2VUV	"	41,496	158	29	62
K2EAC	"	21,350	109	24	46

K2UYG	"	18,873	85	27	54
W2MES	"	17,622	94	21	45
K2DGT	7	71,040	257	29	67
K2GLT	"	43,670	169	28	63
W2FYT	1.8	416	12	8	8
W2EQS	"	80	23	4	4
W3GRF	A	445,884	544	95	197
W3QQL	"	83,592	187	62	100
W3FDH	"	39,790	128	46	69
W3ZKH	"	22,400	82	38	62
K3MNT	"	48	5	5	3
W3LSG	21	39,900	199	22	48
K3AIG	"	16,298	97	21	37
W3JTC	14	106,848	290	31	95
W3PZW	"	94,604	245	34	100
W3AFM	"	58,208	189	29	78
W3BYX	"	53,958	189	27	75
W3ZQ	"	11,781	71	23	40
W3VEQ	"	4326	40	18	24
K3EHM	"	1400	20	9	16
W4DHZ	A	436,322	501	96	217
W4YHD	A	405,876	489	109	189
K4LIQ	A	97,632	234	52	92
W4LIV	"	88,528	189	72	104
W40PM	"	67,206	174	46	92
K4ORQ	"	51,948	161	43	74
W4LRN	"	38,280	118	49	71
W4ZYS	"	24,534	92	38	56
W4MXE	"	19,488	90	32	52
W4ZYQ	"	17,459	82	30	49
W4OM	"	14,170	74	22	43
W1EQ/4	"	8918	61	18	31
W4ADQM	"	7182	48	25	29
W4GF	"	5994	43	24	30
K4ADU	"	3354	30	18	25
K4JLD	"	2268	29	11	16
K4CXR	"	1350	20	12	18
W4DS	"	1325	18	12	13
W4OMW	"	1102	17	14	15
K4RQE	"	760	15	9	11
W4NTE	21	5375	45	16	27
W4EE0	"	792	12	10	12
W4KFC	14	187,142	474	34	103
W4WDI	14	129,220	324	35	105
W4JLJ	"	92,354	261	31	91
W4SNU	"	52,371	186	27	72
W4VNY	"	20,777	95	27	52
W4YGY	"	17,877	106	19	40
K4BAI	"	12,312	76	22	35
K4ASU	"	7056	52	19	30
K4BE	"	3772	31	14	24
K4UVT	"	1092	18	8	13

W4CKD	7	29,465	134	25	58
W4CQR	"	7379	63	19	28
W4SHJ	3.5	2054	32	11	15
W5BRR	A	142,923	255	83	130
W5BUK	"	71,520	167	62	98
K5KBH	"	70,357	163	66	95
W5KLL	"	3315	32	17	22
K5UYF	21	12,432	81	22	34
K5SEK	"	4218	43	16	21
W5KC	14	40,734	157	29	64
W5NOP	"	38,279	135	32	69
W5PSB	7	29,526	143	26	48
K5DEG	"	11,816	80	22	34
K6VTQ	A	372,252	493	102	166
W6IBD	A	294,176	447	89	143
K6CTV	A	282,529	476	83	128
W6AIPY	"	224,924	396	73	124
W6GG	"	175,096	366	75	97
W6GRX	"	129,240	256	71	109
W6ISQ	"	112,391	243	69	98
W6MSM	"	80,772	255	40	66
W6FYM	"	68,552	173	68	84
W6GFFY	"	57,134	192	42	64
W6JFJ	"	55,692	160	47	72
W6VQQ	"	47,674	142	49	72
W6HVN	"	40,800	137	57	63
W6BVM	"	25,020	99	37	53
W6TYM	"	24,087	100	42	51
W6WVVR	"	21,141	98	34	47
W6CHV	"	19,125	80	37	48
K6ASL	"	19,000	75	38	57
W6AQU	"	18,798	87	33	45
W6ID	"	18,564	67	41	61
W6ERS	"	17,280	82	32	48
W6NEX	"	16,425	77	31	42
K6TZT	"	14,740	83	27	40
K6HOR	"	11,984	73	22	34
W6FLT	"	7480	57	19	25
W6A0JM	"	4558	43	20	23
W6AVAT	"	3128	37	15	19
W6AGLD	"	2442	24	17	20
W6WAW	"	2310	23	15	20
W6BIL	"	1500	20	11	14
W6SDBC	28	45	3	2	3
W6SSB0	21	27,200	150	23	45
W6BSY	"	19,824	120	23	36
K6EIV	"	15,125	100	21	34
W6HJT	"	13,573	97	20	29
W6KUT	"	10,094	73	19	30
W6EPZ	14	91,214	266	33	85
W6KNE	"	32,417	148	25	52
W6QNM	"	30,102	121	27	61

WA6UHM	"	24,420	138	23	43
W6N1U	"	17,526	88	25	44
W6GDHJ	"	15,540	90	21	39
W6CVV	"	15,028	77	23	45
W6UQT	"	4042	36	18	25
W6QGW	"	792	15	11	11
W6JZH/6	7	43,068	204	28	46
W6PQW	"	33,051	169	27	42
W6ILP	"	31,416	166	25	43
W6FOZ	"	17,980	108	22	36
K6IEC	"	15,548	105	20	32
W6ANN	"	6486	138	20	27
W6VNI	"	5400	54	16	20
K6SXA	3.5	6120	64	18	22
K6BPR	"	4832	63	13	19
W7VY	A	239,200	408	86	122
W7PQE	"	123,255	279	67	99
W7DIS	"	34,608	130	44	59
W7MX	"	14,616	87	24	34
W7ENA	"	6808	51	20	26
W7DLR	"	640	11	9	11
W7BTH	14	480	11	7	9
W7JLU	3.5	3690	52	13	17
W8JIN	A	267,090	332	104	186
K8AEB	"	220	7	5	6
W8RQ	21	18,492	97	25	42
W8TTN	"	18,084	97	22	44
W8WBV	14	49,373	180	30	67
W8EW	"	6272	47	19	30
K8SWE	"	4472	37	16	27
W8MCC	"	242	8	5	6
W8FGX	7	29,520	130	27	53
W8BAR	"	9570	66	24	34
K8NMG	"	1798	24	14	17
W8AJW	3.5	2323	48	10	13
K8SQK	"	1534	29	11	15
W9EWC	A	220,038	368	79	138
W9IOP	"	112,496	242	65	113
W9ZB	"	19,691	81	42	55
W9CLH	"	7579	51	20	33
K9LYK	"	4592	36	26	30
W9GMS	"	1736	20	15	16
W9YYG	"	1518	20	15	18
K9LID	21	12,960	83	20	40
W9JUV	"	6713	52	18	31
W9LKI	"	5874	51	18	29
K9IWS	"	308	8	7	7
W9IU	14	65,090	199	31	84
K9ZEL	"	41,088	155	30	66
K9DWG	"	1064	19	9	10
W9ERU	7	10,726	65	25	37
W9OKM	"	630	15	8	10
W9PNE	3.5	2592	44	11	16
W0DAE	A	55,913	156	61	82
W0GUV	"	18,042	83	42	55
K0JPL	"	2040	30	19	21
K0VSH	"	1363	20	13	16
W0TCX	21	13,312	80	23	41
K0ODB	"	4017	38	17	22
W0AII	"	2205	27	14	21
W0EQN	14	15,502	93	23	39
W0DU	"	15,257	75	24	49
W0CRY	"	250	9	5	5
W0CDP	1.8	171	26	5	4
W0YXO	"	153	13	5	4
Alaska					
KL7DUZ	14	459	20	4	5
KL7JDO	3.5	1188	67	5	4
Bermuda					
VP980	7	11,169	325	8	9
Canada					
VE1YB	21	2250	29	12	18
VE2NV	A	157,896	383	65	107
VE2YU	"	94,402	251	66	88
VO2NA	"	6936	149	14	10
VE2UQ	1.8	320	34	3	2
VE3ES	A	18,240	89	34	42
VE3PV	"	12,342	122	26	25
VE3EBU	"	4068	49	17	19
VE3BMB	21	4144	45	17	20
VE3AU	14	5513	54	14	23
VE3AGX	3.5	2814	63	9	12
VE5KY	14	3580	85	10	10
VE7EH	A	84,480	399	45	51
VE7AKI	1.8	72	6	3	3
Greenland					
OX3KC	A	36,498	252	23	43
Mexico					
XE1VT	A	13,560	241	16	14
XE1RM	7	700	70	3	2

HP1AC	A	11,456	177	17	15
KP4CC	A	40,369	226	35	44
Panama					
Puerto Rico					
Africa					
Kenya					
VQ4IQ	14	46,750	196	27	58
Kerguelen Is.					
FB8XX	14	4551	41	15	26
Libya					
5A1TW	A	437,376	749	58	146
5A2TS	21	25,543	211	12	29
Morocco					
CN8FE	14	53,735	327	14	41
Mozambique					
CR7IZ	A	29,580	156	28	40
Nigeria					
5N2JKO	21	141,496	523	27	65
Rhodesia, Northern					
VQ2JG	A	67,252	253	30	62
VQ2W	21	112,347	520	22	51
VQ2EW	14	67,782	301	26	53
Rhodesia, Southern					
R7EIV	A	54,480	240	33	47
South Africa					
ZS10	A	6138	70	16	15
ZS2AT	"	168	6	6	6
ZS6IW	21	153,200	520	28	72
ZS2HI	14	115,836	408	29	69
Sudan					
ST2AR	14	166,635	503	33	82
Tanganyika					
5H3HZ	14	40,223	210	26	47
Uganda					
5X5IU	A	76,175	278	33	64
Asia					
Aden					
VS9AAA	A	172,080	476	47	97
Bahrein Is.					
MP4BDD	A	18,056	108	20	41
Burma					
XZ2TH	14	21,168	136	27	45
Ceylon					
4S7WP	A	107,680	273	51	109
4S7RN	21	1488	21	13	18
4S7NE	14	15,318	92	27	42
Cyprus					
5B4WS	A	123,360	368	34	86
Hong Kong					
VS6EC	14	11,832	117	24	34
India					
VU2BK	A	82,779	673	37	86
VU2AJ	14	49,800	280	24	51
VU2CK	"	22,570	173	19	42
VU2TH	"	4300	44	17	26
Israel					
4X4KK	A	1,039,724	1286	78	206
4X4LS	"	125,970	372	34	80
4X4BG	"	122,100	390	29	81
4X4MJ	"	36,437	149	31	52
Korea					
HL9KH	A	1,142,748	1554	103	221
Malaya					
9M2UF	14	7626	116	16	25
Mongolia					
JT1AG	14	1224	50	8	9
Ryukyu Is.					
KR6ML	A	200,734	551	72	95

KR6LJ	"	108,272	362	56	78
KR6NA	21	1026	45	9	9
KR6BQ	14	40,690	295	25	44
Pakistan					
AP5CP	A	4374	57	24	30
AP5AH	"	1056	25	14	18
AP5JA	14	2890	51	12	22
AP5SS	"	868	21	12	16
Singapore					
VS1FJ	A	138,112	407	63	103
Japan					
JA1VX	A	320,943	584	79	124
JA1BK	A	255,285	529	68	115
JA2AEY	A	170,696	434	61	91
JATAD	"	112,320	320	52	78
JA3CUK	"	69,249	202	48	75
JA6ACZ	"	33,675	183	36	43
JA1EM	"	33,375	152	40	49
JA3BEA	"	21,924	109	38	49
JA2BDY	"	21,600	104	27	27
JA2TH	"	19,760	117	37	39
JA3UM	"	19,110	102	36	42
JA1CZG	"	17,850	130	29	41
JA4AS	"	17,775	107	31	44
JA3ASF	"	14,706	104	27	30
JA3ARX	"	13,992	99	32	34
JAGAKW	"	12,537	89	28	35
JA2CA	"	10,416	70	31	31
JA1CPM	"	10,266	79	26	32
JA1EFE	"	7315	86	18	17
JARAAC	"	6660	68	20	25
JA1BYM	"	6642	58	26	28
JA3AVO	"	6400	60	27	23
JA8BY	"	3672	45	17	17
JA1CXW	"	3313	71	18	17
JA9NB	"	3115	37	17	18
JA6FB	"	2436	28	20	22
JA3CED	"	2432	38	19	19
JA2AXB	"	2185	36	12	11
JA2BL	"	1944	33	13	11
JAYAP	"	1444	43	11	8
JA1BUJ	"	999	23	13	14
JA3HC	"	416	14	7	6
JA6SU	21	27,156	176	27	35
JAGPY	21	25,160	148	22	46
JA1ITX	"	20,862	140	23	34
JA3KM	"	20,696	149	20	32
JA7RH	"	13,431	132	17	20
JA1DFQ	"	11,439	109	18	23
JABADQ	"	11,430	101	20	25
JA1IRS	"	10,440	91	20	25
JA1JAT	"	9116	88	19	24
JA1CIB	"	3012	93	12	12
JA3BQU	"	1680	28	12	12
JA4AKL	"	1612	24	16	15
JA1HZ	"	1520	29	10	10
JA1IZ	"	1166	24	12	10
JA7OR	"	442	18	7	6
JA4AQR	"	418	15	6	5
JA1HJE	"	330	16	6	5
JA9UJ	"	110	6	4	6
JA1BWA	14	107,064	439	30	58
JAB8/1	14	83,898	385	28	51
JAZANX	14	36,072	197	28	44
JA1BN	"	33,966	255	22	29
JA1BC	"	27,720	169	28	42
JA2DN	"	25,185	142	26	43
JA3AA	"	12,933	88	26	35
JA4AOE	"	12,550	109	22	28
JA6PN	"	11,904	111	19	29
JA8JR	"	10,340	91	20	27
JA6ZY	"	9487	83	23	30
JA1IFP	"	7988	102	19	19
JA6JU	"	7128	85	18	24
JA2BGT	"	5280	68	14	16
JA6HW	"	4520	55	18	22
JA1BEE	"	3990	53	15	15
JA8FO	"	3060	55	16	20
JA1HOM	"	2912	56	11	15
JA2LA	"	2160	44	11	13
JA1YDU	"	1460	36	9	11
JA3DWC	"	1080	35	9	11
JA1AIU	"	795	30	7	8
JA1CJN	"	736	24	7	9
JASART	"	338	10	6	7
JA8BB	"	132	6	5	6
JA1YL	7	60,532	310	28	46
JA1ISB	7	22,828	165	22	30
JA8LN	7	21,040	146	23	35
JABAJ	"	16,362	129	23	31
JA2KW	"	10,880	118	15	25
JA1SA	"	10,608	110	18	21
JA3DAZ	"	8643	86	18	25
JA3DDG	"	7210	83	15	20
JA3CAF	"	6293	84	15	16
JA7AKQ	"	5882	72	16	18

JA0RF	2620	58	9	11
JA7IBX	2340	51	9	20
JA1CXC	2289	46	10	11
JA4YC	1944	31	12	15
JA1HLR	1140	30	9	10
JA8AER	736	20	8	4
JA1CUM	225	16	5	8
JA3YBQ	88	8	5	6
JA2WB	990	28	8	7
JA1EL	99	9	4	5
JA7ADV	10	4	2	3

U.S.S.R.

UG6AW	14	330	10	3	8
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Asiatic

UA9CH	A	144,256	538	44	117
UA9WL	"	137,835	392	38	97
UA9WS	"	98,098	389	23	75
UA9FH	"	24,180	151	19	46
UA9JL	"	16,569	116	22	41
UA9FM	"	12,740	81	24	46
UA9OC	"	11,096	144	12	26
UA9FA	"	4704	72	9	23
UA9BZ	14	75,112	352	18	64
UA9WJ	"	36,094	208	14	50
UA9OB	"	12,466	121	16	30
UA9JH	"	10,668	104	11	31
UA9SB	"	8995	92	7	28
UA9FO	"	3266	58	6	18
UA9KUA	"	1935	43	6	9
UA9FV	"	1173	23	3	14
UA9XG	"	1100	25	9	16

Crete

UA0SK	A	190,847	590	46	93
UA0AF	"	39,321	346	21	27
UA0GF	"	31,006	286	34	37
UA0EK	"	27,240	243	26	34
UA0LL	"	19,224	272	35	32
UA0LS	"	11,565	96	19	27
UA0JU	"	6204	112	15	18
UA0MF	"	2059	52	14	15
UA0MK	"	1022	66	8	6
UA0SH	14	5850	110	8	22
UA0YW	"	2346	77	9	14
UA0BP	7	20,008	168	18	43

Azerbaijan

UD6AM	A	35,900	172	33	67
UD6AX	"	25,380	160	17	43
UD6GW	"	3922	43	15	22

Georgia

UF6FB	A	721,112	793	94	232
UF6AU	14	33,750	227	15	39

Kazakh

UL7FA	A	127,324	407	44	95
UL7CH	"	24,380	168	17	36
UL7AW	"	15,189	91	20	41
UL7HT	"	5402	79	13	24
UL7LA	14	31,349	234	12	35
UL7LE	7	1806	36	7	14

Turkoman

UH8BO	A	23,572	139	23	47
UH8DA	21	4640	55	10	22

Usbek

UI8LB	A	101,088	356	28	76
UI8FB	14	29,974	193	19	47
UI8AG	"	2376	36	8	19

Europe

Aland Is.

OH0NI	A	2016	60	11	25
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Austria

OE1RZ	A	189,924	380	74	154
OE3TL	7	14,508	174	15	47
OE3LI	"	8037	139	10	37
OE1WO	3.5	6150	141	9	32

Belgium

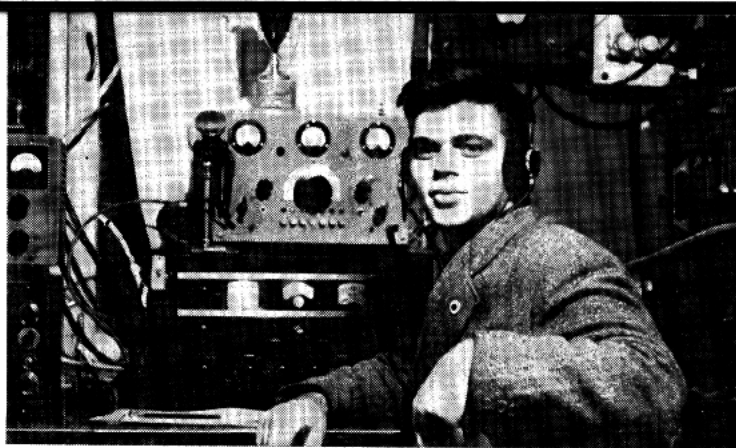
ON4EC	A	84,624	515	33	96
ON5AX	"	18,352	197	20	54
ON4XG	"	18,172	143	26	51
ON4CE	21	972	25	7	11
ON4JQ	7	5586	126	7	31

Bulgaria

LZ2KKZ	A	33,201	357	20	73
LZ1AG	14	41,207	320	24	65

Corsica

F2CB/FC	A	15,990	214	16	49
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Leo Yailenko, UT5AA leading all band scorer for Europe. Note the W3AOH Trophy won by UB5KAB in 1960.

SV0WZ	A	29,716	280	23	69
OK1ZL	A	299,455	689	80	189
OK1GT	A	219,912	524	69	162
OK3AL	A	211,703	703	53	157
OK3CAG	"	53,172	352	34	92
OK3IR	"	48,396	368	24	85
OK1SV	"	47,614	195	47	86
OK2ABU	"	22,008	181	24	64
OK2KFK	"	21,894	188	29	60
OK3CDP	"	19,762	212	18	64
OK2QR	"	19,465	155	27	58
OK1JX	"	18,333	122	30	67
OK2BBJ	"	17,974	134	28	58
OK100	"	16,632	131	25	59
OK3CAO	"	15,616	203	15	46
OK2LN	"	12,460	147	21	68
OK1KRF	"	11,210	153	14	45
OK2KMB	"	10,902	190	10	36
OK1ZW	"	9504	93	21	45
OK2LL	"	4048	49	13	31
OK1KAY	"	2848	80	8	24
OK2BCA	"	1254	30	13	20
OK3DG	21	48,108	236	27	49
OK1GA	"	14,384	86	24	38
OK1KCD	"	2958	36	13	16
OK2EI	14	63,072	378	29	67
OK1AVD	14	54,236	335	29	62
OK1VB	"	36,520	234	26	57
OK3OM	"	36,182	268	21	58
OK1PG	"	22,914	216	21	46
OK1DK	"	17,556	200	17	40
OK1MP	"	13,680	90	21	51
OK1ADM	"	12,528	126	16	42
OK1AVT	"	10,516	150	13	31
OK1TW	"	3480	76	11	19
OK1AAZ	"	221	17	4	9
OK2KOJ	7	57,024	475	19	62
OK3UI	7	47,580	471	18	60
OK1BY	"	42,332	362	20	56
OK1KB	"	16,128	221	12	44
OK2KMR	"	14,148	209	12	42
OK2QX	"	11,495	165	12	43
OK3SL	"	11,362	218	10	36
OK1RX	"	9890	196	11	35
OK2BBI	"	6348	105	11	35
OK3KJH	"	4278	61	10	36
OK1MG	3.5	21,000	355	8	42
OK3EA	3.5	20,304	380	9	38
OK2KGZ	3.5	14,523	283	8	39
OK1FV	"	9460	183	8	36
OK1IQ	"	7696	195	6	31
OK1EV	"	6475	200	6	29
OK1AAE	"	5180	139	7	30
OK3CED	"	5134	153	6	28
OK1AFW	"	2852	89	5	26
OK2KAJ	"	2380	82	4	24
OK3CDY	"	2128	77	5	23
OK2BKV/1	"	1914	52	6	27
OK1AGM	"	1608	67	4	20
OK2BCI	"	1750	69	4	21
OK2BAN	"	1350	59	5	20
OK3CEC	"	1220	61	5	15
OK2BCN	"	1173	45	5	18
OK2BDY	"	1104	48	5	19
OK3CEG	"	798	52	4	15
OK1KRX	"	480	32	4	11
OK2BEC	"	468	24	5	13
OK1AFY	"	330	22	4	11
OK1KIG	"	170	27	3	7
OK10W	"	120	17	3	5

OK2KOF	"	96	12	3	5
OK1WT	1.8	1644	149	3	9
OK1AAI	"	816	88	3	9
OK1AMS	"	676	60	4	9
OK1KNG	"	24	4	2	4

Denmark

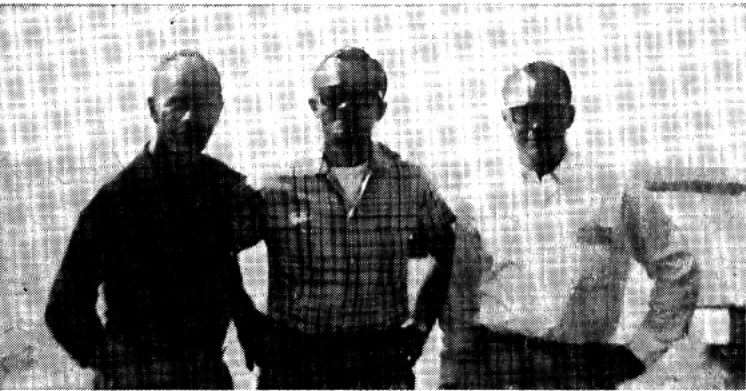
OZ4RT	A	55,760	275	39	97
OZ4H	"	13,908	116	28	48
OZ9QM	"	11,033	155	17	42
OZ3LI	"	6592	81	21	43
OZ5DX	"	3300	56	12	21
OZ5MF	"	1802	32	14	20
OZ4DX	"	945	43	5	16
OZ7G	21	4025	47	14	21
OZ9FH	14	17,355	162	18	47
OZ7YH	7	4862	137	5	29
OZ1LO	3.5	525	35	3	12

England

G2DC	A	157,170	408	52	134
G3DYY	A	57,057	265	44	99
G6VC	"	33,939	210	26	55
G3FTQ	"	21,762	162	26	67
G3JKY	"	19,320	154	25	59
G3GJQ	"	16,502	144	22	52
G3MGL	"	13,110	180	15	54
G3PVS	"	12,383	129	17	44
G2NH	"	11,016	136	21	47
G3JVV	"	10,795	88	27	58
G3MWZ	"	8460	79	24	36
G3JFY	"	2923	61	10	27
G4CP	14	102,600	480	27	68
G3HDA	"	69,468	407	25	59
G2AJB	"	18,966	209	18	40
G3MEA	"	9400	132	13	34
G8DI	"	5180	108	9	28
G3WP	"	1827	45	7	22
G2KW	"	576	26	5	11
G3EYN	7	16,701	260	12	45
G3ORB	3.5	1541	78	5	18
G31GW	1.8	1098	57	5	13
G5MP	"	448	33	3	11

Finland

OH2BZ	A	56,763	252	44	115
OH2AA	A	48,951	218	39	108
OH2RZ	"	37,944	214	42	82
OH2DP	"	36,096	208	33	95
OH2BAI	"	13,920	108	26	70
OH2ND	"	9380	111	16	54
OH3NY	"	9288	148	11	43
OH2VZ	"	5439	75	13	36
OH3TQ	"	5073	72	17	40
OH5UQ	"	4116	56	13	29
OH9RI	"	1617	45	10	23
OH9RF	"	1550	48	8	23
OH2YL	"	1426	32	13	18
OH1VR	"	1271	35	10	21
OH1WH	"	208	10	7	9
OH2RD	"	50	6	4	6
OH5UX	"	48	6	4	4
OH1TY	"	10	5	5	5
OH1TN	21	11,907	85	21	42
OH3NS	"	5123	50	15	32
OH9RC	"	1029	53	5	16
OH2BC	14	27,456	211	22	56
OH2QV	"	24,975	199	23	52
OH1S	"	15,345	190	14	41
OH3UO	"	9024	131	12	35
OH2WI	"	7728	118	12	36
OH2FT	"	4290	93	8	31
OH2XF	"	2822	57	8	26



The boys who manned HKØZU, Ray W4BJ, Ed W4QVJ and Bev W4CKB all from the Florida DX Club.

SP5AKG	"	20,382	135	26	60
SP6WM	"	19,440	172	28	52
SP6UK	"	2982	64	12	30
SP9AGS	"	1288	35	8	20
SP6LK	"	1025	42	8	17
SP2TG	"	620	20	6	11
SP5AHZ	"	306	10	8	9
SP9RF	21	20,468	108	26	42
SP5YC	"	8996	62	21	31
SP5ZA	"	7456	57	18	31
SP5AIB	"	6960	54	21	28
SP3PK	"	2291	27	14	15
SP2AAC	"	2268	27	9	15
SP8HT	14	45,069	344	23	60
SP5AIM	14	24,548	193	20	48
SP2AEL	"	6660	107	12	28
SP8AG	"	5530	112	8	27
SP5AHW	"	4320	68	9	31
SP3KCC	"	4191	83	9	24
SP2AJQ	"	4085	55	12	31
SP8ABQ	"	2720	57	8	24
SP9ADU	"	2409	56	9	24
SP2JS	"	2100	35	7	21
SP8CP	7	18,176	203	14	50
SP5ALG	"	12,740	203	10	42
SP8MJ	"	11,664	207	8	40
SP4TW	"	7140	190	7	28
SP2CO	"	5520	110	9	31
SP2RS	"	5043	99	7	34
SP4KAI	"	4480	100	7	28
SP5AHQ	3.5	17,952	390	8	36
SP6BZ	"	6810	227	4	26
SP8HR	"	4264	168	5	21
SP9AMA	"	2996	103	5	23
SP9DH	"	1311	60	4	19
SP6KBR	"	1080	54	5	15
SP8APV	"	480	38	4	11
SP9AAB	"	225	27	3	6

OH3PX	"	1690	53	6	20
OH9QU	"	780	28	6	14
OH2EW	7	18,356	294	11	41
OH7NF	"	15,741	228	14	39
OH1VA	"	2773	36	12	35
OH5PG	"	16	4	2	2
OH2UQ	3.5	9200	217	7	33
OH6TM/2	"	1705	44	6	25
France					
F8TM	A	72,900	292	46	104
F8IH	"	67,192	214	49	99
F2PO	"	46,580	307	26	59
F3PK	"	26,950	162	50	27
F9BB	"	4,995	63	15	22
F2MA	21	29,829	190	22	39
F8VQ	"	1364	26	9	13
F3BX	14	403	20	4	9

DL6KC	"	7990	111	11	36
DJ2EL	"	2268	62	7	21
DJ3GY	"	1920	32	12	20
DJ2YA	7	23,985	302	14	51
DJ1ZN	"	10,388	186	14	39
DL1KS	"	10,314	142	13	41
DL1JW	3.5	19,488	269	12	44
DJ3WE	"	18,717	307	10	41
DJ2SX	"	7437	163	7	30
DJ2KS	1.8	2576	190	4	10
DL1FF	"	2159	121	5	12
DL1KB	"	296	40	3	5
DL1YA	"	16	6	2	2
DL5IA	A	4017	96	9	30
DL5DU	14	7008	76	15	33
DL4FT	7	8610	173	9	32

Roumania					
Y02BU	A	75,692	484	31	96
Y08DD	"	31,004	259	22	70
Y02BQ	"	30,738	217	32	77
Y02BA	"	9639	133	16	47
Y06EY	"	4305	106	13	28
Y08ME	"	1288	43	8	20
Y03AC	7	12,036	192	11	40
Y07DD	7	8208	110	12	42
Y04CT	"	3492	86	7	29
Y03JV	"	2106	70	6	27
Y02IS	"	1656	49	5	19
Y08KAN	"	1560	58	6	18
Y06SD	"	1288	56	5	18
Y04SA	"	1176	40	6	18
Y03JW	"	779	48	4	13
Y09HI	"	450	31	4	11
Y08AP	3.5	10,491	210	7	32
Y08HG	"	324	19	5	13

Germany					
DJ1PN	A	140,456	388	58	136
DJ7IK	A	123,930	447	53	117
DJ4DN	A	122,537	400	55	126
DJ5HH	A	120,150	357	58	120
DJ5JH	"	87,975	381	38	115
DJ3KR	"	86,984	275	55	111
DJ7AA	"	86,500	189	59	114
DJ5BV	"	85,162	293	48	106
DM2ATL	"	67,268	351	37	97
DL1IF	"	63,048	256	43	99
DJ5GC	"	60,390	182	43	79
DL7DF	"	54,720	218	49	103
DL7BQ	"	49,200	254	40	83
DL7CS	"	44,450	131	48	79
DL1BO	"	42,672	185	40	72
DL3TW	"	42,245	173	39	80
DJ5JW	"	28,012	128	44	50
DJ2MG	"	26,316	39	39	63
DM2AVL	"	21,560	131	34	64
DL1XS	"	20,056	115	33	59
DL8FR	"	18,746	154	31	60
DJ1UE	"	18,414	136	26	67
DJ2HI	"	18,340	134	26	44
DJ5DA	"	17,901	167	19	62
DJ3YU	"	14,823	104	29	52
DL7CF	"	14,104	125	21	65
DJ4VQ	"	12,848	119	18	55
DL9PU	"	12,489	111	25	44
DL8DL	"	10,863	149	17	54
DL6OS	"	10,296	111	21	51
DL1IA	"	10,152	90	24	48
DM3PBM	"	6765	123	21	34
DL1OW	"	6478	120	17	24
DJ3BB	"	6210	90	16	53
DM3VBM	"	6210	115	16	30
DL1EA	"	5684	43	24	34
DJ3WP	"	3354	36	18	25
DL1QT	"	2814	39	16	26
DL6EN	21	48,067	237	27	44
DL3ZI	"	22,336	131	22	42
DL6DF	"	9585	82	26	19
DJ2DG	"	7260	61	18	26
DL1ES	"	2220	31	11	19
DJ4HR	"	624	15	8	8
DM2AMG	"	416	10	8	8
DJ2RE	14	43,168	298	21	50
DL3BK	"	30,174	145	30	64
DJ8IK	"	24,817	173	25	58
DM3PVL	"	21,696	205	20	44
DJ5VQ	"	20,400	207	18	42
DJ3WU	"	7998	121	13	30

Hungary					
HA6NI	A	66,025	301	39	96
HA1SD	"	26,860	276	22	57
HA7PM	"	6600	152	10	34
HA1SB	"	4608	89	12	36
HA1VA	"	1352	50	9	17
HA5BI	21	1792	25	13	15
HA5DY	7	1365	66	5	16
HA5BJ	"	190	19	4	6
Iceland					
TF3AB	A	16,650	169	15	35
Ireland					
E15AJ	14	59,128	455	21	55
Italy					
I1GO	A	52,942	383	30	73
I1WSG	"	540	24	18	30
I1ER	"	248	11	5	3
Madeira Is.					
CT3AV	A	33,198	174	24	42
Netherlands					
PA0LOU	A	18,060	125	29	57
PA0WAC	"	7072	64	21	31
PA0YN	"	3572	70	11	36
PA0NIR	"	2484	36	15	21
PA0HY	"	476	22	7	10
PA0SNG	14	8473	160	10	27
PA0NW	"	1400	53	5	20
PA0VB	3.5	12,427	234	7	36
PA0LV	"	11,362	272	6	32
Northern Ireland					
G130LJ	A	5358	58	18	39
G130TV	14	9956	191	10	28
Norway					
LA5HE	A	53,193	171	48	101
LA6U	"	21,060	87	29	61
LA2Q	"	12,702	153	19	54
LA4LG	"	9729	104	23	46
LA3UF	14	3952	76	8	30
LA2LI	7	1320	67	4	16
Poland					
SP6FZ	A	141,768	479	56	123
SP5ADZ	A	104,542	449	43	124
SP5AFL	"	104,490	445	42	119
SP8YA	"	79,794	405	40	103
SP3KET	"	35,816	361	20	68

Scotland					
GM3E0J	A	35,750	211	31	79
GM3JDR	14	32,430	345	19	50
Sicily					
IT1TAI	A	233,289	699	57	150
IT1AGA	7	6474	140	8	31
Sweden					
SM5BLA	A	317,580	864	62	175
SM3JTW	A	65,436	361	38	95
SM5CEU	A	53,710	219	39	92
SM5CCE	"	52,895	163	46	103
SM6CJX	"	25,812	177	32	76
SM5BDY	"	22,487	143	34	79
SM5CZK	"	18,040	184	20	62
SM6APH	"	16,683	192	17	66
SM2ALU	"	15,946	159	18	49
SM5DUB	"	15,180	162	26	66
SM6DED	"	13,950	227	10	52
SM5BRS	"	12,960	105	24	57
SM6ARR	"	12,267	107	26	61
SM6CAW	"	11,616	156	16	50
SM5CON	"	9240	167	10	45
SM5CMG	"	8122	109	16	47
SM5UQ	"	6958	120	12	37
SM5AJR	"	6528	53	24	40
SM7TV	"	5145	65	16	33
SM5AWF	"	3936	47	18	30
SM5AFE	"	3000	62	13	27
SM5CAK	"	1740	48	9	20
SM5BBC	"	828	14	7	13
SM7MS	"	288	10	7	9
SM2CXU	"	247	16	8	11
SM5BFK	"	230	11	5	7
SM5BOH	"	216	12	5	7
SM5KV	21	12,810	91	20	41
SM5AHS	14	17,215	180	15	40
SM3GNN	"	11,128	148	13	39
SM5AIO	"	5680	104	9	31

SM5BEU	5565	65	14	39	
SM5BEI	3600	79	8	28	
SM1CXE	2325	83	5	20	
SM6CDO	2250	40	10	20	
SM5CWF	7	10,560	193	10	38
SL2CU	7	5952	182	7	24
SM7DRB	5005	141	5	30	
SM6BWO	3904	119	5	27	
SM5BCT	3277	100	5	5	
SM5ARQ	2581	82	5	24	
SM5ARQ	1250	43	5	20	
SM5LW	528	21	5	17	
SM4CLR	300	20	4	11	
SM5BTX	182	15	3	11	
SM4DRD	364	108	6	23	
SM5MX	3.5	364	108	6	23
SM6JY	266	20	3	11	



Part of the crew at W3ADO, station of the U.S. Naval Academy. Seated: Midshipmen KØDQI, K2UVY, K6ILB, K4OCZ and KØKHP. Standing: WA6EVW and K9MBQ.

Switzerland					
HB9JG	A	245,834	468	63	139
HB9K0	"	146,216	422	56	140
HB9ZY	"	118,770	286	60	125
HB9NL	"	113,176	301	56	116
HB9MO	"	93,050	310	49	123
HB9MO	"	34,170	216	26	41
HB9HK	"	21,012	122	34	68
HB9UD	"	14,706	108	31	55
HB9Q0	"	10,434	81	19	28
HB9DX	21	996	83	3	9
HB9QA	1.8				

Yugoslavia					
YU3IE	A	14,552	128	23	45
YU3BU	"	572	27	8	14
YU3FZ	21	5160	64	13	17
YU1SF	7	9632	224	7	36
YU1SJ	"	6040	124	7	33
YU3JS	"	1872	62	5	21
YU4FDE	"	1650	62	6	19

U.S.S.R.					
Estonia					
UR2AT	A	100,430	420	45	121

European					
UA4LE	A	204,590	642	51	154
UA3XS	A	60,564	476	25	78
UA1DH	A	60,078	323	29	85
UA1NA	"	58,320	281	34	101
UA6LI	"	43,992	443	20	52
UA3HK	"	25,300	134	36	74
UA1TL	"	20,002	199	18	55
UA3TA	"	16,320	123	26	59
UA3QV	"	10,556	93	16	42
UA3QV	"	10,065	137	15	40
UA4PZ	"	4961	90	8	33
UA4PZ	"	4242	76	11	31
UA3LR	"	4214	99	10	33
UA3FT	"	3640	97	10	25
UA3GP	"	3504	47	15	33
UA1CC	"	2856	73	9	25
UA1DG	"	2387	58	8	23
UA4NM	"	1674	50	7	20
UA3KLA	"	1540	39	10	18
UA3JD	"	1064	31	10	18
UA3GO	"	456	16	6	13
UA1PH	"	3666	67	12	27
UA6FD	21	3115	43	13	22
UA1MA	"	75,808	441	28	76
UA4PA	14	60,048	279	31	77
UA4IF	14	53,424	387	25	59
UW3UF	"	11,546	120	14	50
UA4CN	"	8510	109	11	35
UA3SG	"	7056	123	8	28
UA1CI	"	4956	100	12	30
UV3TC	"	4662	70	12	30
UA1KBR	"	4641	77	11	28
UA3TP	"	3075	126	6	19
UW3BX	"	3010	68	7	28
UA4IK	"	1025	34	8	17
UA3WX	"	714	24	7	14
UA3IL	"	672	26	6	15
UA1ND	"	299	11	6	7
UA4QD	"	243	10	3	6
UA1LG	"	13,340	268	8	38
UA6FL	7	9840	178	9	31
UA6MK	"	4824	108	8	28
UA1FI	"	216	16	3	8
UA301	"	18,126	286	11	42
UA1DZ	3.5	4247	124	5	26
UA1CE	"				

Latvia					
UQ2AB	A	64,083	388	29	94
UQ2CC	"	18,300	214	17	58
UQ2KCA	"	3264	59	12	36
UQ2GK	7	952	68	3	11

Lithuania					
UP2AN	A	40,488	269	21	67
UP2NV	14	28,220	251	16	52
UP2CP	"	10,222	171	12	26

UP2CG	3.5	6409	215	4	25
Moldavia					
UO5AA	A	72,036	366	45	93
UO5GW	"	15,246	237	18	59
UO5SA	14	20,723	297	11	42

Ukraine					
UT5AA	A	816,408	1224	98	250
UB5CI	"	203,841	476	73	188
UT5HP	"	31,595	241	26	63
UT5TR	"	12,672	136	19	47
UB5TR	"	12,660	157	16	44
UB5KEV	"	6840	71	16	41
UB5LK	"	36,404	354	18	58
UB5FY	14	28,690	185	23	72
UB5ZY	"	25,259	229	18	49
UB5WO	"	8200	114	15	35
UT5EW	"	2576	112	6	17
UB5SZ	"	1728	44	8	16
UB5QA	7	14,078	190	13	44
UB5DQ	"	12,737	220	10	37
UT5EH	"	8668	150	13	31
UB5ZE	"	510	20	6	9
UB5HQ	3.5	10,222	258	7	31
UB5EF	"	2016	78	5	19
UB5WJ	1.8	1500	101	4	11

White Russia					
UC2BB	A	888	31	8	16
UC2AA	14	183,580	645	34	100
UC2CS	7	4830	125	6	24
UC2WP	"	2708	98	6	20

Oceania

Australia					
VK2GW	A	311,200	677	63	97
VK2PV	"	83,592	273	40	68
VK2RA	"	43,862	182	38	53
VK2APK	14	55,566	251	27	54
VK3AXK	A	85,750	331	41	57
VK3RJ	21	1664	37	8	8
VK3ACI	14	7020	98	12	14
VK3AZZ	7	82,289	459	22	39
VK3XB	"	31,464	238	19	27
VK4SS	A	4050	38	24	30
VK4XW	7	1530	38	7	8
VK5NQ	14	137,917	474	32	71
VK5RT	"	4104	42	15	21
VK5RX	7	11,180	156	12	14
VK6RU	A	302,670	596	61	116
VK7SM	"	100,848	283	56	76

Caroline Is., East					
KC6BK	14	23,608	176	22	30
Cook Islands					
ZK1BS	A	235,200	691	56	64
ZK1AR	"	43,620	259	31	29

Fiji Is.					
VR2DK	A	87,990	330	46	59

Hawaii					
KH6EVT	A	182,805	610	48	57
KH6EJY	"	111,786	628	27	35
KH6EKO	14	108,868	554	28	40

Midway Is.					
W6ZDF/KM6	A	30,510	233	24	21

New Zealand					
ZL2AJW	A	238,524	550	64	92
ZL1AMO	"	77,532	324	44	40
ZL4LB	"	70,152	328	33	46
ZL2AY	14	39,996	232	25	41
ZL1TU	"	9480	91	18	22
ZL2GS	3.5	1417	39	8	5

Philippine Is.					
DU7SV	A	112,934	479	32	50

South America

Argentina					
LU5AQ	14	58,695	312	25	40
Brazil					
PY1ADA	A	296,815	701	59	86
PY1NFC	"	56,635	412	25	22
PY7ACS	"	44,464	270	25	31
PY2BNX	"	10,368	75	25	25
PY7BX	"	900	26	8	4
PY4BC	21	11,254	114	10	24
PY40D	14	219,230	692	32	76
PY4ABH	"	103,680	401	28	62
PY7AKQ	7	19,572	252	11	17

Chile					
CE1AD	A	397,085	920	63	86
CE1BD	"	51,072	197	47	49
CE20F	14	8232	106	12	16

Colombia					
HK1QQ	A	1,002,042	1885	66	113
HK3AH	"	95,064	334	49	53
HK7AJ	"	35,391	258	26	21
HK2ZT	28	3276	65	10	8
HK7UL	21	3735	139	5	4

Ecuador					
HC1DC	A	759,000	1304	74	126

Falkland Is.					
VP8AI	A	20,295	144	25	30

Netherlands Antilles					
PJ2AE	A	65,968	331	30	32

Paraguay					
ZP9AY	A	160,038	552	50	52
ZP5JP	21	6816	96	11	13

Peru					
0A4CG	A	25,760	194	24	27

Netherlands Guiana					
PZ1AH	14	15,200	178	12	20

Uruguay					
CX1RY	A	251,748	739	44	67
CX1FB	"	50,330	257	32	38
CX1OP	"	4590	54	18	16

Venezuela					
YV5AGD	A	307,988	710	59	89
YV5BZ	"	3116	59	11	8
YV1DP	14	63,046	726	12	17
YV5BOA	"	6660	113	9	11
YV5ANT	7	34,476	297	13	26



The New Hampshire multi station, operated by LaMar Ray and Phil Smith, K1NBN.

MULTI-OPERATOR Single Transmitter North America

United States			
W1B1H	426,075	505	104 195
			(W1B1H, JYH)
K1RTB	250,068	418	82 147
			(K1RTB, NBN)
W2PCJ	98,208	190	71 115
			(W2PCJ, WB2CKS)
W2RA	4284	42	18 24
			(W2RA, WA2CFG)
W3ADD	260,615	339	82 153
			(U.S. Naval Academy)
W4HOS	48,240	128	49 85
			(W4HOS, FRO)
K7ADL	87,885	220	61 94
			(K7ADL, MLO)
K7CAD	77,542	227	59 78
			(K7CAD, W7TML)
K8UTX	206,360	359	80 140
			(K8UTX, LFY)

Canada			
VE4JB	48,472	276	38 45
			(VE4JB, MF)

San Andres			
HK8ZU	791,280	2251	61 107
			(W4BJ, CKB, QVJ)

Asia

Mongolia			
JT1KAA	11,374	142	19 28
			(Club Station)

Saudi Arabia			
HZ1AB	89,444	285	35 83
			(W1TYQ, W8CCN)

U.S.S.R. Club Stations			
UG6KAA	67,313	285	19 64

Asiatic			
UA9KDP	1,033,184	1164	86 246
UA9KCA	456,351	841	55 162
UA9KAC	339,845	785	47 138
UA9KQA	295,470	541	54 156
UA9KTB	94,866	363	23 74
UA9KWS	40,755	212	20 45
UA9KPW	31,171	204	15 46
UA9KAO	18,901	194	10 31
UA9KEC	18,312	118	13 43
UA9KUU	3134	58	8 14
UA9KHA	1400	44	9 16

UA9KSB	95,078	421	45 92
UA9KYA	30,429	242	23 46
UA9KKB	22,114	197	32 32
UA9KCA	21,285	292	19 26
UA9KZB	9360	157	18 21
UA9KUA	1416	58	12 12

Azerbaijan			
UD6KAB	45,150	205	22 64

Georgia			
UF6KAF	80,652	336	17 61
UF6KPA	64,914	383	10 52

Kazakh			
UL7KBK	67,320	251	32 70
UL7KUR	22,904	202	21 35
UL7KDT	20,975	145	17 40
UL7KAA	19,796	170	14 35
UL7KKD	6860	91	13 22
UL7KBI	5166	72	16 25

Kirghiz			
UM8KAB	103,896	451	29 75

Turkoman			
UH8KBC	46,920	252	18 51

Europe

Bulgaria Club Stations			
LZ1KSV	602,730	1029	106 256
LZ1KZS	257,342	814	54 169
LZ1KBD	133,355	540	52 127
LZ1KBL	64,845	460	22 77
LZ2KBA	24,163	153	17 46
LZ1KSA	10,836	153	17 46
LZ1KAA	10,472	180	14 42
LZ2KRS	8352	232	9 27
LZ1KPW	4860	100	9 36
LZ1KSW	480	29	5 10

Czechoslovakia Club Stations			
OK1KPA	224,018	639	62 140
OK3KAG	113,844	548	37 122
OK1ZC	84,840	355	45 123
			(OK1ZC, WR)
OK3KAS	67,209	415	32 97
OK2KJU	64,517	254	43 106
OK1KSO	48,251	368	24 89
OK3KMS	21,576	331	15 43
OK2KVI	6897	212	5 28
OK2KAU	5148	51	22 30
OK1KSL	3990	90	10 25
OK2KHD	3724	72	14 35
OK3KTD	2250	88	5 20
OK3KGI	1488	31	14 17

England			
GB2KW	83,616	445	44 90
			(Radio Society)
G3PPG	11,200	111	20 44
			(G3PPG, PPC, KLZ, DEF, PDX, POM)

Finland			
OH2FS	82,502	369	38 128
			(OH2FS, OH2SB)
OH1SH	57,352	336	28 89
			(OH1SH & friend)
OH2A	50,516	220	45 101
			(OH2HK, 2YV, XK)
OH2BR	27,508	199	26 68
			(OH2BR, OH2BAD)
OH2AF	13,024	127	22 52
			(OH2BG, OH2VB)

Germany			
DJ1ZG	317,280	646	72 168
			(DJ1ZG, 3JV, 3CI, 3SM, DL9XO)
DL1IN	221,760	536	63 135
			(DL1IN, DL9CE, LI, PS)
DL9VN	152,304	528	50 117
			(DL9VN, DJ2JE, DL3YQ, DJ5LE)
DL0FT	114,208	381	56 110
			(DL1GW, 1HA, 1HH, DJ2VY, 5HL)
DJ4FZ	67,536	408	40 94
			(DJ4FZ, 5AZ, 6TK, 6UK, 7SW)
DM3ML	61,410	277	40 98
			(DM3ML, 3JML, OML, KJ)
DL9YP	28,615	229	27 70
			(DL9YP, DJ4AN, 2AW)
DL0DX	11,904	101	22 42
			(Club Station)

Hungary Club Stations			
HA3KGC	177,210	627	51 128
HA5KBP	130,427	648	42 124
HA5KFR	98,560	438	50 104
HA7KPF	64,064	506	26 78
HA5KFZ	31,525	297	19 78
HA6KVC	22,176	182	28 60
HA5KDQ	7080	101	19 40

Italy			
I1DFG	2968	100	7 21
			(K1SDS, WA6NPW)

Luxembourg			
LX3TA	55,296	422	28 80
			(DL1TA, DJ0HZ)

Netherlands			
PI1PT	50,249	304	35 74
			(Hobby Club)

Norway			
LA1H	64,032	428	25 62
			(Club Station)

Poland Club Stations			
SP8KAR	61,177	304	40 91
SP3KAU	25,839	262	23 58
SP2KDS	25,048	176	30 71
SP9AOX	20,923	148	25 62
			(SP9AOX, 9PT, AJM)
SP3KCC	4191	83	9 24

Roumania Club Stations			
Y03KSD	116,490	495	39 126
Y06KAF	36,378	359	18 76
Y04KAK	34,594	271	24 74

Sweden			
SM5CZQ	143,262	524	51 138
			(SM5CZQ, SM5ARR)
SM5BAU	106,240	480	36 130
			(SM5BAU, 5BCE, 5BDS, 6AVW, 7LV)
SL2ZA	56,134	376	31 96
			(School Station)
SL5AB	46,746	248	37 89
			(School Station)
SM7WT	10,150	177	23 447
			(SM7WT, SM7CJZ)

Switzerland			
HB1YR	221,943	573	55 112
			(HB9MD, HB9EU)
HB9IV	35,203	177	37 70
			(HB9IV, HB9ACC)
HB9AAW	23,927	173	27 44
			(HB9AAW, HB9AAV)

Yugoslavia Club Stations			
YU2AKL	52,555	318	29 86
YU4FTU	10,065	157	13 48

U.S.S.R. Club Stations			
UR2KAE	10,440	152	17 43
UR2KAT	3007	86	7 24
UR2KAH	2295	85	6 21

European			
UA3KWA	164,892	633	41 141
UA4KHW	160,908	507	54 158

[Continued on page 84]

Home-Built Receiver [from page 27]

should be enough.) Set the BC-221 to 3.5 mc and check to see that a signal output is obtained from the receiver.

8. Set the BC-221 to 3.6, 3.7, 3.8, and 3.9 mc and tune one of the four 4.5 mc i.f. circuits to each of these frequencies. It does not appear to matter much in what order they are tuned to which frequency but keep in mind the frequency selected for the primary of the input i.f.

9. Set the BC-221 to 3.75 mc and tune the antenna tuning circuit for maximum signal.

10. All of the above tuning adjustments can be made satisfactorily by ear. They can also be made by turning up the a.g.c. delay and tuning for maximum signal on the S meter. (Caution: With the a.g.c. at maximum, the meter will rise to a maximum and then hang. If care is not taken, the tuning will not be maximized.) Keep the a.g.c. at $\frac{1}{4}$ open.

11. With the receiver bandswitch on the 40 meter band, set the receiver dial on the frequency chosen in step 8 for tuning the primary of the input 4.5 mc i.f. transformer. Set the BC-221 on the forty meter frequency indicated on the receiver dial so as to produce a signal output and tune the primary of the input i.f. for maximum signal. Return to 3.75 mc with the receiver and the BC-221 and retune the 80 meter antenna tuning circuit for maximum signal.

12. Switch to the 15 meter band, tune the oscillator tank, and check for proper oscillator operation by listening for the beat on the BC-221. Then peak the input circuit in the band center.

13. A check should be made of the half-lattice filter by coupling the BC-221 to the 12AT7 conversion detector as in step 5 above and

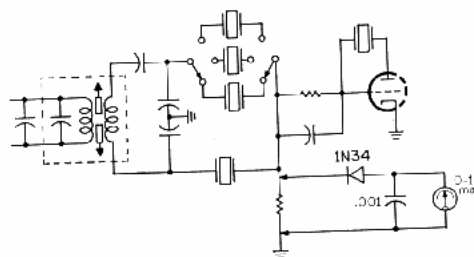


Fig. 5—Temporary circuit for determining the half lattice filter response as described in the text.

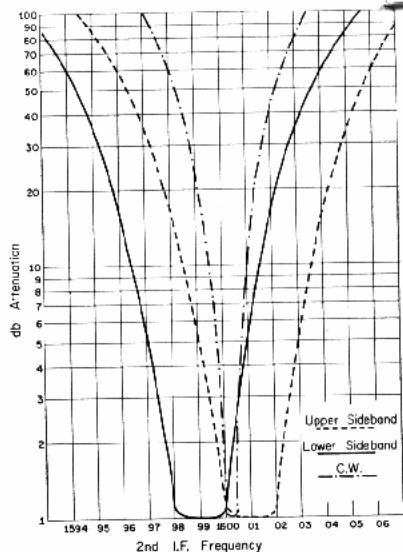


Fig. 6—Response curves of the half lattice filter for C.W., LOWER SIDEBAND and UPPER SIDEBAND.

temporarily soldering a 1N34 (or any other similar detector crystal) to the signal side of the 68K load resistor for the half-lattice filter, as shown in fig. 5. For each position of the half-lattice filter switch, a series of current measurements should be taken at 500 c.p.s. intervals from 1597 kc to 1603 kc. A typical plot of outputs as measured on the original receiver is shown in fig. 6. If the plots obtained do not approximate those shown, then the performance of the receiver will not be optimum. The crystal frequencies and the circuit should be carefully checked and the bandpass characteristics of the filter rechecked until the shapes of the curves are near those shown.

Conclusions

Although I have tried to be very detailed in describing the circuits in this receiver that I had to spend time on, I did this for the benefit of those who have never embarked on a receiver project before. I am in hopes that those who have built receivers will recognize the promise of the quartz crystal detector as a tool for s.s.b., f.s.k. and c.w. and I am also in hopes that variations of this technique will soon appear in *CQ* which will make the homebuilt receiver even easier to build and better performing. ■

C.W. Results [from page 50]

UA1KUA	117,600	525	53	94	UA3KOB	3072	86	7	25
UA6KTB	112,365	461	41	124	UA6KYB	861	21	8	13
UA3KWB	41,202	256	32	77	UA1KYD	288	14	6	10
UA3KUA	24,450	215	19	56	Latvia				
UA6KAF	18,078	170	17	52	UQ2KAM	2350	75	7	18
UA3KHA	17,756	219	28	44	Ukraine				
UA3KFA	15,980	160	26	42	UB5KED	259,440	734	61	174
UA3KTK	11,205	209	11	34	UB5KAJ	100,536	506	42	135
UA1KAY	8,112	132	17	35	UB5KAK	32,509	473	16	43
UA3RZO	7880	121	8	32	UB5KKE	21,165	192	22	60
UA4KPL	6966	130	15	39	White Russia				
UA3KYA	4182	48	15	26	UC2KAR	258,000	921	56	144
UA4KCE	3267	55	13	20	UC2KGD	10,620	163	16	43

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